A

α Alpha, the first letter of the Greek alphabet.
Å *angstrom unit.*
A_2 *aortic second sound.*
a *accommodation; ampere; anode; anterior; aqua; area; artery.*
ā [L.] *ante,* before.
a-, an- [Gr., not] Prefix meaning *without, away from, not* (a- is usually used before a consonant; an- is usually used before a vowel).
AA, aa *achievement age; Alcoholics Anonymous; amino acid; arteriae; arteries.*
āā [Gr. *ana,* of each] Prescription notation meaning *the stated amount of each of the substances is to be used in compounding the prescription.*
AAA *acne-associated arthritis; American Academy of Allergists; American Ambulance Association; American Association of Anatomists.*
AAAS *American Association for the Advancement of Science.*
AABB The professional organization, formerly known as the American Association of Blood Banks, whose mission is to promulgate standard practices in immunohematology.
AACC *American Association for Clinical Chemistry.*
AACN *American Association of Critical-Care Nurses; American Association of Colleges of Nursing.*
AAFP *American Academy of Family Physicians.*
AAHN *American Association for the History of Nursing.*
AAL *anterior axillary line.*
AAMA *American Association of Medical Assistants.*
AAMI *Association for the Advancement of Medical Instrumentation; age-associated memory impairment.*
AAMS *Association of Air Medical Services.*
AAMT *American Association for Medical Transcription.*
AAN *American Academy of Nursing.*
AANA *American Association of Nurse Anesthetists.*
AANN *American Association of Neuroscience Nurses.*
AAOHN *American Association of Occupational Health Nurses.*
AAOS *American Academy of Orthopedic Surgeons.*
AAP *American Academy of Pediatrics; American Association of Pathologists.*
AAPA *American Academy of Physician Assistants.*
AAPMR *American Academy of Physical Medicine and Rehabilitation.*
AARC *American Association for Respiratory Care.*
AARP *American Association of Retired Persons.*
AAS *atomic absorption spectroscopy.*
AASECT *American Association of Sex Educators, Counselors, and Therapists.*
Ab *antibody.*
ab- [L. *ab,* from] Prefix meaning *from, away from, negative, absent.*
Abadie's sign (ă-bad′ēz,bă-dēz′) [Jean Abadie, Fr. neurologist, 1873–1946] In tabes dorsalis, insensibility to pressure over the Achilles tendon.
Abadie's sign (ă-bă-dēz′) [Charles A. Abadie, Fr. ophthalmologist, 1842–1932] In exophthalmic goiter, spasm of the levator palpebrae superioris.
abandonment A premature termination of the professional treatment relationship by the health care provider without adequate notice or the patient's consent.
abarognosis (ăb″ăr-ŏg-nō′sĭs) [Gr. *a-,* not, + *baros,* weight, + *gnosis,* knowledge] A rare disorder marked by loss of the ability to gauge the weight of objects held in the hand. SEE: *baragnosis.*
abarticulation (ăb″ăr-tĭk-ū-lā′shŭn) **1.** Ambiguous term meaning dislocation of a joint. **2.** Diarthrosis.
abasia (ă-bā′zē-ă) [Gr. *a-,* not, + *basis,* step] **1.** Motor incoordination in walking. **2.** Inability to walk due to impairment of coordination. **abasic, abatic,** *adj.*
a.-astasia Lack of motor coordination with inability to stand or walk. SYN: *astasia-abasia.*
paralytic a. Abasia in which the leg muscles are paralyzed.
paroxysmal trepidant a. Abasia caused by trembling and sudden stiffening of the legs on standing, making walking impossible. It may be related to hysteria.
abate (ă-bāt′) [L. *ab,* from, + *battere,* to beat] **1.** To lessen or decrease. **2.** To cease or cause to cease.
abatement (ă-bāt′mĕnt) Decrease in severity of pain or symptoms.
abaxial, abaxile (ăb-ăk′sē-al, -sĭl) [L. *ab,* from, + *axis,* axis] **1.** Not within the axis of a body or part. **2.** At the opposite end of the axis of a part.
Abbe-Wharton-McIndoe operation, McIndoe operation (ă′bē-whăr′tŏn-măk′ĭn-dō) A surgical procedure performed to create a vagina in patients who do not have one. This is achieved by creating adequate space between the rectum and bladder; the inlaying of a split-thickness graft; and most importantly, continuous

and prolonged dilatation during the healing stage when tissues are most likely to contract.

PATIENT CARE: The health care team supports the patient medically and psychologically by helping the patient learn about her condition and the procedure by answering questions, providing comfort, and alleviating anxiety.

Abbott's method (ăb′ŏtz) [Edville G. Abbott, U.S. orthopedic surgeon, 1871–1938] A treatment for scoliosis that is no longer used, in which a series of plaster jackets were applied to straighten the spine.

ABC *antigen-binding capacity; airway, breathing, circulation* (mnemonic for assessing status of emergency patients).

ABCD A mnemonic to aid health care providers in the recognition of malignant melanoma. The letters represent "asymmetry," "border," "color," and "diameter." Pigmented lesions on the skin with irregularities of growth and color and diameters greater than 6 mm have a considerable likelihood of being melanomas and should be professionally examined. Additional characteristics of melanomas include the sudden change of an existing mole or sudden appearance of pigmented moles. In some cases an existing mole that was flat elevates above the skin. The letter "E" is used as a memory aid for this "expansion" or "evolution" of skin lesions (thus the mnemonic is sometimes referred to as "ABCDE"). SEE: illus. *melanoma*.

abdiction (ăb-dĭk′shĭn) The intolerance or avoidance of drugs or chemicals.

abdomen (ăb-dō′mĕn, ăb′dă-mĕn) [L., belly] The portion of the trunk lying between the thorax and the pelvis. It contains the stomach, lower part of the esophagus, small and large intestines, liver, gallbladder, and spleen. The parietal peritoneum lines the abdominal cavity. The organs within this cavity are enveloped by the visceral peritoneum. The kidneys, adrenal glands, ureters, prostate, seminal vesicles, and greater vascular structures are located behind the peritoneum (retroperitoneal or extraperitoneal). SEE: *abdominal quadrants* for illus.

INSPECTION: Visual examination of the abdomen is best done while the patient is supine with the knees slightly bent. In a healthy person the abdomen is oval-shaped, with elevations and depressions corresponding to the abdominal muscles, umbilicus, and to some degree the forms of underlying viscera. Relative to chest size, it is larger in children than in adults; it is more rotund and broader inferiorly in males than in females.

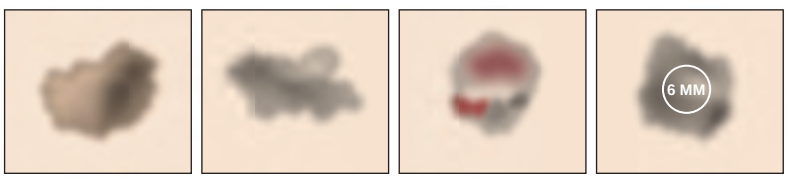
Disease can alter the shape of the abdomen. A general, symmetrical enlargement may result from ascites; a partial and irregular enlargement may result from tumors, hypertrophy of organs such as the liver or spleen, or intestinal distention caused by gas. Retraction of the abdomen may occur in extreme emaciation and in several forms of cerebral disease, esp. tubercular meningitis of children.

The respiratory movements of the abdominal walls are related to movements of the thorax and are often increased when the latter are arrested and vice versa; thus, abdominal movements are increased in pleurisy, pneumonia, and pericarditis but are decreased or wholly suspended in peritonitis and disease-caused abdominal pain.

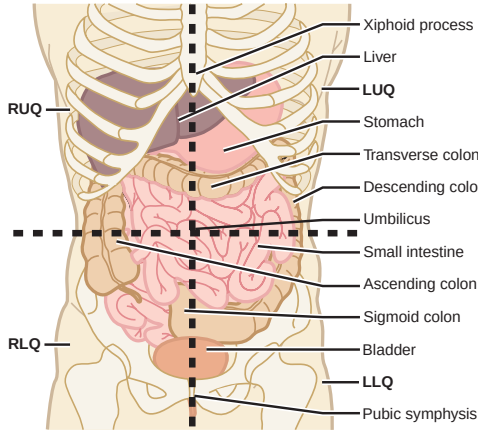
The superficial abdominal veins are sometimes visibly enlarged, indicating an obstruction of blood flow in either the portal system (as in cirrhosis) or the inferior vena cava.

AUSCULTATION: Listening to sounds produced in abdominal organs provides useful diagnostic information. Absent or diminished bowel sounds may indicate paralytic ileus or peritonitis. High-pitched tinkling sounds are associated with intestinal obstruction. Bruits may indicate atherosclerosis or an abdominal aortic aneurysm. During pregnancy, auscultation enables identification and evaluation of the fetal heart rate and vascular sounds from the placenta.

PERCUSSION: For the practitioner to obtain the greatest amount of information, the patient should be supine with the head slightly raised and knees slightly flexed. Percussion should be carried out systematically over the anterior surface of the abdomen. A combination of audible or tactile sensation will be perceived by the examiner according to underlying structures (e.g.,



ABCD'S OF MELANOMA



ABDOMINAL QUADRANTS

gaseous distended organs versus solid organs). A large abdominal aneurysm gives dullness or flatness over it unless a distended intestine lies above it.

PALPATION: The abdomen may be palpated with fingertips, the whole hand, or both hands; pressure may be slight or forceful, continuous or intermittent. The head is supported to relax the abdominal wall. On occasion, the patient may be examined in a standing position (e.g., palpation of groin hernias that might not be palpable in the supine position).

Palpation is helpful in detecting the size, consistency, and position of viscera; the existence of tumors and swellings; and whether the tumors change position with respiration or are movable. It is necessary to ascertain whether there is tenderness in any portion of the abdominal cavity, whether pain is increased or relieved by firm pressure, and whether pain is accentuated by sudden release of firm pressure (i.e., rebound tenderness).

An arterial impulse, if one exists, is systolic and expansive. A thrill accompanying a bruit may occasionally be palpated. The surface of a tumor is usually firm and smooth but may be nodular. Inflammatory masses are typically firm and reproducibly tender. Effusion of blood into tissues (e.g., hematoma) may produce a palpable mass.

acute a. An abnormal condition of the abdomen in which there is a sudden, abrupt onset of severe pain. It requires urgent evaluation and diagnosis because it may indicate a need for immediate surgical intervention. SYN: *surgical abdomen*.

pendulous a. An abdomen with folds of fatty tissue that drape over the pubis.

scaphoid a. An abdomen that on examination appears hollowed, sunken, or emaciated.

surgical a. Acute a.

abdomin- SEE: *abdomino-*.

abdominal (ăb-dŏm′ĭ-năl) Pert. to the abdomen.

abdominal migraine Intermittent attacks of prolonged and intense upper abdominal pain, often associated with nausea or vomiting. The condition is considered a variant of migraine headache. It is also known as cyclic vomiting syndrome.

abdominal muscles SEE: under *muscle*.

abdominal quadrants Four parts or divisions of the abdomen determined by drawing imaginary vertical and horizontal lines through the umbilicus. The quadrants and their contents are:

Right upper quadrant (RUQ): right lobe of liver, gallbladder, part of transverse colon, part of pylorus, hepatic flexure, right kidney, and duodenum; *Right lower q. (RLQ):* cecum, ascending colon, small intestine, appendix, bladder if distended, right ureter, right spermatic duct in the male, right ovary and right tube, and uterus if enlarged in the female; *Left upper q. (LUQ):* left lobe of liver, stomach, small intestine, transverse colon, splenic flexure, pancreas, left kidney, and spleen; *Left lower q. (LLQ):* small intestine, left ureter, sigmoid flexure, descending colon, bladder if distended, left spermatic duct in the male; left ovary and left tube, and uterus if enlarged, in the female. SEE: illus.

abdominal reflexes Contraction of the muscles of the abdominal wall on stimulation of the overlying skin. Absence of these reflexes indicates damage to the pyramidal tract.

abdominal regions The abdomen and its external surface, divided into nine regions by four imaginary planes: two

horizontal, one at the level of the ninth costal cartilage (or the lowest point of the costal arch) and the other at the level of the highest point of the iliac crest; two vertical, through the centers of the inguinal ligaments (or through the nipples or through the centers of the clavicles) or curved and coinciding with the lateral borders of the two abdominal rectus muscles. SEE: illus.

abdominal rescue SEE: under *rescue*.

abdominal rings The apertures in the abdominal wall. *External inguinal* or *superficial*: An interval in the aponeurosis of the external oblique muscle, just above and to the outer side of the crest of the pubic bone.

abdomino-, abdomin- Combining forms meaning *abdomen*.

abdominocentesis (ăb-dŏm″ĭ-nō-sĕn-tē′sĭs) [L. *abdomen,* belly, + Gr. *kentesis,* puncture] Puncture of the abdomen with an instrument for withdrawal of fluid from the abdominal cavity. SYN: *abdominal paracentesis*.

abdominocyesis (ăb-dŏm″ĭn-ō-sī-ēs′ĭs) Abdominal pregnancy.

abdominocystic (ăb-dŏm″ĭ-nō-sĭs′tĭk) [″ + Gr. *kystis,* bladder] Pert. to the abdomen and bladder.

abdominohysterectomy (ăb-dŏm″ĭ-nō-hĭs-tĕr-ĕk′tō-mē) [L. *abdomen,* belly, + Gr. *hystera,* womb, + *ektome,* excision] Abdominal hysterectomy.

abdominohysterotomy (ăb-dŏm″ĭ-nō-hĭs-tĕr-ŏt′ō-mē) [″ + ″ + *tome,* incision] Abdominal hysterotomy.

abdominoperineal (ăb-dŏm″ĭ-nō-pĕr″ĭ-nē′ăl) Pert. to the abdomen and perineal area.

abdominoplasty (ăb-dŏm′ĭ-nō-plăs″tē) Plastic surgery on the abdomen.

abdominoscopy (ăb-dŏm″ĭ-nŏs′kō-pē) [-L. *abdomen,* belly, + Gr. *skopein,* to examine] An outdated term for laparoscopy.

abdominovaginal (ăb-dŏm″ĭ-nō-văj′ĭ-năl) [″ + *vagina,* sheath] Pert. to the abdomen and vagina.

abdominovesical (ăb-dŏm″ĭ-nō-vĕs′ĭ-kăl) [″ + *vesica,* bladder] Pert. to the abdomen and urinary bladder.

abducens (ăb-dū′sĕnz) [L., drawing away] Pert. to drawing away from the midline of the body.

a. oculi Musculus rectus lateralis bulbi, the lateral rectus muscle, one of the extraocular muscles.

abducens nerve SEE: under *nerve*.

abducent (ăb-dū′sĕnt) [L. *abducens,* drawing away] **1.** Abducting; leading away. **2.** Abducens.

abduct (ăb-dŭkt′) [L. *abductus,* led away] To draw away from the median plane of the body or one of its parts.

abduction (ăb-dŭk′shŭn) **1.** Lateral movement of the limbs away from the median plane of the body, or lateral bending of the head or trunk. SEE: illus. **2.** Movement of the digits away from the axial line of a limb. **3.** Outward rotation of the eyes.

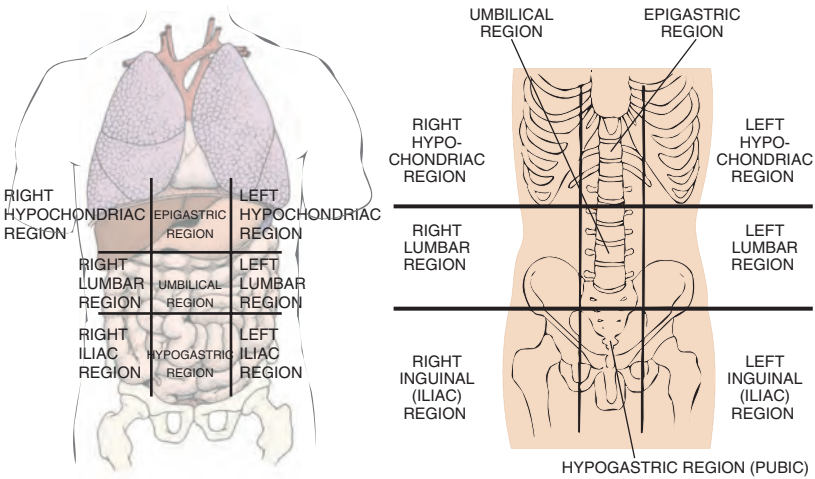
abduction stress test SEE: under *stress test*.

Abernethy's fascia (ăb′ĕr-nē″thē) [John Abernethy, Brit. surgeon, 1764–1831] A layer of areolar tissue separating the external iliac artery from the iliac fascia over the psoas muscle.

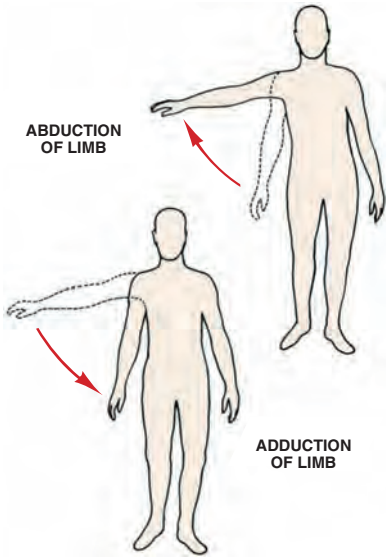
aberrant (ăb-ĕr′ănt) [L. *ab,* from, + *errare,* to wander] Deviating from normal. SYN: *abnormal*.

aberratio (ăb-ĕr-ā′shē-ō) [L.] Aberration.

aberration (ăb-ĕr-ā′shŭn) [L. *ab,* from, + *errare,* to wander] **1.** Deviation from



ABDOMINAL REGIONS



ABDUCTION AND ADDUCTION OF LIMBS

the normal. **2.** Imperfect refraction of light rays.

chromatic a. Unequal refraction of different wavelengths of light through a lens, producing a colored image.

chromosomal a. An abnormality in chromosomes regarding number (aneuploidy, polyploidy) or chromosomal material (translocation, deletion, duplication).

dioptric a. Spherical a.

lateral a. Deviation of a ray from the focus measured on a line perpendicular to the axis.

longitudinal a. Deviation of a ray from the direction parallel to the optic axis.

spherical a. Aberration or distortion of an image due to rays entering the peripheral portion of a spherical mirror or lens being refracted differently from those closer to the center. Thus the peripheral rays are focused on the optical axis at a different point from the central rays.

aberrometry (ă″bĕr-ŏm′ĕ-trē) [″ + L. *errare,* to wander, + ″] The measurement of refractive errors of the eye.

abetalipoproteinemia (ā-bā″tă-lĭp″ō-prō″tēn-ē′mē-ă) [Gr. *a-,* not, + *beta* + *lipos,* fat, + *protos,* first, + *haima,* blood] An inherited disorder marked by an absence of beta lipoproteins in the blood and low levels of cholesterol, fatty acids, and chylomicrons. The red blood cells have a thorny or spiked appearance (i.e., acanthocytosis). It is most often seen in Ashkenazi Jews. Symptoms include retinal macular degeneration and chronic progressive neurological deficits, which usually begin in childhood. Affected infants develop steatorrhea and growth retardation. Later clinical manifestations include ataxia; by adolescence, many patients are unable to walk. Vitamin E may be helpful in arresting the progression of neurological aspects. SYN: *Bassen-Kornzweig syndrome*. SEE: *acanthocyte* for illus.

abeyance (ă-bā′ăns) [O. Fr.] A temporary suspension of activity, sensation, or pain.

abfraction (ăb″frăk′shĭn) Deterioration of the tooth in the region of the cementoenamel junction, thought to result from flexion of the tooth under heavy lateral load.

ABG *arterial blood gas.*

ability An individual's performance capability for a given task, based on genetic makeup and learning.

cognitive a. The ability of the brain to process, retrieve, and store information. Impairment of these brain functions is common in patients with dementia, drug intoxication, or head injury.

constructional a. The ability to copy or draw shapes, figures, or lines (e.g., with a pen and paper). This nonverbal ability depends on the integration of several higher brain functions, including perception, planning, and motor coordination. It is lost in organic brain syndromes.

functional a. The ability to perform activities of daily living, including bathing, dressing, and other independent living skills, such as shopping and housework. Many functional assessment tools are available to quantify functional ability. SEE: *activities of daily living*.

impaired transfer a. Limitation of independent movement between two nearby surfaces. SEE: *Nursing Diagnoses Appendix*.

verbal a. The ability to use words, spoken or written, to communicate.

abiogenesis (ăb-ē-ō-jĕn′ĕ-sĭs) [Gr. *a-,* not, + *bios,* life, + *genesis,* generation, birth] Spontaneous generation of life; theoretical production of living organisms from nonliving matter. **abiogenetic, abiogenous** (-jĕ-nĕt′ĭk, ăb-ē-ŏj′ĭ-nŭs), *adj.*

abiosis (ăb-ē-ō′sĭs) [Gr. *a-,* not, + *bios,* life, + *osis,* condition] Absence of life. **abiotic,** *adj.*

abiotrophy (ăb-ē-ŏt′rō-fē) [″ + ″ + *trophe,* nourishment] Premature loss of vitality or degeneration of tissues and cells with consequent loss of endurance and resistance.

ablactation (ăb-lăk-tā′shŭn) [L. *ab,* from, + *lactatio,* suckling] **1.** The cessation of milk secretion. SEE: *weaning*.

ablate (ăb-lāt′) [L. *ablatus,* taken away] To remove.

ablatio (ăb-lā′shē-ō) [L., carrying away] Ablation, removal, detachment.

a. placentae Abruptio placentae.

a. retinae Detachment of the retina. SEE: *retina*.

ablation (ăb-lā′shŭn) [L. *ab,* from, + *latus,* carried] Removal of a part, pathway, or function by surgery, chemical destruction, electrocautery, or radiofrequency.

endometrial a. Removal or destruction of the whole thickness of the endometrium and some superficial myometrium. The purpose is to remove all of the endometrial glandular material. This is done to treat benign disturbances of menstrual bleeding in women who do not wish to preserve fertility. Ablation may be done by use of the following: *Laser or electrosurgical*: YAG laser or high-powered "rollerball" electrocoagulation is used to destroy the uterine endometrium and 2 to 3 cm of myometrium. *Thermal*: A balloon catheter containing a heating element that delivers temperatures to 188°F (87°C) and a controller that monitors, displays, and regulates pressure, time, and temperature are used for heat-mediated endometrial destruction.

radiofrequency a. Ablation in which an electrode delivers a low-voltage, high-frequency current to cauterize and destroy abnormal tissues. Destruction of electrical conduction pathways in the heart with an intracardiac catheter that removes the abnormal conducting tissues has been used to treat Wolff-Parkinson-White syndrome, atrioventricular re-entrant tachycardia, and other cardiac arrhythmias.

ABLEDATA (ā′bĭl-dā′tă) A searchable Internet database of assistive technology information maintained by the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education. The website address is www.abledata.com.

ablepharia (ăb-lĕ-fā′rē-ă) [Gr. *a-,* not, + *blepharon,* eyelid] Congenital absence of or reduction in the size of the eyelids. **ablepharous** (ă-blĕf′ă-rŭs), *adj.*

ablution (ăb-lū′shŭn) A cleansing or washing.

abnormal (ăb-nor′măl) [L. *ab,* from, + *norma,* rule] **1.** Diverging from a known standard or mean. SYN: *aberrant*. **2.** Exceptional. **3.** Unexpected.

Abnormal Involuntary Movement Scale test ABBR: AIMS test. A system used to assess abnormal involuntary movements, such as hand tremors or rhythmic movements of the tongue and jaw, that may result from the long-term administration of psychotropic drugs. The test is often given before patients are started on antipsychotic drugs and then readministered periodically to monitor side effects.

abnormality (ăb″nor-măl′ĭ-tē) Deviation from the normal. SYN: *aberration*.

aborad (ăb-ō′răd) [L. *ab,* from, + *oris,* mouth] Away from the mouth.

aboral (ăb-ō′răl) Opposite to, or away from, the mouth.

aboriginal healing **1.** Shamanism (2). **2.** Health practices of native or indigenous peoples within a geographic region, which often include folk and spiritual elements. In Canada, the term pertains to specific governmental efforts to address health issues of indigenous or First Nations peoples.

abort (ă-bort′) [L. *abortare,* to miscarry] **1.** To expel an embryo or fetus prior to viability. **2.** To arrest the progress of disease. **3.** To arrest growth or development. **4.** To discontinue an effort or project before its completion.

abortifacient (ă-bor-tĭ-fā′shĕnt) [L. *abortio,* abortion, + *facere,* to make] Anything used to cause or induce an abortion. Examples of abortifacients include prostaglandins, among other agents.

abortion (ă-bor′shŭn) [L. *abortio*] The spontaneous or induced termination of pregnancy before the fetus reaches a viable age. The legal definition of viability—usually 20 to 24 weeks—differs from state to state. Some premature neonates of fewer than 24 weeks or 500 g are viable. Symptoms of spontaneous abortion include abdominal cramps and vaginal bleeding, sometimes with the passage of clots or bits of tissue.

ETIOLOGY: Among the most common spontaneous causes are faulty development of the embryo resulting from chromosomal anomalies, abnormalities of the placenta, endocrine disturbances, acute infectious diseases, severe trauma, and shock. Other causes include problems related to the uterus, immunologic factors, and use of certain drugs.

PATIENT CARE: Assessment includes monitoring vital signs, fluid balance, and abortion status and progress. Historical data must include duration of pregnancy; Rh status; and time of onset, type, and intensity of abortion symptoms. Character and amount of vaginal bleeding are noted, and any passed tissue (embryonic or fetal) is preserved for laboratory examination. The patient is evaluated for shock, sepsis, and disseminated intravascular coagulation.

A health care professional remains with the patient as much as possible to help allay anxiety, is aware of the patient's coping mechanisms, and is alert for responses such as grief, anger, guilt, sadness, depression, relief, or happiness.

If an elective abortion or surgical com-

pletion of the abortion is needed, the procedure and expected sensations are explained, and general perioperative care is provided. If the patient is Rh negative and Coombs' test negative (not isoimmune), and if the pregnancy exceeded 8 weeks' gestation, Rho(D) is administered as prescribed within 72 hr of the abortion. Prescribed fluids, oxytocics, antibiotics, and transfusions are administered as required.

After abortion, the patient is instructed to report excessive bleeding (clots greater than dime-size), pain, inflammation, or fever and to avoid intercourse, tampon use, douching, or placing anything else in the vagina until after a follow-up examination.

complete a. An abortion in which the total products of conception have been expelled.

elective a. Voluntary termination of a pregnancy for other than medical reasons. The procedure may be recommended when the mother's mental or physical state would be endangered by continuation of the pregnancy or when the fetus has a condition incompatible with life. It may also be performed as a result of rape, incest, or at the mother's request.

habitual a. Three or more consecutive spontaneous abortions.

imminent a. Impending abortion characterized by bleeding and colicky pains. The cervix is usually effaced and patulous.

incomplete a. An abortion in which part of the products of conception has been retained in the uterus.

induced a. The intentional termination of a pregnancy by means of dilating the cervix and evacuating the uterus. Methods used during the first trimester include cervical dilation with a laminaria tent or a cannula, vacuum aspiration, or dilation and curettage (D & C). In the second trimester, abortion may be induced with methotrexate, RU 486, prostaglandins, or the instillation of hypertonic saline into the uterus. SEE: *curettage, uterine; mifepristone*.

inevitable a. An abortion that cannot be halted.

infected a. Abortion accompanied by infection of retained fetal tissue.

missed a. Abortion in which the fetus has died before completion of the 20th week of gestation but the products of conception are retained in the uterus for 8 weeks or longer.

partial-birth a. A lay term for a second- or third-trimester abortion, sometimes referred to medically as "dilation and extraction." The cranial contents of the fetus are evacuated prior to the removal of the fetus from the uterus.

septic a. Abortion in which there is an infection of the products of conception and the endometrial lining of the uterus.

spontaneous a. Abortion occurring without apparent cause. SYN: *miscarriage*. SEE: *Nursing Diagnoses Appendix*.

suction a. The removal of the products of conception from the uterus using a device that sucks the tissues away from the lining of the uterus.

therapeutic a. Abortion performed when the pregnancy endangers the mother's mental or physical health or when the fetus has a known condition incompatible with life.

threatened a. The appearance of signs and symptoms of possible loss of the fetus. Vaginal bleeding with or without intermittent pain is usually the first sign. If the fetus is still alive and attachment to the uterus has not been interrupted, the pregnancy may continue. Absolute bedrest is recommended, with avoidance of coitus, douches, stress, or cathartics.

tubal a. **1.** A spontaneous abortion in which the fetus has been expelled through the distal end of the uterine tube. **2.** The escape of the products of conception into the peritoneal cavity by way of the uterine tube.

abortionist (ă-bor′shŭn-ĭst) One who performs an abortion.

abortive (ă-bor′tĭv) [L. *abortivus*] **1.** Preventing the completion of something. **2.** Abortifacient; that which prevents the normal continuation of pregnancy.

abortus (ă-bor′tŭs) [L.] A fetus born before 20 weeks' gestation or weighing less than 500 g.

aboulia SEE: *abulia*.

ABP *arterial blood pressure.*

abrachia (ă-brā′kē-ă) [Gr. *a-,* not, + *brachium,* arm] Congenital absence of arms.

abrachiocephalia (ă-brā″kē-ō-sĕ-fā′lē-ă) [″ + ″ + *kephale,* head] Congenital absence of arms and head.

abradant (ă-brād′ĕnt) An abrasive.

abrade (ă-brād′) [L. *ab,* from, + *radere,* to scrape] **1.** To chafe. **2.** To roughen or remove by friction.

abrasion (ă-brā′zhŭn) [″ + *radere,* to scrape] **1.** Scraping away of skin or mucous membrane as a result of injury or by mechanical means, as in dermabrasion for cosmetic purposes. SEE: *avulsion; bruise*. **2.** Wearing away of the substance of a tooth. It usually results from mastication but may be produced by mechanical or chemical means.

abrasive **1.** Producing abrasion. **2.** That which abrades.

abreaction (ăb″rē-ăk′shŭn) [L. *ab,* from, + *re,* again, + *actus,* acting] In psychoanalysis, the release of emotion by consciously recalling or acting out a

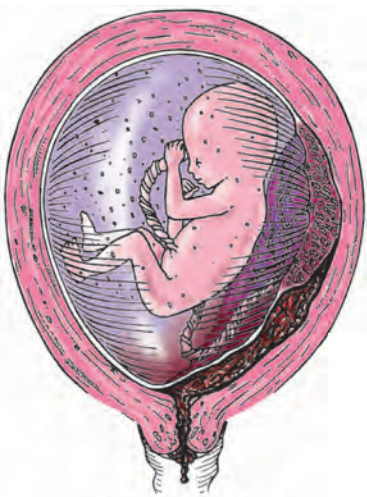
painful experience that had been forgotten or repressed. The painful or consciously intolerable experience may become bearable as a result of the insight gained during this process. SEE: *catharsis* (2).

abrin (ā′brĭn) [NL fr. Gr. *habros,* graceful, delicate] A powerful cellular toxin derived from the seeds of the jequirty pea (*Abrus precatorius*), also called the Rosary Pea. Abrin prevents cells from making necessary proteins and may cause death or poisoning after it is inhaled, consumed, or applied to the skin.

abruptio (ă-brŭp′shē-ō) [L. *abruptus*] A tearing away from.

PATHOLOGY: Three types of placental abruption occur: *a. centralis:* a partial central detachment with hidden bleeding between the placenta and the uterine wall; occasionally, blood will invade the myometrium (Couvelaire uterus); *a. complete:* total placental detachment, marked by profuse vaginal bleeding, profound fetal distress, and rapid fetal demise; *a. marginalis:* partial separation of an edge of the placenta, as evidenced by vaginal bleeding. The large amount of circulating thromboplastin may cause a coagulation defect to occur, resulting in hypofibrinogenemia. SEE: *Couvelaire uterus; disseminated intravascular coagulation*.

a. placentae The sudden, premature, partial, or complete detachment of the placenta from a normal uterine site of implantation. The incidence of abruptio placentae is 1:120 births, and the risk of recurrence in later pregnancies is much higher than that for cohorts. SYN: *ablatio placentae*. SEE: illus.; *placenta*.



ABRUPTIO PLACENTAE

ETIOLOGY: The cause is unknown; however, the condition often is associated with pregnancy-induced hypertension (PIH) and may occasionally be related to current cocaine abuse or intimate partner violence.

SYMPTOMS: Abruptio placentae is classified according to type and severity. *Grade 1*: vaginal bleeding with possible uterine tenderness and mild tetany; neither mother nor baby is in distress; approximately 10% to 20% of placental surface is detached. *Grade 2*: uterine tenderness; tetany, with or without uterine bleeding; fetal distress; mother is not in shock. Approximately 20% to 50% of the total surface area of the placenta is detached. *Grade 3*: Uterine tetany is severe; the mother is in shock, although bleeding may be covert; and the fetus is dead. Often the patient develops coagulopathy. More than 50% of the placental surface is detached.

PATHOLOGY: Extravasation of blood occurs between the placenta and the uterine wall, occasionally between muscle fibers of the uterus. Hemorrhage can be concealed or covert, causing consumptive coagulopathy (disseminated intravascular coagulopathy).

TREATMENT: This varies with the type and extent of abruption. Women experiencing only a small marginal separation of the placenta from the uterine wall may be confined to bed and monitored closely for signs of further threat to maternal or fetal status. If prematurity also is a factor, the woman may be given betamethasone to expedite development of fetal pulmonary surfactant. If the woman is at or near term, induction of labor and vaginal delivery may be an option. SEE: *betamethasone*.

Supportive treatment and prompt surgical intervention are indicated for women who have moderate to severe abruptions. Complete detachment calls for immediate cesarean delivery, concomitant treatment of shock and, sometimes, management of a coagulation defect. The massive loss of blood jeopardizes the mother's survival; fetal mortality is 100%. If the uterus fails to contract after the surgical delivery, immediate hysterectomy may be necessary. SEE: *Couvelaire uterus*.

PROGNOSIS: Although maternal mortality is unusual, other than as noted, the perinatal mortality is between 20% and 30%.

PATIENT CARE: Early recognition and prompt management of the event and any associated complications are vital. The woman's vital signs, fundal height, uterine contractions, labor progress, and fetal status data are monitored, including heart rate and rhythm. Any changes are noted, such as prolonged decelerations in fetal heart rate or alterations in baseline variability; uter-

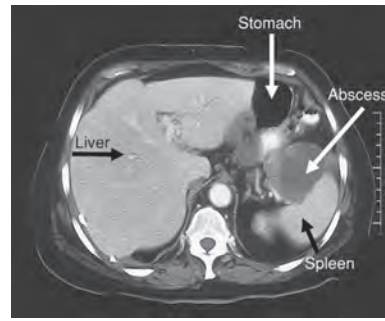
ine tetany; complaints of sudden, severe abdominal pain; and the advent of or increase in vaginal bleeding. Vaginal blood loss is estimated by weighing perineal pads and subtracting the known weight of dry pads. The interval between pad changes, the character and amount of the bleeding, and the degree of pad saturation are noted. Prescribed IV fluids and medications are administered through a large-bore catheter. A central venous pressure line may be placed to provide access to the venous circulation, and an indwelling catheter is inserted to monitor urinary output and fluid balance. A calm atmosphere is maintained, and the patient's verbalization is encouraged. The patient is assisted in coping with her fears and anxiety. Questions are answered truthfully, comfort measures are implemented, and reassurance is provided as possible and consistent with the current situation and prognosis. All procedures are explained, and the woman and her family are prepared for induction of labor, vaginal delivery, or cesarean birth, as appropriate. The possibility of neonatal death should be tactfully mentioned; the neonate's survival depends primarily on gestational age, blood loss, and associated hypertensive disorders. SEE: *Nursing Diagnoses Appendix.*

abs A colloquial term for the rectus abdominis muscles.

abscess (ăb′sĕs) [L. *abscessus,* a going away] A localized collection of pus in any body part, resulting from invasion of a pyogenic bacterium or other pathogen. *Staphylococcus aureus* (e.g., methicillin-resistant *Staph. aureus* [MRSA]) is a common cause. The abscess is surrounded by a membrane of variable strength created by macrophages, fibrin, and granulation tissue. Abscesses can disrupt function in adjacent tissues and can be life threatening in some circumstances (e.g., in the lung or within the peritoneal cavity). SEE: illus; *inflammation; pus; suppuration; Standard Precautions Appendix.*

acute a. An abscess associated with significant inflammation, producing intense heat, redness, swelling, and throbbing pain. The tissue over the abscess becomes elevated, soft, and eventually unstable (fluctuant) and discolored as the abscess comes to a head (points). An abscess can rupture spontaneously or be drained via an incision. If it is left untreated, the pathogens may spread to adjacent tissues or to other parts of the body via the bloodstream. Appearance of or increase in fever may indicate sepsis. SEE: illus.

alveolar a. Abscess around the root of a tooth in the alveolar cavity. It is usually the result of necrosis and infection of dental pulp following dental caries. SEE: *periapical a.*



INTRA-ABDOMINAL ABSCESS

CT scan shows abscess between stomach and spleen (Courtesy of Harvey Hatch, MD, Curry General Hospital)

amebic a. An abscess caused by *Entamoeba histolytica.* SYN: *endamebic abscess.*

anorectal a. Abscess in the ischiorectal fossa. It may occur in patients with Crohn's disease, diabetes mellitus, or anal fissures more often than in other patients. Incision, drainage, and antibiotics usually provide effective treatment. SYN: *rectal abscess.*; SYN: *ischiorectal abscess.*

apical a. **1.** Abscess at the apex of a lung. **2.** Periapical abscess.

appendicular a. A collection of pus around an inflamed or ruptured vermiform appendix.

axillary a. Abscess or multiple abscesses in the axilla (e.g. in patients with hidradenitis suppurativa).

Bartholin's a. SEE: *Bartholin's abscess.*

bicameral a. Abscess with two pockets.

ACUTE ABSCESS

Acute abscess of the skin with surrounding cellulitis

bile duct a. Abscess of the bile duct. SYN: *cholangitic abscess*.

biliary a. Abscess of the gallbladder. It is an infrequent complication of cholangitis or obstruction of the bile duct.

bone a. Brodie's abscess.

brain a. An intracranial abscess involving the brain or its membranes. It is seldom primary but usually occurs secondary to infections of the middle ear, nasal sinuses, face, or skull or from contamination from penetrating wounds or skull fractures. It may also have a metastatic origin arising from septic foci in the lungs (bronchiectasis, empyema, lung abscess), in bone (osteomyelitis), or in the heart (endocarditis). Infection of nerve tissue by the invading organism results in necrosis and liquefaction of the tissue, with edema of surrounding tissues. Brain abscesses may be acute, subacute, or chronic. Their clinical manifestations depend on the part of the brain involved, the size of the abscess, the virulence of the infecting organism, and other factors. SYN: *cerebral abscess; intracranial abscess*. SEE: *Nursing Diagnoses Appendix.*

SYMPTOMS: Symptoms may include headache, fever, vomiting, malaise, irritability, seizures, or paralysis.

TREATMENT: The usual treatment is chemotherapy. Surgical drainage may be required.

breast a. Mammary abscess.

Brodie's a. SEE: *Brodie's abscess*.

bursal a. Abscess in a bursa.

canalicular a. Breast abscess that discharges into the milk ducts.

caseous a. Abscess in which the pus has a cheesy appearance.

cerebral a. Brain abscess.

cholangitic a. Biliary a.

chronic a. Abscess with pus but without signs of inflammation. It usually develops slowly as a result of liquefaction of tuberculous tissue. It may occur anywhere in or on the body but more frequently in the spine, hips, genitourinary tract, and lymph glands. Symptoms may be very mild. Pain, when present, is caused by pressure on surrounding parts; tenderness is often absent. Chronic septic changes accompanied by afternoon fever may occur. Amyloid disease may develop if the abscess persists for a prolonged period. SYN: *cold abscess*.

circumtonsillar a. Peritonsillar abscess.

cold a. Chronic abscess.

collar-button a. Two pus-containing cavities, one larger than the other, connected by a narrow channel.

dental a. Acute inflammatory infection within the maxilla or mandible. SEE: *periapical a.; periodontal a.*

dentoalveolar a. Periapical abscess.

diffuse a. A collection of pus not circumscribed by a well-defined capsule.

dry a. Abscess that disappears without pointing or breaking.

embolic a. Metastatic a.

emphysematous a. Abscess containing air or gas, produced by organisms such as *Clostridium perfringens*. SYN: *gas abscess; tympanitic abscess*.

endamebic a. Amebic a.

epidural a. Extradural a.

extradural a. Abscess on the dura mater, an occasional cause of back pain in febrile patients, usually in those who inject drugs. SYN: *epidural abscess*.

fecal a. An abscess containing both pus and stool. SYN: *stercoraceous abscess; stercoral abscess*.

filarial a. An abscess caused by parasitic infection with thread-like worms known as microfilaria.

follicular a. Abscess in a follicle.

fungal a. Abscess caused by a fungus (e.g., mycetoma). SYN: *mycotic abscess*.

gas a. Emphysematous a.

gingival a. Abscess of the gum.

helminthic a. Worm a.

hemorrhagic a. Abscess containing blood.

hepatic a. Abscess of the liver, either a pyogenic or amebic abscess. It usually results from metastatic spread of infection from appendicitis, diverticulitis, or other intraperitoneal sources of infection. The most commonly identified infecting organisms are species of *Bacteroides, Enteroccoccus, Escherichia, Klebsiella,* or *Staphylococcus*. SYN: *liver abscess*.

hot a. Acute a.

hypostatic a. Metastatic a.

idiopathic a. Abscess due to an unknown cause.

iliac a. Abscess in the iliac region.

iliopsoas a. An abscess in the psoas and iliacus muscles. It typically results from a local or regional spread of an intestinal or renal abscess or from a blood-borne infection (e.g., after a drug injection). SYN: *psoas abscess*.

intracranial a. Brain a.

intradural a. Abscess within the layers of the dura mater.

intraperitoneal a. Peritoneal a.

ischiorectal a. Anorectal a.

kidney a. One or more abscesses arising in the kidney, typically following pyelonephritis or a blood-borne infection. The most common causative organisms are gram-negative bacteria from the lower urinary tract that spread to the kidneys and *Staphylococcus aureus* from a blood-borne infection. Immunocompromised patients may develop abscesses caused by *Nocardia, Candida,* or *Aspergillus.* Occasionally, *Mycobacterium tuberculosis* and *Echinococcus* are responsible agents. SYN: *renal abscess*.

TREATMENT: Antimicrobial agents are used in combination with surgical drainage. Occasionally, nephrectomy or retroperitoneal exploration is required.

lacrimal a. Localized infection of a lacrimal gland or in a lacrimal duct.

lateral alveolar a. Abscess in periodontal tissue.

liver a. Hepatic abscess.

lumbar a. Abscess in the lumbar region.

lung a. Circumscribed infection of lung tissue, caused by germs such as anaerobic bacteria, *Staphylococcus aureus,* or *Nocardia* species.

lymphatic a. Abscess of a lymph node.

mammary a. Abscess in the female breast, esp. one involving the glandular tissue. It usually occurs during lactation or weaning. SYN: *breast abscess*.

mastoid a. An abscess of the mastoid portion of the temporal bone.

metastatic a. Secondary abscess at a distance from the focus of infection. SYN: *embolic abscess; hypostatic abscess; wandering abscess*.

miliary a. Multiple small embolic abscesses.

milk a. Mammary abscess during lactation.

mycotic a. Fungal a.

nocardial a. Abscess caused by *Nocardia* (e.g., in the lung).

orbital a. A localized infection in the orbit.

palatal a. Abscess in a maxillary tooth, erupting toward the palate.

palmar a. Purulent effusion into the tissues of the palm of the hand.

pancreatic a. Abscess of pancreatic tissue, usually as a complication of acute pancreatitis or abdominal surgery.

parafrenal a. Abscess on the side of the frenulum of the penis.

parametric a. Abscess between the folds of the broad ligaments of the uterus.

paranephric a. Abscess in the tissues around the kidney. SYN: *perinephric abscess*.

parapancreatic a. Abscess in the tissues adjacent to the pancreas. SYN: *peripancreatic abscess*.

parietal a. Periodontal abscess arising in the periodontal tissue other than the orifice through which the vascular supply enters the dental pulp.

parotid a. Abscess of the parotid gland.

pelvic a. Abscess of the pelvic peritoneum, esp. in Douglas' pouch. It may arise as a complication of a sexually transmitted disease or diverticulitis.

perianal a. Abscess of the skin around the anus. It usually results from obstruction of intestinal crypts and subsequent fistula formation in the skin. SYN: *periproctic abscess*.

periapical a. An accumulation of acute inflammatory cells at the apex of a tooth, usually resulting from dental caries or tooth trauma. It may be classified further as an acute periapical abscess, a chronic periapical abscess, a periapical granuloma, or a radicular cyst. SYN: *apical abscess* (2); *dentoalveolar abscess*.

pericemental a. Alveolar abscess not involving the apex of a tooth.

pericoronal a. Pericoronitis.

peridental a. Abscess of periodontal tissue.

perinephric a. Paranephric a.

periodontal a. A localized area of acute or chronic inflammation with pus formation found in the gingiva, periodontal pockets, or periodontal ligament.

peripancreatic abscess Parapancreatic a.

peripleuritic a. Abscess in the tissue surrounding the parietal pleura.

periproctic a. Perianal a.

peritoneal a. Abscess within the peritoneal cavity usually following peritonitis. It is usually caused by enteric bacteria (e.g., *Escherichia coli,* enterococci, or *Klebsiella*). SYN: *intraperitoneal abscess*.

peritonsillar a. Abscess of the tissue around the tonsillar capsule. Needle aspiration of the abscess, with subsequent antibiotic therapy, is an effective treatment in 90% of cases. SYN: *circumtonsillar abscess*.

periureteral a. Abscess in the tissue around a ureter.

periurethral a. Abscess in tissue surrounding the urethra.

perivesical a. Abscess in tissue around the urinary bladder.

pneumococcic a. Abscess due to infection with pneumococci.

prelacrimal a. Abscess of the lacrimal bone producing a swelling at the inner canthus of the eye.

premammary a. Subcutaneous or subareolar abscess of the mammary gland.

prostatic a. Abscess within the prostate gland.

protozoal a. Abscess caused by a protozoon.

psoas a. Iliopsoas a.

pulp a. **1.** An abscess in the pulp chamber of a tooth. **2.** Abscess of the tissues of the pulp of a finger.

pyemic a. A metastatic abscess, usually multiple, due to pyogenic organisms.

rectal a. Anorectal a.

renal a. Kidney a.

retrocecal a. An abscess located behind the cecum. It is an occasional, severe complication of a ruptured appendix or Crohn's disease.

retromammary a. Abscess between the mammary gland and the chest wall.

retroperitoneal a. Abscess located between the peritoneum and the posterior abdominal wall. It may arise from an abscess in the kidney or from the spread of an intraperitoneal infection posteriorly.

retropharyngeal a. Abscess of the lymph nodes in the walls of the pharynx. It sometimes simulates diphtheritic pharyngitis.

ETIOLOGY: *Staphylococcus aureus* and group A hemolytic streptococcus are the most common pathogens.

SYMPTOMS: Typically, a history of pharyngitis is elicited. This is followed by high fever, dysphagia, and refusal to eat. The condition progresses to respiratory distress with hyperextension of the head ("sniffing position"), tachypnea, labored breathing, and drooling. An exquisitely tender bulge in the pharyngeal wall is usually evident.

TREATMENT: A retropharyngeal abscess, if fluctuant, should be treated with incision and drainage. If recognized before becoming fluctuant, the abscess should be treated with antibiotics, intravenously administered if the patient is unable to swallow.

retrovesical a. Abscess behind the bladder.

root a. A colloquial and veterinary term for periapical abscess.

sacrococcygeal a. Abscess over the sacrum and coccyx.

septicemic a. Abscess resulting from septicemia.

spermatic a. Abscess of the seminiferous tubules.

spinal a. Abscess due to necrosis of a vertebra.

splenic a. Abscess of the spleen. It may arise either from the spread of infection from a neighboring organ (i.e., a diverticular abscess or a ruptured gastric ulcer) or from hematogenous spread in patients with infective endocarditis.

stercoraceous a. Fecal a.

stercoral a. Fecal a.

sterile a. Abscess from which microorganisms cannot be cultivated, an occasional complication of intramuscular injection.

stitch a. Abscess formed about a stitch or suture.

streptococcal a. Abscess caused by streptococci.

subaponeurotic a. Abscess beneath an aponeurosis or fascia.

subarachnoid a. Abscess of the midlayer of the covering of the brain and spinal cord.

subareolar a. Abscess underneath the areola of the mammary gland, sometimes draining through the nipple.

subdiaphragmatic a. Abscess beneath the diaphragm (e.g., an hepatic, splenic, or interperitoneal abscess). SYN: *subphrenic abscess*.

subdural a. Abscess beneath the dura of the brain or spinal cord.

subfascial a. Abscess beneath the fascia.

subgaleal a. Abscess beneath the galea aponeurotica (i.e., the epicranial aponeurosis).

subpectoral a. Abscess beneath the pectoral muscles.

subperiosteal a. Bone abscess below the periosteum.

subperitoneal a. Abscess between the parietal peritoneum and the abdominal wall.

subphrenic a. Subdiaphragmatic a.

subscapular a. Abscess between the serratus anterior and the posterior thoracic wall.

subungual a. Abscess beneath the fingernail. It may follow injury from a pin, needle, or splinter.

sudoriparous a. Abscess of a sweat gland.

suprahepatic a. Abscess in the suspensory ligament between the liver and the diaphragm.

syphilitic a. Abscess occurring in the tertiary stage of syphilis, esp. in bone.

thecal a. A spinal epidural abscess.

thymus a. Abscess of the thymus.

tonsillar a. Acute suppurative tonsillitis.

tooth a. Alveolar a.

tropical a. Amebic abscess of the liver.

tuberculous a. Chronic a.

tubo-ovarian a. Abscess involving both the fallopian tube and the ovary. It is typically transmitted sexually.

tympanitic a. Emphysematous a.

tympanocervical a. Abscess arising in the tympanum and extending to the neck.

tympanomastoid a. A combined abscess of the tympanum and mastoid.

urethral a. Abscess in the urethra.

urinary a. Abscess caused by escape of urine into the tissues.

urinous a. Abscess that contains pus and urine.

verminous a. Worm a.

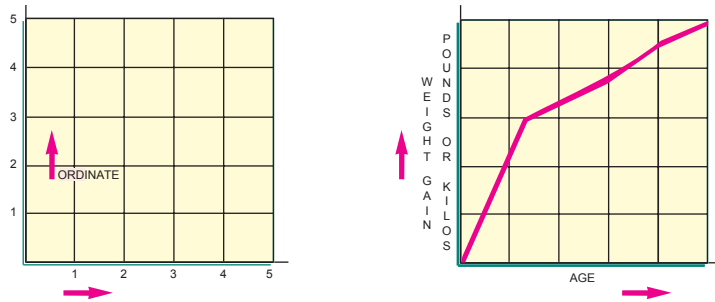
wandering a. Metastatic a.

warm a. Acute a.

worm a. An abscess caused by or containing insect larvae, worms, or other animal parasites. SYN: *helminthic abscess; verminous abscess*.

abscissa (ăb-sĭs′ă) [L. *abscindere,* to cut off] The horizontal line, or x-axis, in a graph of a two-dimensional coordinate system wherein perpendicular horizontal and vertical lines are used in order to provide a frame of reference. The ordinate is the vertical line, or y-axis. SEE: illus.

abscission (ăb-sĭ′zhŭn) [L. *abscindere,* to cut off] Removal by excision.



ABSCISSA (HORIZONTAL AXIS)

abscopal (ăb-skō′păl) Concerning the effect of radiation on tissues at some distance from the actual radiation site or target.

absence (ăb′sĕns) **1.** Brief temporary loss of consciousness, as may occur in petit mal epilepsy. **2.** Lack of development of a structure.

absenteeism Prolonged or repeated absence from work, school, or assigned duties.

Absidia (ăb-sĭd′ē-ă) Genus of pathogenic fungi of the order Phycomycetes and the family Mucoraceae.

absinthe, absinth (ăb′sĭnth) [L. *absinthium,* wormwood] A liquor containing oil of wormwood, anise, and other herbs. It is highly toxic, esp. to the nervous system.

absinthism (ăb′sĭn-thĭzm) Deterioration of the nervous system following excessive use of absinthe.

absolute Unrestricted, complete.

absolute benefit increase ABBR: ABI. The beneficial effect of an intervention or treatment in a clinical trial. It consists of the number of events observed in the experimental cohort minus the number of events in the control group. The term is the opposite of the "absolute risk increase."

absolute risk increase ABBR: ARI. A measure of the negative effect of an intervention or treatment in a clinical trial. It consists of the number of adverse events found in the experimental group, minus the number of adverse events in the control group. It is the opposite of the "absolute benefit increase."

absorb (ăb-sorb′) [L. *absorbere,* to suck in] To take in, suck up, or imbibe. SEE: *absorption; adsorb; adsorption*.

absorbance (ăb-sor′băns) **1.** In health care, the ability of a material or a tissue to absorb electromagnetic radiation. **2.** In chemistry, the negative logarithm of the transmittance of radiation through a substance or solution.

absorbent (ăb-sor′bĕnt) **1.** A substance that absorbs. **2.** Having the power to absorb.

absorptiometer (ăb-sorp″shē-ŏm′ĕ-tĕr) [-L. *absorptio,* absorption, + Gr. *metron,* measure] **1.** An instrument that measures the thickness of a layer of liquid, drawn by capillary attraction, between glass plates. **2.** An instrument that measures the absorption of gas by a liquid.

absorptiometry (ăb-sŏrp″shē-ŏm′ĕ-trē) The measurement of the dissipation of x-rays as they pass through substances (e.g., body tissues).

dual energy x-ray a. ABBR: DEXA; DEX. A radiographic technique used to measure the average density of the mineral concentration of bone (e.g., at the femur, the heel, or the forearm). It is used primarily in the diagnosis of osteopenia and osteoporosis.

absorption (ăb-sorp′shŭn) [L. *absorptio*] **1.** The taking up of liquids by solids, or of gases by solids or liquids. **2.** The taking up of light or its energy by black or colored rays. **3.** The taking up by the body of radiant energy, causing a rise in body temperature. **4.** The reduction in intensity of an x-ray photon as it passes through a substance or a beam of light as it passes through a solution (used in clinical photometry as well as nuclear methods). **5.** The passage of a substance through some surface of the body into body fluids and tissues, such as the diffusion of oxygen from the alveolar air into the blood, or the active transport of amino acids from food through the epithelium of the small intestine.

carbohydrate a. The taking up of the monosaccharides by the brush border of the small intestine.

colonic a. The uptake of water, electrolytes such as sodium, amino acids, and some drugs by the mucosa of the large bowel.

cutaneous a. Absorption through the skin. SYN: *percutaneous absorption*.

external a. Absorption of material by the skin and mucous membrane.

fat a. The taking up of glycerols and fatty acids, suspended in bile salts, into the villi of the small intestine.

gastric a. Absorption of water, alco-

hol, and some salts through the gastric mucosa.

mouth a. Oral or buccal absorption of materials or medicines such as nicotine or nitroglycerin. Alkaloids are better absorbed through the oral mucosa than acidic chemicals.

parenteral a. Absorption of fluids, electrolytes, and nutrients from a site other than the gastrointestinal tract.

pathological a. Absorption of a substance normally excreted (e.g., urine) or of a product of disease processes (e.g., pus) into the blood or lymph.

percutaneous a. Cutaneous a.

protein a. The taking up of amino acids—singly, or linked as dipeptides or tripeptides—by the brush border of the small intestine.

small intestinal a. The uptake of water, fatty acids, monosaccharides, amino acids, vitamins, and minerals from the lumen of the gut into the capillary networks and lacteals of the villi. The small intestine is the major site of nutrient absorption in the body.

absorption lines In spectroscopy, dark lines of the solar spectrum. SYN: *Fraunhofer's lines*.

absorptive (ăb-sorp′tĭv) Absorbent.

abstinence (ăb′stĭ-nĕns) [L. *abstinere,* to abstain] Going without something voluntarily, esp. refraining from indulgence in food, alcoholic beverages, or sexual intercourse.

abstinence effects Withdrawal.

abstract (ăb′străkt, ăb-străkt′) [L. *abstrahere,* to draw away] **1.** A summary or abridgment of an article, book, or address. **2.** Intangible.

discharge a. Discharge summary.

abstraction (ăb-străk′shŭn) **1.** Removal or separation of a constituent from a mixture or compound. **2.** Distraction of the mind; inattention or absent-mindedness. **3.** The process whereby thoughts and ideas are generalized and dissociated from particular concrete instances or material objects.

abulia (ă-bū′lē-ă) [Gr. *a-,* not, + *boule,* will] **1.** Absence of or decreased ability to exercise willpower (or initiative) or to make decisions. **2.** Syndrome of slow reaction, lack of spontaneity, and brief spoken responses. It may be part of the clinical picture that accompanies injuries to or diseases of the internal capsules, basal ganglia, or frontal lobes of the brain.

abuse (ă-būs′) [L. *abusus,* using up] **1.** Excessive or improper use (e.g., abuse of alcohol or other agents); misuse. **2.** Injurious, pathological, or malignant treatment of another person or living thing (e.g., verbal, physical, or sexual assault; depriving others of the means to maintain their health, nutrition, or safety; or exposing others to unnecessary risks).

child a. Emotional, physical, or sexual injury to a child. It may be due either to an action or to an omission by those responsible for the care of the child. In domestic situations in which a child is abused, it is important to examine other children and infants living in that home; about 20% will have signs of physical abuse. The examination should be done without delay. An infant or child must never be allowed to remain in an environment where abuse has occurred. SEE: *battered child syndrome; shaken baby syndrome*.

PATIENT CARE: All health care providers, teachers, and others who work with children are responsible for identifying and reporting abusive situations as early as possible. Risks for abuse may be assessed by identifying predisposing parental, child, and environmental characteristics, but these are not by themselves predictors of actual abuse. A detailed history and thorough physical examination should be carried out. Findings should be assessed not only in comparison to known indicators of maltreatment but also in light of diseases or cultural practices that can simulate abuse. Nurses play an important role in identifying child abuse, since they often are the first health care contacts for child and family (e.g., in the emergency department, physician's office, clinic, or school).

Physical neglect may be evidenced by failure to thrive, signs of malnutrition, poor personal hygiene, dental neglect, unclean or inappropriate dress, and frequent injuries from lack of supervision.

Emotional abuse (belittling, embarrassing, blaming, rejection) and neglect may be suspected but are difficult to substantiate. Physical abuse is not always obvious and may be difficult to diagnose. Subtle physical indicators include failure to thrive, feeding disorders, enuresis, and sleep disorders. More overt evidence of abuse includes bruises and welts, imprint burns (forming the shape of a cigarette tip or other item), immersion burns (socklike on feet and legs or donut-shaped on buttocks or genitalia), spiral fractures and dislocations of limbs, facial and rib fractures, abrasions and lacerations in various stages of healing, human bite marks (with tissue compression and contusion), and chemical poisonings. Behavioral indicators include self-stimulating behaviors; lack of social smile and stranger anxiety during infancy; withdrawal; unusual wariness; antisocial behavior (destructiveness, cruelty, stealing); being indiscriminately friendly or displaying unexpected affection; developing only superficial relationships; acting out to seek attention; being overly compliant, passive, aggres-

sive, or demanding; delays in emotional, language, and intellectual developmental; and suicide attempts.

Symptoms in the older child include begging or stealing food, frequent school absences, vandalism, shoplifting, or substance abuse.

When sexual abuse is suspected, a thorough but gentle physical examination must be conducted. Physical indicators may include any injury to the external genitalia, anus, mouth, and throat; torn, stained, or bloody undergarments; pain on urination or recurrent urinary tract infections; pain, swelling, unusual odor, and itching of the genitalia; vaginal or penile discharge, vaginitis, venereal warts, or sexually transmitted diseases; difficulty with walking or sitting; or pregnancy in the young adolescent. In most cases, the child knows the sexual abuser; in about half the cases the abuser is a caregiver or parent.

Abuse should be suspected in the presence of physical evidence, including old injuries; conflicting stories about an accident or injury from parents or others; injury blamed on siblings or another party; injury inconsistent with the history given; a history inconsistent with the child's developmental age; a chief complaint that is not associated with physical evidence; inappropriate level of parental concern (absence or an exaggerated response); refusal of parents to sign for needed tests or treatments; excessive delay in seeking treatment; absence of parents for questioning; inappropriate response of the child (little or no response to pain, fear of being touched, excessive or deficient separation anxiety, or indiscriminate friendliness to strangers); previous reports of abuse in the family; and/or repeated visits to emergency facilities with injuries (this may require checking with other facilities). Often, suspicions may be aroused by a feeling that behaviors are "not right."

The first priority of care for the abused child is prevention of further injury. This usually involves removing the child from the abusive situation by reporting the situation to local authorities. All U.S. states and Canadian provinces have laws for mandatory reporting of such mistreatment. If evidence of abuse is supported, further action is taken. If the child is hospitalized because of injuries, his or her prescribed treatment is managed. Care consistent with that for a rape victim is provided when sexual abuse is present. All developmental and other needs of the child are considered as they would be for any other child patient. Caregivers act as role models for parents, helping them to relate positively to their child and fostering a therapeutic environment. In such an environment, there is no accusation or punishment, only concern and treatment to help parents recognize and change abusive behaviors. Referral to self-help groups, resources for financial aid, improved housing, and child care are important in helping families deal with overwhelming stress.

Educational programs in the prenatal period, infancy home visits, and out-patient parent groups provide opportunities for health care providers to give families information about normal growth and development and routine health care. In such cases, families can also share their concerns, gain support from others, and obtain referrals to appropriate services when needs are identified. Prevention of sexual abuse focuses on teaching children about their bodies, their right to privacy, and their right to say no. Parents and school nurses can discuss such topics with children, using "what if" questions to explore potentially dangerous situations. Everyone needs to know that "nice" people can be sexual abusers and that a change in a child's behavior toward a person requires investigation. The child must always be reassured that whatever happened was not his or her fault. Prevention of false accusations is also important. Caregivers play an important role by carefully documenting all evidence of abuse and recording exactly what they observed on examination and what behaviors occurred without interpreting their meaning.

For further information on abuse or reporting abuse, contact: U.S. Department of Health and Human Services Children's Bureau: Childhelp USA's National Child Abuse Hotline at 1-800-4 A CHILD (http://www.acf.dhhs.gov/programs/cb/); Prevent Child Abuse America at 1-800-CHILDREN or 312-663-3520 (http://www.preventchildabuse.org); or National Clearinghouse on Child Abuse and Neglect Information at 1-800-394-3366 or 703-385-7565 (http://nccanch.acf.hhs.gov).

domestic a. The mistreatment or injury of individuals in a domestic setting. Such abuse includes physical violence (e.g., striking or forcibly restraining or raping a family member), passive abuse (e.g., withholding access to resources needed to maintain health), psychological or emotional abuse (e.g., demeaning, devaluing, intimidating, or instilling fear by threat of physical harm or abandonment), and economic abuse by imposing financial dependency. Domestic abuse is common: more than two million Americans are abused or assaulted each year.

PATIENT CARE: Domestic violence

should be considered in any patient who:

1. presents with unexplained bruises, lacerations, burns, fractures, or multiple injuries in various stages of healing (esp. in areas normally covered by clothing);
2. delays seeking treatment for an injury;
3. has a partner who is reluctant to leave the patient alone, or is uncooperative or domineering;
4. indicates that he or she has a psychiatric history or drug/alcohol problems;
5. presents with injuries that are not consistent with the "accident" reported;
6. expresses fear about returning home or for the safety of children in the home; or
7. talks about harming himself or herself.

Professional health care providers should screen such patients privately to ensure confidentiality and patient safety. "Do you feel safe at home?" may elicit a history of abuse. A sympathetic and nonjudgmental manner helps victims to communicate. Scrupulous documentation of evidence of abuse is critical. Reporting is mandatory in many states.

elder a. Emotional, physical, or sexual injury or financial exploitation, of a person over 65 years of age. It includes violence, financial exploitation, intimidation, humiliation, isolation, and neglect (e.g., failure to provide adequate clothing, food, medical care, or shelter). Elders may be exploited by individuals and organizations.

PATIENT CARE: The assessment of older people thought to have been abused includes looking for evidence of impairments in caregiver relationships to the aged and in finding unusual patterns of injuries or illnesses that seem unlikely to occur as a result of disease. When abuse is suspected, questions such as: "Do you feel safe and well cared for at home?" or "Has someone hurt you?" or "Did someone do this to you?" may elicit a history of abuse if the patient is mentally competent. Careful documentation of historical and physical findings (including discrepancies between patient and caregiver reports) and notification of legal authorities (e.g., a local adult protective services agency, long-term-care ombudsman, or the police) are mandated in most jurisdictions. Resources for health care providers include the National Center on Elder Abuse Phone (202-898-2586; www.elderabusecenter.org); Adult Protective Services (www.elderabusecenter.org/default.cfm?p=apsstate.cfm); The National Long Term Care Ombudsman Resource Center (202-332-2275; www.ltcombudsman.org); The U.S. Administration on Aging Elder Care Locator (1-800-677-1116; www.eldercare.gov/Eldercare/Public/Home.asp).

Health care providers can also help the elderly by educating them about the potential for abuse (e.g., in community education and outreach programs), explaining that abuse can be physical, emotional, or financial, and that even people who appear to be kind can be abusive. Talking points include recommendations that the elderly remain active and engaged with others in the community and that they get help and representation from ombudsmen or family lawyers who can be trusted to represent their interests.

laxative a. The ingestion of cathartic drugs to relieve perceived constipation when none is present or to prevent the absorption of nutrients (e.g., in bulimia). Patients who consume excessive quantities of laxatives may complain of chronic diarrhea or may present with illnesses caused by electrolyte deficiencies.

sexual a. Fondling, rape, sexual assault, or sexual molestation. The abuser may be a male or female, adult or child. The victim may be of the same sex or the opposite sex as the abuser. SEE: *incest; rape*.

spouse a. Emotional, physical, or sexual mistreatment of one's spouse.

substance a. A maladaptive pattern of behavior marked by the use of chemically active agents (e.g., prescription or illicit drugs, alcohol, and tobacco). Of all deaths in the U.S. each year, half are caused by substance abuse. Substance abuse is pervasive. About 33% of all Americans smoke cigarettes, 6% use illicit drugs regularly, and about 14% of all Americans are alcoholics. The consequences of substance abuse include heart disease, cancer, stroke, chronic obstructive lung disease, cirrhosis, trauma, and familial, social, legal, and economic difficulties. SEE: *alcoholism; drug dependence; nicotine; tobacco; Nursing Diagnoses Appendix.*

abutment (ă-bŭt′mĕnt) [Fr. *abouter,* to place end to end] A structure that provides support for fixed restorations and prosthetic devices. Examples of dental abutments include natural teeth and implants.

ABVD *Adriamycin, bleomycin, vinblastine,* and *dacarbazine,* a combination of chemotherapy drugs.

abzyme (ăb′zīm″) [*ab,* abbr. for *antibody* + Gr. *zyme,* leaven] A monoclonal antibody that acts as a catalyst. Also known as a catmab (catalytic monoclonal antibody).

AC *acromioclavicular; adrenal cortex; air conduction; alternating current; anodal closure; atriocarotid; auriculocarotid; axiocervical.*

Ac Symbol for the element actinium.

a.c. L. *ante cibum,* before meals.

-ac (ăk) A suffix used to designate an anti-inflammatory drug derived from acetic acid.

acacia (ă-kā′shē-ă) Gum arabic. A dried gummy exudation from the tree *Acacia senegal.* It is used as a suspending agent in pharmaceutical products.

academic dishonesty Intentional participation in deceptive practices in one's academic work or the work of others. Examples include cheating, fraud, plagiarism, or falsification of research results.

acalculia (ă-kăl-kū′lē-ă) [Gr. *a-,* not, + L. *calculare,* to reckon] A learning or speech disorder characterized by the inability to perform simple arithmetic operations.

acampsia (ă-kămp′sē-ă) [″ + *kamptein,* to bend] Inflexibility of the joints of a limb; rigidity; ankylosis.

acanth- SEE: *acantho-*.

acantha (ă-kăn′thă) [Gr. *akantha,* thorn] **1.** The spine. **2.** A vertebral spinous process.

acanthamebiasis (ă-kăn″thă-mē-bī′ă-sĭs) A rare infection of the brain and meninges caused by free-living amebae. The organisms invade the nasal mucosa of persons swimming in fresh water, the natural habitat of *Acanthamoeba* and *Naegleria fowleri*. The organisms invade the central nervous system through the olfactory foramina. The symptoms begin after an incubation period of 2 to 15 days and are those of acute meningitis. Debilitated or immunocompromised persons are esp. susceptible. Diagnosis is made by finding the amebae in the spinal fluid. Treatment is virtually ineffective and most patients die within a week of onset. Swimming pools adequately treated with chlorine are not a source of the amebae. SEE: *meningoencephalitis, primary amebic*.

acanthesthesia (ă-kăn″thĕs-thē′zē-ă) [Gr. *akantha,* thorn, + *aisthesis,* sensation] A sensation as of a pinprick; a form of paresthesia.

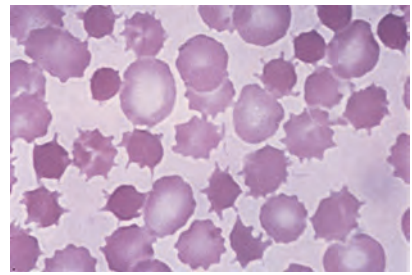
acanthion (ă-kăn′thē-ŏn) [Gr. *akanthion,* little thorn] The tip of the anterior nasal spine.

acantho-, acanth- [Gr. *akantha,* thorn] Combining forms meaning *thorn, spine*.

Acanthocephala (ă-kăn″thō-sĕf′ă-lă) [Gr. *akantha,* thorn + *kephale,* head] A phylum of parasitic worms. Their usual hosts are fish and birds. SYN: *proboscis worms; thorny-headed worms.*

acanthocephaliasis (ă-kăn″thō-sĕf-ă-lī′ă-sĭs) Widespread infection of skin and bones with Acanthocephala. It is most often seen in immunosuppressed patients.

acanthocyte (ă-kăn′thō-sīt″) [Gr. *akantha,* thorn, + *kytos,* cell] An abnormal erythrocyte that in wet preparations has cytoplasmic projections so that the cell appears to be covered with thorns. SEE: illus.; *abetalipoproteinemia*.



ACANTHOCYTES IN PATIENT WITH ABETALIPOPROTENEMIA (×640)

acanthocytosis (ă-kăn″thō-sī-tō′sĭs) [″ + ″ + *osis,* condition] Acanthocytes in the blood.

acanthoid (ă-kăn′thoyd) [″ + *eidos,* form, shape] Thorny; spiny; of a spinous nature.

acanthokeratodermia (ă-kăn″thō-kĕr″ă-tō-dĕr′mē-ă) [″ + *keras,* horn, + *derma,* skin] Hypertrophy of the horny portion of the skin of the palms of the hands and soles of the feet and thickening of the nails.

acantholysis (ă-kăn-thŏl′ĭ-sĭs) [″ + *lysis,* dissolution] Any disease of the skin accompanied by degeneration of the cohesive elements of the cells of the outer or horny layer of the skin.

a. bullosa Obsolete term for epidermolysis bullosa.

acanthoma (ăk″ăn-thō′mă) [″ + *oma,* tumor] A benign tumor of the skin. It was previously used to denote skin cancer.

a. adenoides cysticum A cystic tumor, often familial, occurring on the chest and face and in the axillary regions. The tumor contains tissues resembling sweat glands and hair follicles. SYN: *epithelioma adenoides cysticum*.

acanthopelvis, acanthopelyx (ă-kăn″thō-pĕl′vĭs, -pĕl′ĭks) [″ + *pelyx,* pelvis] A prominent and sharp pubic spine on a rachitic pelvis.

acanthosis (ăk″ăn-thō′sĭs) [″ + *osis,* condition] Increased thickness of the prickle cell layer of the skin. **acanthotic** (ăk″ăn-thŏt′ĭk), *adj.*

a. nigricans A skin disorder in which dark brown or gray velvety plaques appear on the skin, typically under the arms, in the groin or upper thighs, on the neck, or near the genitalia. They usually appear in patients with relative insulin excess, such as adults with obesity, type 2 diabetes mellitus, or polycystic ovaries. The condition may rarely be associated with internal malignancy. SYN: *keratosis nigricans*.

acapnia (ă-kăp′nē-ă) [Gr. *akapnos,* smokeless] Literally, the absence of carbon dioxide. The term is incorrectly used to indicate less than the normal amount of carbon dioxide in blood and tissues (e.g., after hyperventilaion). SYN: *hypocapnia*. **acapnial** (ă-kăp′nē-ăl), *adj.*

acarbia (ă-kăr′bē-ă) Decrease of bicarbonate in the blood.

acardia (ă-kăr′dē-ă) [Gr. *a-,* not, + *kardia,* heart] Congenital absence of the heart (e.g., in a monozygotic twin supported by the circulatory system of the other fetus). **acardiac** (ă-kăr′dē-ăk), *adj.*

acardiacus (ă-kăr-dī′ă-kŭs) A parasitic twin without a heart, therefore using the circulation of its twin. SYN: *acardius*.

acardiotrophia (ă-kăr″dē-ŏ-trō′fē-a) [Gr. *a-,* not, + *kardia,* heart + *trophe,* nutrition] Atrophy of the heart.

acardius (ā-kăr′dē-ŭs) Acardiacus.

acariasis (ăk″ă-rī′ă-sĭs) [L. *acarus,* mite, + Gr. *-iasis,* condition] Any disease caused by a mite or acarid. SYN: *acarinosis; acaridiasis*.

demodectic a. Infection of hair follicles with *Demodex folliculorum*.

sarcoptic a. Infestation with a burrowing mite, *Sarcoptes scabiei,* which deposits its eggs in the burrows. SEE: *scabies*.

acaricide (ă-kăr′ĭ-sīd) [″ + *caedere,* to kill] **1.** An agent that destroys acarids. **2.** Destroying a member of the order Acarina.

acarid, acaridan (ăk′ă-rĭd, ă-kăr′ĭ-dăn) [L. *acarus,* mite] A tick or mite of the order Acarina.

Acaridae (ă-kăr′ĭ-dē) A family of mites that irritate the skin. SEE: *itch, grain; itch, grocer's*.

acaridiasis (ă-kăr″ĭ-dī′ă-sĭs) [″ + Gr. *-iasis,* condition] Acariasis.

Acarina (ăk″ă-rī′nă) An order of arachnids that includes many ticks and mites. Most are ectoparasites, i.e., parasites that infest the skin and skin structures; their bites or burrowing cause localized dermatitis and itching. Systemic reactions are rare. Some may be vectors of disease. SEE: *Ixodidae; Lyme disease; Sarcoptidae; scabies; tick*.

acarinosis (ă-kăr″ĭ-nō′sĭs) [L. *acarus,* mite, + Gr. *osis,* condition] Acariasis.

acarodermatitis (ăk″ă-rō-dĕr″mă-tī′tĭs) [″ + Gr. *derma,* skin, + *itis,* inflammation] Skin inflammation caused by a mite.

acaroid (ăk′ă-royd) [″ + Gr. *eidos,* form, shape] Resembling a mite.

acarology (ăk″ă-rŏl′ō-jē) [″ + Gr. *logos,* word, reason] The study of mites and ticks.

acarophobia (ăk″ăr-ō-fō′bē-ă) [″ + Gr. *phobos,* fear] Abnormal fear of small objects such as pins, needles, worms, mites, and other small insects.

Acarus (ăk′ăr-ŭs) [L., mite] A genus of mites.

A. folliculorum Demodex folliculorum.

A. scabiei *Sarcoptes scabiei.* SEE: *scabies; Sarcoptidae*.

acarus [L.] Any mite or tick.

acaryote (ă-kăr′ē-ōt) [Gr. *a-,* not, + *karyon,* nucleus] Without a nucleus. SEE: *eukaryote; prokaryote*.

acatalasemia (ă″kăt-ă-lă-zē′mē-ă) Acatalasia.

acatalasia (ă″kăt-ă-lā′zē-ă) A rare inherited disease in which there is an absence of the enzyme catalase. The gingival and oral tissues are particularly susceptible to bacterial invasion with subsequent gangrenous changes and alveolar bone destruction. SYN: *acatalasemia*.

acatastasia (ă-kăt-ăs-tā′zē-ă) [Gr. *akatastasis,* disorder] Irregularity; deviation from the normal.

acc *accommodation.*

accelerated drug approval The bringing of a drug to market more rapidly than most other drugs, typically because the drug serves a compelling public health interest.

acceleration (ăk-sĕl″ĕr-ā′shŭn) [L. *accelerans,* hastening] **1.** An increase in the speed of an action or function, such as pulse or respiration. **2.** The rate of change in velocity for a given unit of time.

angular a. Rate of change in velocity per unit of time during circular movement.

central a. Centripetal a.

centripetal a. Rate of change in velocity per unit of time while on a circular or curved course. SYN: *central acceleration*.

fetal heart rate a. **1.** The increase in heart rate associated with fetal movement. **2.** A reassuring sign during labor that the fetus is not experiencing intrauterine hypoxemia.

linear a. Rate of change in velocity per unit of time while on a straight course.

negative a. Decrease in the rate of change in velocity per unit of time.

positive a. Increase in the rate of change in velocity per unit of time.

standard a. of free fall The rate of change in velocity of a freely falling body as it is acted on by gravity to travel to the earth. It is 9.81 m (or 32.17 ft)/sec^2.

acceleration fractionation The treatment of a tumor with radiation doses given over a shorter period than usual, e.g., over a 5-week as opposed to a 7-week period. Accelerated fractionation may provide clinical and survival benefits to some patients with inoperable tumors.

accelerator (ăk-sĕl′ĕr-ā″tor) **1.** Anything that increases action or function. **2.** In chemistry, a catalyst. **3.** A device that

speeds up charged particles to high energy levels to produce x-radiation and neutrons.

accelerometer (ăk″sĕl-ĕr-ŏm′ĕ-tĕr) An instrument that detects a change in the velocity of the object to which it is attached. The device may be designed to record the changes and indicate the direction(s) of the acceleration.

acceptable daily intake (ăk-sĕp′tă-bĭl) [LL *acceptabilis*] ABBR: ADI. That quantity of chemical residue contained in food and thought to be harmless even when consumed daily for life. The chemical residue may be a food additive, e.g., a preservative, or an antibiotic, antifungal, or a small quantity of pesticide. ADIs apply solely to residues of chemicals used intentionally by agricultural businesses in food production. ADI is expressed as mg/kg (bw)/d (milligrams of residue per kilogram body weight per day). Chemicals that enter the human food supply unintentionally are called contaminants, not residues.

acceptance **1.** According to Dr. Elisabeth Kübler-Ross, the fifth and final stage of dying. Individuals who reach this stage (not all do) come to terms with impending death and await the end with quiet expectation. **2.** In organ transplantation, the harmonious integration of grafted tissue into the body of the transplant recipient. **3.** Approval or acquiescence (e.g., of a recommended treatment or a functional impairment produced by an illness).

acceptor (ăk-sĕp′tor) [L. *accipere,* to accept] A compound that unites with a substance freed by another compound, called a donor.

hydrogen a. A substance that combines with hydrogen and is reduced when a substrate is oxidized by an enzyme.

oxygen a. A substance that combines with oxygen and is oxidized when a substrate is reduced by an enzyme.

access The ability or the technique of obtaining data from a specific source by a specific user.

access, medical SEE: *medical access*.

access, vascular A portal of entry into the circulation, for example, by way of a dialysis catheter.

accessible Able to be used or entered. In the U.S., under the requirements of the Americans with Disabilities Act (ADA), public places and places of employment must be accessible to the disabled through architectural design (e.g., ramps, wheelchair-wide doorways) and/or the use of assistive technologies. SEE: *barrier-free design*.

accessory (ăk-sĕs′ō-rē) Auxiliary; assisting. This term is applied to a lesser structure that resembles in structure and function a similar organ.

accessory muscles of respiration Muscles that are recruited to increase ventilation by patients with labored breathing. The sternocleidomastoids, scalenes, and pectoralis minors may be used for a more forceful inhalation; the abdominal muscles may be used for a more forceful exhalation. Their use represents an abnormal or labored breathing pattern and is a sign of respiratory distress.

accident (ăk′sĭ-dĕnt) [L. *accidens,* happening] **1.** An unforeseen occurrence of an unfortunate nature; a mishap. **2.** An unexpected complicating event in the course of a disease or following surgery.

accidental (-dĕn′tăl), *adj.*

cerebrovascular a. ABBR: CVA. Stroke.

radiation a. Undesired excessive exposure to ionizing radiation.

accident-prone Frequently injured or at risk for traumatic injury. The validity of this concept is questionable.

acclimation, acclimatization (ăk-lĭ-mā′shŭn, ă-klī″mă-tĭ-zā′shŭn) [Fr. *acclimater,* acclimate] The act of becoming adapted and adjusted to a new or unfamiliar environment.

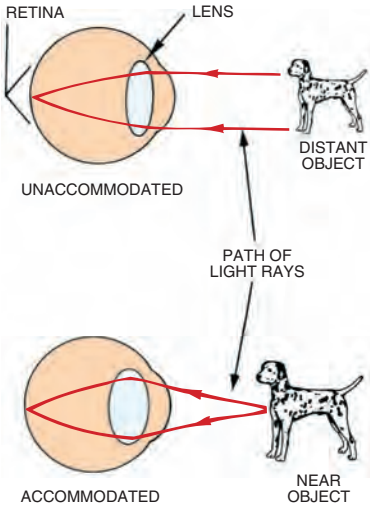
acclimatize (ăk-klī′mă-tīz) To become accustomed to a different environment.

accommodation (ă-kŏm″ă-dā′shŭn) [L. *accommodare,* to suit] ABBR: a; acc. **1.** Adjustment or adaptation. **2.** In ophthalmology, a phenomenon noted in receptors in which continued stimulation fails to elicit a sensation or response. **3.** The adjustment of the eye for various distances whereby it is able to focus the image of an object on the retina by changing the curvature of the lens. In accommodation for near vision, the ciliary muscle contracts, causing increased rounding of the lens, the pupil contracts, and the optic axes converge. These three actions constitute the accommodation reflex. The ability of the eye to accommodate decreases with age. SYN: *ocular accommodation; visual accommodation*. SEE: illus. **4.** In the learning theory of Jean Piaget, the process through which a person's schema of understanding incorporates new experiences that do not fit existing ways of understanding the world. SEE: *adaptation*.

absolute a. Accommodation of one eye independently of the other.

amplitude of a. The difference in the refractive power of the eye when accommodating for near and far vision. It is measured in diopters (D) and normally diminishes progressively from childhood to old age. It is approx. 16 D at age 12, 6.5 D at age 30, and 1 D at age 50.

binocular a. Coordinated accommodation of both eyes jointly.



VISUAL ACCOMMODATION

excessive a. Greater-than-needed accommodation of the eye.

mechanism a. A method by which curvature of the eye lens is changed in order to focus close objects on the retina.

negative a. Relaxation of the ciliary muscle to adjust for distant vision.

ocular a. Accommodation (3).

positive a. Contraction of the ciliary muscle to adjust for near vision.

range of a. SEE: under *range*.

reasonable a. An employer's responsibility to provide necessary workplace changes in reassignment, equipment modification, devices, training materials, interpreters, and other adjustments for disabled employees.

relative a. The extent to which accommodation is possible for any specific state of convergence of the eyes.

spasm of a. A spasm of the ciliary muscle, usually the result of excessive strain from overuse; it is common in myopia.

subnormal a. Insufficient accommodation.

visual a. Accommodation (3).

accommodative/convergence accommodation ratio (ă-kŏm′ă-dā″tĭv) ABBR: A/CA. The amount of inward turning of the eyes that accompanies each diopter of accommodation. Normally the A/CA ratio is 1:4 or 1:5.

accommodative excess Overfocusing of the eye. It causes blurry vision when one views distant objects.

accommodative fatigue The inability of the eye to sustain accommodation over time. It is usually a result of repeated or sustained visual effort.

accommodative inertia A rare disorder of accommodation in which the time between the application of an accommodative stimulus and the response of the eye is delayed. The delay is typically more than 0.7 sec.

accoucheur, accoucheuse (ă-koo-shŭr′, ă-koo-shĕz′) [Fr.] An obstetrician or midwife.

accountability Responsibility of health care professionals for their decisions, judgments, and acts.

ACCP *American College of Chest Physicians*.

accreditation Formal recognition by an impartial body that an educational faculty or health care institution has met established quality benchmarks. In the U.S. there are two types of educational accreditation: institutional and specialized. The former recognizes the institution for having facilities, policies, and procedures that meet accepted standards. The latter recognizes specific programs of study within institutions for having met established standards.

Accredited Record Technician ABBR: A.R.T. A person who, as a result of training and experience, is competent to process, maintain in a secure place, compile, and report information in a patient's medical record. This is done according to rules set by the health care facility to comply with medical, administrative, ethical, legal, and accreditation considerations.

accretio (ă-krē′shē-ō) [L.] Adhesion of parts normally separate from each other.

a. cordis The extension of fibrous bands from the external pericardium to surrounding structures, resulting in angulation and torsion of the heart.

accretion (ă-krē′shŭn) [L. *accrescere,* accrue] **1.** An increase by external addition; accumulation. **2.** The growing together of parts naturally separate. **3.** Accumulation of foreign matter in a cavity.

acculturation The process by which a member of one culture assumes the values, attitudes, and behavior of a second culture.

accumulate (ă-kūm′ū-lāt″) **1.** To grow in number or mass. **2.** To store or incorporate.

Accupril (āk′ū-prĭl″) Quinapril.

accuracy **1.** The ratio of the error of measurement to the true value. **2.** The state of being free of error. **3.** The sum of the true-positive and true-negative test results, divided by the total number of tests performed.

ACD *absolute cardiac dullness.*

ACD sol Citric acid, trisodium citrate, dextrose solution; an anticoagulant used in collecting blood.

ACE *angiotensin-converting enzyme.*

acellular (ă-sĕl′ū-lăr) **1.** Not containing cells. **2.** Not containing complete cells, but rather, antigenically recognizable

parts of them. The term is used to describe some vaccines.

acentric (ă-sĕn′trĭk) [″ + L. *centrum,* center] Not central; peripheral.

ACEP *American College of Emergency Physicians.*

acephalia, acephalism (ă-sĕ-fā′lē-ă, ă-sĕf′ă-lĭzm) [Gr. *a-,* not, + *kephale,* head] Congenital absence of the head.

acephalocardia (ă-sĕf″ă-lō-kăr′dē-ă) [″ + ″ + *kardia,* heart] Congenital absence of the head and heart.

acephalochiria (ă-sĕf″ă-lō-kī′rē-ă) [″ + ″ + *cheir,* hand] Congenital absence of the head and hands.

acephalocyst (ă-sĕf′ă-lō-sĭst) [″ + ″ + *kystis,* bag] A sterile hydatid cyst.

acephalopodia (ă-sĕf″ă-lō-pō′dē-ă) [″ + ″ + *pous,* foot] Congenital absence of the head and feet.

acephalostomia (ă-sĕf″ă-lō-stō′mē-ă) [″ + ″ + *stoma,* mouth] Congenital absence of the head; however, an opening resembling a mouth is present on the superior portion of the body.

acephalothoracia (ă-sĕf″ă-lō-thō-rā′sē-ă) [″ + ″ + *thorax,* chest] Congenital absence of the head and chest.

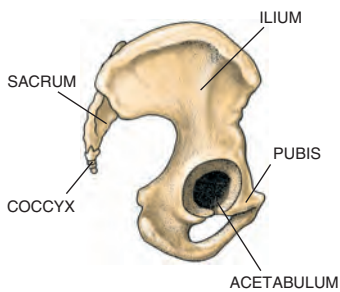
acephalus (ă-sĕf′ă-lŭs) A fetus lacking a head.

acetabular (ăs″ĕ-tăb′ū-lăr) Pert. to the acetabulum.

acetabulectomy (ăs″ĕ-tăb″ū-lĕk′tō-mē) [L. *acetabulum,* a little saucer for vinegar, + Gr. *ektome,* excision] Surgical removal of the acetabulum.

acetabuloplasty (ăs″ĕ-tăb′ū-lō-plăs″tē) [″ + Gr. *plassein,* to form] Surgical repair and reconstruction of the acetabulum.

acetabulum (ăs″ĕ-tăb′ū-lŭm) [L., a little saucer for vinegar] The cavity or depression on the lateral surface of the innominate bone (hip bone) that provides the socket into which the head of the femur fits. SEE: illus.



ACETABULUM OF RIGHT HIP BONE (FEMALE)

acetal (ăs′ĕ-tăl″) Chemical combination of an aldehyde with alcohol.

acetaldehyde (ăs″ĕt-ăl′dĕ-hīd″) CH_3CHO; an intermediate in yeast fermentation and alcohol metabolism. SYN: *acetic aldehyde.*

acetamide (ăs″ĕt-ăm′īd) Acetic acid amide, CH_3CONH_2, used in industry for synthesis of chemicals and as a solvent.

acetaminophen (ă-sĕt″ă-mĭn′ō-fĕn) A drug with antipyretic and analgesic effects similar to those of aspirin, but with limited anti-inflammatory or antirheumatic effects. It is used to treat mild to moderate pain. Unlike aspirin and related drugs, it is not irritating to the stomach.

! Overdose may cause necrosis of the liver or fulminant hepatic failure. An acetaminophen level should routinely be checked on all patients who come to an emergency department because of medication overdose.

acetanilid (ăs″ĕ-tăn′ĭ-lĭd) A white powder or crystalline substance obtained by interaction of glacial acetic acid and aniline.

ACTION/USES: Acetanilid has analgesic, antipyretic, and anti-inflammatory effects. Acute or chronic poisoning may develop as a result of prolonged administration or drug idiosyncrasy. Because of its toxicity, it is rarely used.

acetate (ăs′ĕ-tāt) A salt of acetic acid.

acetic (ă-sē′tĭk) [L. *acetum,* vinegar] Pert. to vinegar; sour.

acetic acid test A test for albumin in urine. Adding a few drops of acetic acid to urine that has been boiled causes a white precipitate if albumin is present.

acetic aldehyde Acetaldehyde.

acetify (ă-sĕt′ĭ-fī) [L. *acetum,* vinegar, + *fieri,* to become] To produce acetic fermentation or vinegar.

Acetobacter (ă-sē″tō-băk′tĕr) [L. *acetum,* vinegar, + Gr. *bakterion,* little rod] A genus of gram-negative bacilli that produce vinegar from plant matter.

acetone (ăs′ĕ-tōn) Dimethyl ketone, C_3H_6O, a colorless, volatile, flammable liquid used primarily in monitoring individuals with type 1 diabetes mellitus and used as a solvent. It has a sweet, fruity, ethereal odor and is found in the blood and urine of diabetics, in those with other metabolic disorders, and after lengthy fasting. It is produced when fats are not properly oxidized due to inability to oxidize glucose in the blood. SEE: *ketone; ketonuria; ketosis; test, acetone.*

a. in urine, test for A simple urine screening test, used principally in monitoring patients with type 1 diabetes mellitus, to determine the presence of ketoacidosis. To perform the test, the patient wets a specially treated paper or dipstick with urine. If ketones are present, the paper will change color within a specified time.

acetone body Ketone body.

acetonemia (ăs″ĕ-tō-nē′mē-ă) [*acetone*

+ Gr. *haima,* blood] Large amounts of acetone in the blood. It causes altered mental status, abdominal pain, and anorexia.

acetone test A test for the presence of acetone in the urine; made by dribbling urine on a dipstick. The presence of acetone causes a color change on the dipstick, which can be compared to calibrated standards.

acetonitrile (ăs″ĕ-tō-nī′trĭl) Methyl cyanide, CH_3CN, an ingredient of some commercially available nail care products. When ingested, it produces a toxic reaction similar to cyanide poisoning. The onset is delayed 9 to 12 hr or more. It is also found in the urine of cigarette smokers. Treatment for poisoning is the same as for cyanide poisoning. SEE: *cotinine; cyanide poisoning*.

acetonuria (ăs″ĕ-tō-nū′rē-ă) [*acetone* + Gr. *ouron,* urine] Ketonuria.

acetous (ăs′ĕ-tŭs) [L. *acetum,* vinegar] **1.** Pert. to vinegar. **2.** Sour in taste.

acetowhite test (ă-sē′-tō-hwīt″) [Fm. *acetic* + ″] A means of examining a genital or anal lesion for the presence of human papillomavirus infection and atypical cells suggestive of cancer. The lesion (e.g., an irregularity on the surface of the uterine cervix or a wart found on the penis) is coated with 5% acetic acid. The epithelium is then examined for a change in color (e.g., from pink or red to white). This color change in the presence of acetic acid suggests a pathologically significant lesion that may require biopsy or other intervention.

acetyl (ăs′ĕ-tĭl, ă-sēt′ĭl) [″ + Gr. *hyle,* matter] CH_3CO, a univalent radical.

a. CoA Acetylcoenzyme A.

acetylation (ă-sĕt″ĭ-lā′shŭn) The introduction of one or more acetyl groups into an organic compound.

acetylcholine (ăs″ĕ-tĭl-kō′lēn) ABBR: ACh. An ester of choline that is the neurotransmitter at somatic neuromuscular junctions, the entire parasympathetic nervous system, sympathetic preganglionic fibers (cholinergic fibers), and at some synapses in the central nervous system. It is inactivated by the enzyme cholinesterase. SEE: *cholinergic fiber*.

a. chloride A salt solution of acetylcholine used in irrigation of the iris to produce contraction of the pupil after cataract surgery. The sterile solution is instilled in the anterior chamber of the eye before suturing.

acetylcholinesterase (ăs″ĕ-tĭl-kō″lĭnĕs′tĕr-ās) ABBR: AChE. An enzyme that stops the action of acetylcholine. It is present in various body tissues, including muscles, nerve cells, and red blood cells.

acetylcoenzyme A (ăs″ĕ-tĭl-kō-ĕn′zīm″) A condensation product of coenzyme A and acetic acid.

acetylcysteine (ăs″ĕ-tĭl-sĭs′tē-ĭn) A chemical substance that when nebulized and inhaled liquefies mucus and pus. It is also used in the treatment of acetaminophen poisoning. SEE: *acetaminophen poisoning*.

acetylene (ă-sĕt′ĭ-lēn) A colorless explosive gas, C_2H_2, with a garlic-like odor.

acetyl L-carnitine A dietary supplement (a form of L-carnitine) promoted for its positive effects on fat (esp. triglyceride) metabolism and Alzheimer's disease.

acetyltransferase (ăs″ĕ-tĭl-trănz′fĕr-ās) An enzyme that is effective in the transfer of an acetyl group from one compound to another.

ACH *adrenocortical hormone.* SEE: under *hormone*.

ACh *acetylcholine.*

achalasia (ăk″ă-lā′zhă) [Gr. *a-,* not, + *chalasis,* relaxation] Failure to relax; said of smooth muscles, such as those positioned between the lower esophagus and the stomach. SEE: *Nursing Diagnoses Appendix.*

a. of the cardia Failure of the cardiac sphincter to relax, restricting the passage of food to the stomach. In advanced cases, dysphagia is marked, and dilation of the esophagus may occur. SYN: *cardiospasm*.

cricopharyngeal a. Failure of the lower pharyngeal muscles to relax during swallowing. The condition may cause dysphagia or aspiration of food.

pelvirectal a. Congenital absence of ganglion cells in the distal large bowel, resulting in failure of the colon to relax.

sphincteral a. Failure of the intestinal sphincters to relax.

AChE *acetylcholinesterase.*

ache (āk) [AS. *acan*] **1.** Pain that is persistent rather than sudden or spasmodic. It may be dull or severe. **2.** To suffer persistent pain.

acheilia (ă-kī′lē-ă) [Gr. *a-,* not, + *cheilos,* lip] Congenital absence of one or both lips.

acheiria (ă-kī′rē-ă) [″ + *cheir,* hand] **1.** Congenital absence of one or both hands. **2.** A loss of sensation in one or both hands. This may result from temporary or permanent injury or malfunction of the sensory mechanism, or it may occur in hysteria. **3.** Inability to determine to which side of the body a stimulus has been applied. SYN: *achiria*.

Achilles jerk (ă-kĭl′ēz) [Achilles, hero of the *Iliad,* whose vulnerable spot was his heel] Achilles tendon reflex.

Achilles tendon The tendon of insertion of the gastrocnemius and soleus muscles on the calcaneus; one of the strongest tendons in the body. SYN: *calcaneal tendon*.

Achilles tendon reflex Plantar flexion resulting from contraction of the calf muscles after a sharp blow to the Achilles tendon, activating the S1 spinal reflex.

The variations and their significance correspond closely to those of the knee jerk. It is exaggerated in upper motor neuron disease and diminished or absent in lower motor neuron disease. SYN: *triceps surae jerk; triceps surae reflex*.

achillobursitis (ă-kĭl″ō-bŭr-sī′tĭs) [*Achilles* + L. *bursa,* a pouch, + Gr. *itis,* inflammation] Inflammation of the bursae lying over the Achilles tendon. SYN: *Albert's disease*.

achillodynia (ă-kĭl″ō-dĭn′ē-ă) [″ + Gr. *odyne,* pain] Nondescript pain arising from the Achilles tendon.

achillorrhaphy (ă-kĭl-or′ă-fē) [″ + Gr. *rhaphe,* seam, ridge] Suture of the Achilles tendon.

achillotenotomy (ă-kĭl″ō-tĕn-ŏt′ō-mē) [″ + Gr. *tenon,* tendon, + *tome,* incision] Achillotomy.

achillotomy (ă-kĭl-ŏt′ō-mē) [″ + *tome,* incision] Division of the Achilles tendon. SYN: *achillotenotomy*.

achlorhydria (ă″klor-hī′drē-ă) [″ + *chloros,* green, + *hydor,* water] Absence of free hydrochloric acid in the stomach; may be associated with gastric carcinoma, gastric ulcer, pernicious anemia, adrenal insufficiency, or chronic gastritis. SEE: *achylia*.

histamine-proved a. Absence of free acid in gastric secretion even after subcutaneous injection of histamine hydrochloride.

acholuria (ă-kō-lū′rē-ă) [″ + *chole,* bile, + *ouron,* urine] Absence of bile pigments in the urine in some forms of jaundice.

achondrogenesis (ă-kŏn″drō-jĕn′ĕ-sĭs) [Gr. *a-,* not, + *chondros,* cartilage, + *genesis,* generation, birth] Failure of bone to grow, esp. the bones of the extremities.

achondroplasia (ă-kŏn″drō-plā′sē-ă) [″ + ″ + *plasis,* a molding] The most common form of short-limbed dwarfism, caused by a point mutation in a fibroblast growth receptor and characterized by impairment in the formation of cartilage at the epiphyses of long bones. SYN: *chondrodystrophy*.

achroma (ă-krō′mă) [″ + *chroma,* color] An absence of color or normal pigmentation as in leukoderma, albinism, and vitiligo.

achromasia (ăk″rō-mā′zē-ă) [Gr. *achromatos,* without color] **1.** Absence of normal pigmentation of the skin as in albinism, vitiligo, or leukoderma. **2.** Pallor. **3.** Inability of cells or tissues to be stained.

achromate (ă-krō′māt) [Gr. *a-,* not, + *chroma,* color] A person who is colorblind.

achromatic (ăk″rō-măt′ĭk) [Gr. *achromatos,* without color] **1.** Colorless. **2.** Not dispersing light into constituent components. **3.** Not containing chromatin. **4.** Difficult to stain, with reference to cells and tissues.

achromatin (ă-krō′mă-tĭn) The weakly staining nucleoplasm of a cell nucleus.

achromatism (ă-krō′mă-tĭzm) [Gr. *a-,* not, + *chroma,* color, + *-ismos,* condition] Colorlessness.

achromatocyte (ăk″rō-măt′ō-sīt) [Gr. *achromatos,* without color, + *kytos,* cell] Achromocyte.

achromatolysis (ă-krō″mă-tŏl′ĭ-sĭs) [″ + *lysis,* dissolution] Dissolution of cell achromatin.

achromatophil (ă″krō-măt′ō-fĭl) [″ + *philos,* love] A cell or tissue not stainable in the usual manner. SYN: *achromophil*.

achromatopsia (ă-krō″mă-tŏp′sē-ă) [″ + *opsis,* vision] Complete color blindness.

achromatosis (ă-krō″mă-tō′sĭs) [″ + *osis,* condition] The condition of being without natural pigmentation. SEE: *achroma*.

achromatous (ă-krō′mă-tŭs) Without color.

achromaturia (ă-krō″mă-tū′rē-ă) [Gr. *achromatos,* without color, + *ouron,* urine] Colorless or nearly colorless urine.

achromia (ă-krō′mē-ă) [Gr. *a-,* not, + *chroma,* color] **1.** Absence of color; pallor. **2.** Achromatosis. **3.** Condition in which erythrocytes have large central pale areas; hypochromia.

congenital a. Albinism.

achromic (ă-krō′mĭk) Lacking color.

Achromobacter (ă-krō″mō-băk′tĕr) A genus of gram-negative bacilli that may inhabit the lower gastrointestinal tract; may cause nosocomial infections.

achromocyte (ă-krō′mō-sīt) [Gr. *a-,* not, + *chroma,* color + *kytos,* cell] In a blood smear, a large, pale, crescent-shaped cell produced from fragile red cells as the bloodfilm preparation is being made. SYN: *achromatocyte; crescent body; selenoid cell*.

achromophil (ă-krō′mō-fĭl) [″ + ″ + *philos,* love] Achromatophil.

achromotrichia (ă-krō″mō-trĭk′ē-ă) [″ + ″ + *trichia,* condition of the hair] Lack of color or graying of the hair. SYN: *canities*.

nutritional a. Grayness of the hair due to dietary deficiency.

achylia (ă-kī′lē-ă) [Gr. *a-,* not, + *chylos,* juice] Absence of chyle or other digestive enzymes. SYN: *achylosis*.

a. gastrica Complete absence or marked decrease in the amount of gastric juice. SEE: *achlorhydria*.

a. pancreatica Absence or deficiency of pancreatic secretion; usually a sign of chronic pancreatitis.

achylosis (ă″kī-lō′sĭs) Achylia.

achylous (ă-kī′lŭs) [Gr. *achylos,* without chyle] **1.** Lacking in any kind of digestive secretion. **2.** Without chyle.

acicular (ă-sĭk′ū-lăr) [L. *aciculus,* little needle] Needle-shaped.

acid [L. *acidum,* acid] **1.** Any substance that liberates hydrogen ions (protons) in solution; a hydrogen ion donor. An acid reacts with a metal to form a salt, neutralizes bases, and turns litmus paper red. **2.** A substance that can accept a pair of electrons (Lewis acid). SEE: *alkali; base; indicator; pH.* **3.** A sour substance. **4.** Slang term for LSD.

acetic a. The substance, CH_3COOH, that gives the sour taste to vinegar; also used as a reagent. Glacial acetic acid contains at least 99.5% acetic acid by weight.

acetoacetic a. A ketone body, CH_3COCH_2COOH, formed when fats are incompletely oxidized. It appears in urine in abnormal amounts in starvation and in untreated diabetes, primarily type 1 diabetes. It was formerly called acetylacetic acid

acetylsalicylic a. Aspirin.

acrylic a. $CH_2{:}CH \cdot COOH$; a colorless corrosive liquid used in making acrylic polymers and resins.

adenylic a. Adenosine monophosphate.

amino a. SEE: *amino acid.*

aminoacetic a. Glycine.

aminobenzoic a. Para-aminobenzoic acid.

aminocaproic a. $H_2N(CH_2)_5COOH$; a hemostatic drug. It is a specific antidote for an overdose of a fibrinolytic agent.

aminoglutaric a. Glutamic a.

aminosalicylic a. Para-aminosalicylic a.

aminosuccinic a. Aspartic a.

arachidonic a. $C_{20}H_{32}O_2$; an essential fatty acid formed by the action of enzymes on phospholipids in cell membranes. It is metabolized primarily by the cyclo-oxygenase or 5-lipoxygenase pathways to produce prostaglandins and leukotrienes, which are important mediators of inflammation. Corticosteroids inhibit formation of arachidonic acid from phospholipids when cell membranes are damaged. Nonsteroidal anti-inflammatory agents such as salicylates, indomethacin, and ibuprofen inhibit the synthesis of prostaglandins and leukotrienes. Arachidonic acid is found in many foods.

argininosuccinic a. (ăr″jĭ-nĭ″nō-sŭk-sĭn′ĭk) A compound intermediate in the synthesis of arginine; formed from citrulline and aspartic acid.

ascorbic a. Vitamin C, $C_6H_8O_6$, a vitamin that occurs naturally in fresh fruits, esp. citrus, and vegetables. It can also be synthesized. It is essential in maintenance of collagen formation, osteoid tissue of bones, and formation and maintenance of dentin. This essential vitamin is used as a dietary supplement and in the prevention and treatment of scurvy. Scurvy develops after approx. 3 months of ascorbic acid deficiency in the diet. High daily doses (1 to 5 g/day) of vitamin C are purported to prevent or treat the common cold, but this has not been established. Continual consumption of high doses can cause kidney stones. SYN: *antiscorbutic vitamin; vitamin C.*

aspartic a. A nonessential amino acid, $HOOC \cdot CH_2 \cdot CH(NH_2) \cdot COOH$. It is a product of pancreatic digestion. SYN: *aminosuccinic acid.*

barbituric a. A crystalline compound, $C_4H_4N_2O_3$, from which phenobarbital and other barbiturates are derived. SYN: *malonylurea.*

bile a. Any one of the complex acids that occur as salts in bile (e.g., cholic, glycocholic, and taurocholic acids). They give bile its foamy character, are important in the digestion of fats in the intestine, and are reabsorbed from the intestine to be used again by the liver. The circulation of bile acids is called enterohepatic circulation.

boric a. A white crystalline substance, H_3BO_3, that in water forms a very weak acid solution poisonous to plants and animals. It is soluble in water, alcohol, and glycerin. SEE: *boric acid poisoning.*

Because of its toxicity, boric acid should be used rarely. It is particularly dangerous because it can be accidentally swallowed by children or used in food because of its resemblance to sugar.

butyric a. A fatty acid, C_3H_7COOH, derived from butter but rare in most fats. It is a viscid liquid with a rancid odor; it is used in disinfectants, emulsifying agents, and pharmaceuticals.

carbolic a. Phenol.

carbonic a. H_2CO_3; an acid formed when carbon dioxide is dissolved in water.

carboxylic a. Any acid containing the group -COOH. The simplest examples are formic and acetic acids.

cholic a. $C_{24}H_{40}O_5$; an acid formed in the liver by hydrolysis of other bile acids. It is formed from the breakdown of cholesterol and helps to digest consumed fats.

citric a. An acid, $C_6H_8O_7$, found naturally in citrus fruits or prepared synthetically. It acts as a sequestrant, helping to preserve food quality.

deoxyribonucleic a. ABBR: DNA. A complex nucleic acid of high molecular weight consisting of nucleotides made of deoxyribose, phosphoric acid, and one of four bases (two purines, adenine and guanine, and two pyrimidines, thymine and cytosine). These nucleotides are ar-

ranged as two long chains that twist around each other to form a double helix joined by hydrogen bonds between the complementary base pairs A-T and C-G. Nucleic acid, present in chromosomes of the nuclei of cells, is the chemical basis of heredity and the carrier of genetic information for all organisms except the RNA viruses. Formerly spelled desoxyribonucleic acid. SEE: *chromosome; gene; ribonucleic acid; virus; Watson-Crick helix*.

docosahexanoic a., docosahexaenoic (dŏk″ă-să-hĕk″să-nō′ĭk, să-ĕ-nō′ĭk ABBR: DHA.) An essential omega-3 polyunsaturated-22 carbon fatty acid found in fish oils. It plays a role in the development of nerve cell membranes and is required for the normal growth and development of the infant brain. Lack of docosahexanoic acid has been linked to increases in the number of people suffering from depression. Foods rich in DHA include cold water fish, seafood, and algae.

eicosapenteanoic a. ABBR: EPA. One of a group of fatty acids containing 20 carbons and five double bonds that is prevalent in fish oils. SEE: *omega-3 (ω3) fatty acids*.

essential fatty a. ABBR: EFA. A fatty acid (alpha-linoleic and linoleic) that must be present in the diet because it cannot be synthesized in the body and is essential to maintaining health. SEE: *digestion*.

ethylenediaminetetraacetic a. ABBR: EDTA. A chelating agent that, in the form of its calcium or sodium salts, is used to remove metallic ions such as lead and cadmium from the body and as a food preservative. SEE: *chelation*.

fatty a. A hydrocarbon in which one of the hydrogen atoms has been replaced by a carboxyl (COOH) group; a monobasic aliphatic acid made up of an alkyl radical attached to a carboxyl group.

Saturated fatty acids have single bonds in their carbon chain with the general formula $C_{n+1}H_{2n+3}$–COOH. They include acetic, butyric, capric, caproic, caprylic, formic, lauric, myristic, palmitic, and stearic acids. Unsaturated fatty acids have one or more double or triple bonds in the carbon chain. They include those of the oleic series (oleic, tiglic, hypogeic, and palmitoleic) and the linoleic or linolic series (linoleic, linolenic, clupanodonic, arachidonic, hydrocarpic, and chaulmoogric). Fatty acids are insoluble in water. This would prevent their absorption from the intestines if the action of bile salts on the fatty acids did not enable them to be absorbed. SEE: *fat*.

folic a. A water-soluble B complex vitamin needed for DNA synthesis and occurring naturally in green leafy vegetables, beans, and yeast. It is used to treat megaloblastic and macrocytic anemias and to prevent neural tube defects (NTDs) as well as cardiovascular disease in adults. The U.S. Public Health Service recommends that all women of childbearing age in the U.S. who are capable of becoming pregnant should consume 0.4 mg of folic acid per day to reduce their risk of having a child affected with spina bifida or other neural tube defects (NTD). SEE: *neural tube defect*. SYN: *folate; vitamin B_9*.

! Folic acid should not be used to treat pernicious anemia (a vitamin B_{12} deficiency) because it does not protect patients against the development of changes in the central nervous system that accompany this type of anemia.

formic a. HCOOH; the first and strongest member of the monobasic fatty acid series. It occurs naturally in certain animal secretions and in muscle, but it may also be prepared synthetically. It is one of the irritants present in the sting of insects such as bees and ants.

formiminoglutamic a. $C_6N_2O_4H_{10}$; an intermediate product in the metabolism of histidine. Its increase in the urine after administration of histidine in patients with folic acid deficiency is the basis for the FIGLU excretion test.

free fatty a. ABBR: FFA. The form in which a fatty acid leaves the cell to be transported for use in another part of the body. These acids are not esterified and may be unbound (i.e., not bound to protein). In the plasma, the nonesterified fatty acids released immediately combine with albumin to form bound free fatty acids.

gadolinium-diethylenetriamine pentaacetic a. ABBR: GD-DTPA. A radiographic contrast agent, used in magnetic resonance imaging to enhance the appearance of blood vessels.

! Gadolinium-containing contrast agents should not be given to patients with diminished renal function.

gallic a. A colorless crystalline acid, $C_6H_2(OH)_3COOH$. It occurs naturally as an excrescence on the twigs of trees, esp. oaks, as a reaction to the deposition of gall wasp eggs. It is used as a skin astringent and in the manufacture of writing inks and dyes.

gammalinoleic a. An essential fatty acid promoted by alternative medicine practitioners as a treatment for skin and inflammatory disorders, cystic breast disease, and hyperlipidemia.

glucuronic a. $CHO(CHOH)_4COOH$; an oxidation product of glucose that is present in the urine. Toxic products (e.g., salicylic acid, menthol, and phenol) that have entered the body through the intestinal tract are detoxified in the liver by conjugation with glucuronic acid.

glutamic a. $HOOC \cdot (CH_2)_2 \cdot CH(NH_2) \cdot COOH$; an amino acid formed in protein hydrolysis and an excitatory neurotransmitter in the central nervous system. SYN: *aminoglutaric acid*.

glyceric a. $CH_2OH \cdot CHOH \cdot COOH$; an intermediate product of the oxidation of fats.

glycocholic a. A bile acid, $C_{26}H_{43}NO_6$, yielding glycine and cholic acid on hydrolysis.

glycolic a. An alpha-hydroxy acid derivative used to remove the outer layer of skin to rejuvenate its appearance.

homogentisic a. An intermediate product of tyrosine catabolism; found in the urine in alkaptonuria. SYN: *alkapton(e)*.

hyaluronic a. ABBR: HA. An acid mucopolysaccharide found in the extracellular matrix of connective tissue that acts as a binding and protective agent. It is found, e.g., in synovial fluid and in the vitreous and aqueous humors of the eye. Serum levels of HA have been shown to be elevated in patients with osteoarthritis. SYN: *hyaluronan*.

hydriodic a. SYMB: HI. An acid used in solution in various forms of chemical analyses. SYN: *hydrogen iodide*.

hydrochloric a. HCl; an inorganic acid that is normally present in gastric juice. It destroys fermenting bacteria that might cause intestinal tract disturbances.

hydrocyanic a. HCN; a colorless, extremely poisonous, highly volatile liquid that occurs naturally in plants but can be produced synthetically. It has many industrial uses: electroplating, fumigation, and production of dyes, pigments, synthetic fibers, and plastic. Exposure of humans to 200 to 500 parts of hydrocyanic acid per 1,000,000 parts of air for 30 min is fatal. It acts by preventing cellular respiration. SYN: *hydrogen cyanide*. SEE: *Poisons and Poisoning Appendix*.

hydrofluoric a. (HF) A highly corrosive solution of hydrogen fluoride in water. It can be used in dentistry to etch composites and porcelain surfaces and is used industrially to etch glass. Exposures to the skin and aerodigestive tract cause severe burns with local necrosis and systemic manifestations resulting from disordered calcium and potassium metabolism. Treatments with calcium gluconate can be beneficial.

hydroxy a. An acid containing one or more hydroxyl (-OH) groups in addition to the carboxyl (-COOH) group (e.g., lactic acid, $CH_3COHCOOH$).

hydroxy-iminodiacetic a. ABBR: HIDA. A chemical that, when bound to radioactive technetium, is used to demonstrate the formation and flow of bile. SEE: *HIDA scan*.

hydroxybutyric a. An acid present in the urine, esp. in diabetic ketoacidosis, when fatty acid conversion to ketones increases.

hydroxycitric a. An herbal extract promoted for the treatment of weight loss. Placebo-controlled studies have not found any benefit to the treatment.

hypochlorous a. An acid, HClO, used as a disinfectant and bleaching agent. It is usually used in the form of one of its salts.

imino a. An acid formed as a result of oxidation of amino acids in the body.

inorganic a. An acid containing no carbon atoms.

keto a. Any organic acid containing the ketone CO (carbonyl radical).

lactic a. An organic acid, $C_3H_6O_3$, that is formed in muscles during the anaerobic cell respiration that occurs during strenuous exercise. It is also formed during anaerobic muscle activity when glucose cannot be changed to pyruvic acid in glycolysis. It contributes to muscle aches and fatigue.

linoleic a. $C_{18}H_{32}O_2$; an omega-6 fatty acid found in vegetables, nuts, grains, seeds, fruits and their oils. Oils rich in linoleic acid are safflower, sunflower, corn, soybean and cottonseed (in descending order).

linolenic a. $C_{18}H_{30}O_2$; a major omega-6 essential fatty acid.

Linolenic acid is thought to be cardioprotective. It reduces the production of cytokines and down-regulates serum cell adhesion molecules thought to be intermediates in atherosclerosis.

lysergic a. A crystalline substance, $C_{16}H_{16}N_2O_2$, derived from ergot. Its derivative, lysergic acid diethylamide (LSD), is a potent hallucinogen. SEE: *LSD*.

lysophosphatidic a. ABBR: LPA. A diverse group of substances purified from the ascitic fluid of patients with ovarian cancer. It stimulates the growth of ovarian cancer and may be a useful screening test for the disease.

malic a. $C_4H_6O_5$; a substance found in certain sour fruits such as apples and apricots and active in the aerobic metabolism of carbohydrates.

malonic a. A dibasic acid, $C_3H_4O_4$, formed by the oxidation of malic acid and active in the tricarboxylic acid cycle in carbohydrate metabolism. Its inhibition of succinic dehydrogenase is the classic example of competitive inhibition. Malonic acid is found in beets.

mandelic a. $C_8H_8O_3$; a colorless hydroxy acid. Its salt is used to treat urinary tract infections.

monounsaturated fatty a. A fatty acid containing one double bond between carbon atoms. This type of fatty acid is found in olive oil. It is thought to reduce low-density lipoprotein levels without affecting high-density lipoprotein levels. It is the predominant fat in the Mediterranean diet. SEE: *Mediterranean diet*.

oleic a. $C_{18}H_{34}O_2$; a monounsaturated fatty acid found in most organic fats and oils.

omega-6 (ω6) fatty a. Any of the fatty acids, such as linoleic and arachidonic, thought to influence cardiovascular and growth function when balanced with omega-3 fatty acids in eicosanoid production. Linoleic acids are derived from vegetable oils; arachidonic acids, from animal fats.

organic a. An acid containing the carboxyl radical, -COOH. Acetic acid, formic acid, lactic acid, and all fatty acids are organic.

orotic a. Uracil-6-carboxylic acid. It is a precursor in the formation of pyrimidine nucleotides.

oxalic a. $C_2H_2O_4$; the simplest dibasic organic acid. Its potassium or calcium salt occurs naturally in rhubarb, wood sorrel, and many other plants. It is the strongest organic acid and is poisonous. When properly diluted, it removes ink or rust stains from cloth. It is used also as a reagent.

palmitic a. $C_{16}H_{32}O_2$; a saturated fatty acid occurring as esters in most natural fats and oils.

pentanoic a. Valeric a.

peptide nucleic a. ABBR: PNA. An artificial nucleic acid analog in which natural nucleotide bases are linked to a peptide-like backbone instead of the sugar-phosphate backbone found in DNA and RNA. It has numerous uses in gene regulation, splicing, and therapy; in hybridization; and as a molecular diagnostic assay.

perchloric a. $HClO_4$, a colorless unstable liquid compound. It is the highest oxygen-containing acid of chlorine.

phenylglycolic a. Mandelic a.

phosphoric a. An acid formed by oxidation of phosphorus. The phosphoric acids are orthophosphoric acid, H_3PO_4; pyrophosphoric acid, $H_4P_2O_7$; metaphosphoric acid, HPO_3; and hypophosphoric acid, $H_4P_2O_6$. The salts of these acids are phosphates. Orthophosphoric acid, a tribasic acid, is used as a 30% to 50% solution to etch enamel of teeth in preparation for bonding of resin dental restorations.

picric a. $C_6H_2(NO_2)_3OH$; a yellow crystalline substance that precipitates proteins and explodes when heated or charged. Salts of picric acid are used in the Juffee reaction for determination of serum creatinine. Picric acid is used as a dye and a reagent. SYN: *trinitrophenol*.

pyruvic a. An organic acid, $CH_3CO \cdot COOH$, that plays an important role in the Krebs cycle. It is an intermediate product in the metabolism of carbohydrates, fats, and amino acids. Its quantity in the blood and tissues increases in thiamine deficiency because thiamine is essential for its oxidation.

ribonucleic a. ABBR: RNA. A nucleic acid that controls protein synthesis in all living cells and is the sole nucleic acid in certain viruses. It differs from DNA in that its sugar is ribose rather than deoxyribose, and its pyrimidine base is uracil rather than thymine. RNA occurs in several forms that are determined by the number of nucleotides. SEE: illus.; *deoxyribonucleic acid*.

Messenger RNA (mRNA) carries the code for specific amino acid sequences from the DNA to the cytoplasm for protein synthesis.

Transfer RNA (tRNA) carries the amino acid groups to the ribosome for protein synthesis.

Ribosomal RNA (rRNA) exists within the ribosomes and assists in protein synthesis.

saturated fatty a. Fatty acid in which the carbon atoms are linked to other carbon atoms by single bonds. SEE: *fatty a.; unsaturated fatty a.*

silicic a. An acid containing silica, as H_2SiO_3, H_2SiO_4, or H_2SiO_6. When silicic acid is precipitated, silica gel is obtained.

succinic a. $HOOC(CH_2)_2COOH$; an intermediate in carbohydrate metabolism.

sulfonic a. An organic compound of the general formula SO_2OH derived from sulfuric acid by replacement of a hydrogen atom.

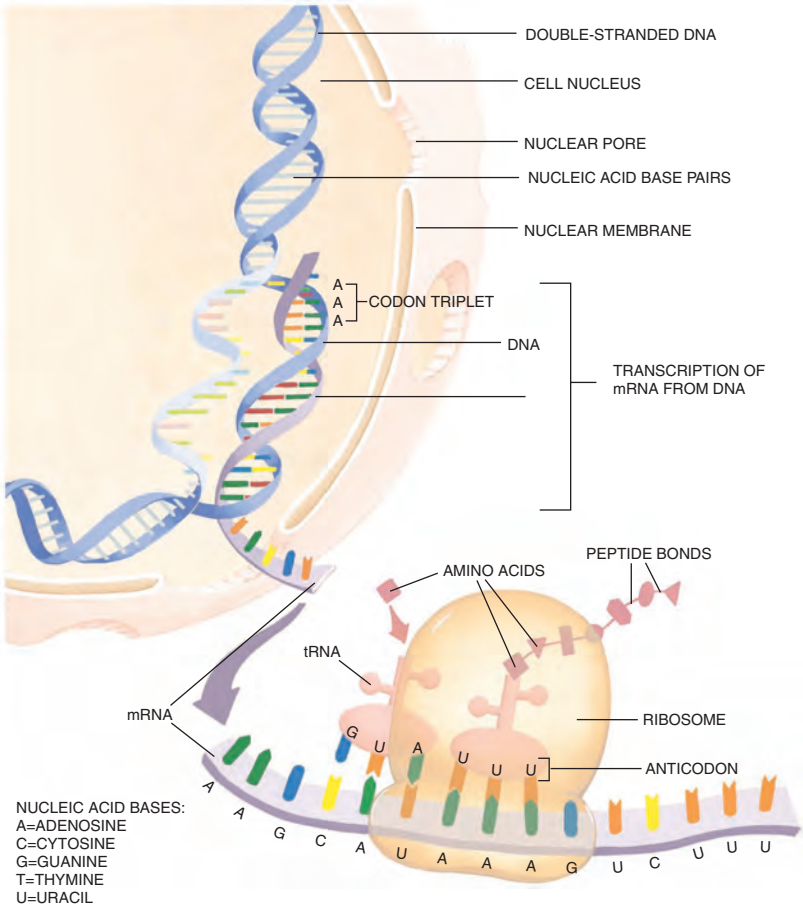
sulfosalicylic a. A crystalline acid soluble in water or alcohol; used as a reagent for precipitating proteins, as in testing for albumin in urine.

sulfuric a. H_2SO_4; a colorless, corrosive, dense, and viscous liquid prepared from sulfur and used in the production of a great number of industrial products. It is rarely used in medicine.

sulfurous a. An inorganic acid, H_2SO_3. It is a powerful chemical reducing agent that is used commercially, esp. for its bleaching properties.

tannic a. A mixture of digallic acid esters of D(+) glucose prepared from oak galls and sumac. It yields gallic acid and glucose on hydrolysis.

tartaric a. $C_4H_6O_6$; a substance obtained from byproducts of wine fermentation. It is widely used in industry in the manufacture of carbonated drinks,



RIBONUCLEIC ACID

Roles in protein synthesis

flavored gelatins, dyes, and metals. It is also used as a reagent. It is thought to be an allergen.

taurocholic a. A bile acid that yields cholic acid and taurine on hydrolysis.

unsaturated fatty a. An organic acid in which some of the carbon atoms are linked to other carbon atoms by double bonds, thus containing less than the maximum possible number of hydrogen atoms (e.g., unsaturated oleic and linoleic acids as compared with the saturated stearic acid). SEE: *fatty a.; saturated fatty a.*

valeric a. $C_5H_{10}O_2$; an oily liquid of the fatty acid series, existing in four isomeric forms and having a distinctly disagreeable odor. SYN: *pentanoic acid*.

valproic a. A drug used to treat seizure disorders.

acidaminuria (ăs″ĭd-ăm″ĭ-nū′rē-ă) [L. *acidum,* acid, + *amine* + Gr. *ouron,* urine] An excess of amino acids in urine. SYN: *hyperacidaminuria*.

acid-citrate-dextrose ABBR: ACD sol. An anticoagulant solution used in blood collection tubes. Its components are citric acid, sodium citrate, and dextrose.

acidemia (ăs-ĭ-dē′mē-ă) [L. *acidum,* acid, + Gr. *haima,* blood] A decrease in the arterial blood pH below 7.35. The hydrogen ion concentration of the blood increases, as reflected by a lowering of serum pH values. SEE: *acid-base balance; acidity; acidosis*.

lactic a. Lactacidemia.

acid-fast In bacterial staining, pertaining to bacteria that do not decolorize after application of acid-alcohol but keep a dark stain. Members of the genus *Mycobacterium* are acid-fast.

acid hydrolase Any hydrolytic enzyme

found in a lysosome that performs optimal catalysis at a pH of about 5.

acidifiable (ă-sĭd′ĭ-fī″ă-bl) [L. *acidum,* acid, + *fieri,* to be made, + *habilis,* able] Capable of being transformed to produce an acid reaction.

acidification (ă-sĭd″ĭ-fĭ-kā′shŭn) [″ + *factus,* made] Conversion into an acid or acidic conditions.

acidifier (ă-sĭd′ĭ-fī″ĕr) [″ + *fieri,* to be made] A substance that causes acidity.

acidify **1.** To make a substance acid. **2.** To become acid.

acidity (ă-sĭd′ĭ-tē) **1.** The quality of possessing hydrogen ions (protons). SEE: *acid; hydrogen ion; pH*. **2.** Sourness.

a. of the stomach The lowered pH of the gastric contents, due to hydrogen ion release by parietal cells.

acidophil(e) (ă-sĭd′ō-fĭl, -fīl) [″ + Gr. *philos,* love] **1.** Acidophilic. **2.** An acid-staining cell of the anterior pituitary. **3.** A bacterial organism that grows well in an acid medium.

acidophilic (ă-sĭd″ō-fĭl′ĭk) **1.** Having affinity for acid or pert. to certain tissues and cell granules. **2.** Pert. to a cell capable of being stained by acid dyes.

acidoresistant (ăs″ĭ-dō-rĕ-zĭs′tănt) Acid-resisting; said about bacteria.

acidosis (ăs″ĭ-dō′sĭs) [L. *acidum,* acid, + Gr. *osis,* condition] An actual or relative increase in the acidity of blood due to an accumulation of acids (as in diabetic acidosis or renal disease) or an excessive loss of bicarbonate (as in renal disease). The hydrogen ion concentration of the fluid is increased, lowering the pH. SEE: *acid-base balance; acidemia; buffer; pH*. **acidotic** (ăs″ĭ-dŏt′ĭk), *adj.*

carbon dioxide a. Respiratory a.

compensated a. Acidosis in which the pH of body fluids has returned to normal. Compensatory mechanisms maintain the normal ratio of bicarbonate to carbonic acid (approx. 20 : 1) in blood plasma, even though the bicarbonate level is decreased or the carbon dioxide level is elevated.

diabetic a. Diabetic ketoacidosis.

hypercapnic a. Respiratory a.

hyperchloremic a. Acidosis in which there is an abnormally high level of chloride in the blood.

lactic a. An accumulation of lactic acid in the blood, often due to inadequate perfusion and oxygenation of vital organs (e.g., in cardiogenic, ischemic, or septic shock), drug overdoses (commonly, salicylates or ethanol), skeletal muscle overuse (e.g., after heavy exercise or seizures), or other serious illnesses (some cancers; diabetes mellitus). Lactic acid is produced more quickly than normal when there is inadequate oxygenation of skeletal muscle and other tissues. Thus, any disease that leads to tissue hypoxia, exercise, hyperventilation, or some drugs (e.g., oral hypoglycemic agents) may cause this condition. In general, when blood pH is less than 7.35 and lactate is greater than 5 to 6 mmol/L (5 to 6 mEq/L), lactic acidosis is present.

metabolic a. Any process that causes a decrease in the pH of the body as a result of the retention of acids or the loss of bicarbonate buffers. Metabolic acidosis is usually categorized by the presence or absence of an abnormal anion gap. The anion gap metabolic acidoses include diabetic, alcoholic, and lactic acidoses; the acidosis of renal failure; and acidoses that result from the consumption of excess acids e.g., salicylates, methanol, or ethanol). Non-anion gap metabolic acidoses occur in diarrhea, renal tubular acidosis, and multiple myeloma.

ETIOLOGY: Possible causes include excessive ingestion of acids, salicylates, methanol, or ethylene glycol; failure of the kidneys to excrete acids (e.g., in renal failure or renal tubular acidosis); ketoacidosis (diabetic, alcoholic, owing to starvation); severe dehydration; diarrhea; rhabdomyolysis; seizures; and shock.

PATIENT CARE: A history is obtained, focusing on the patient's urine output, fluid intake, dietary habits (including recent fasting), associated disorders (e.g., diabetes mellitus and kidney or liver dysfunction), and the use of medications (including aspirin) and alcohol. Arterial blood gas values, serum potassium level, and fluid balance are monitored. The patient is assessed for lethargy, drowsiness, and headache, diminished muscle tone, and deep tendon reflexes. The patient is also evaluated for hyperventilation, cardiac dysrhythmias, muscle weakness and flaccidity, and gastrointestinal distress (e.g., nausea, vomiting, diarrhea, and abdominal pain). Prescribed intravenous fluids, medications such as sodium bicarbonate or insulin, and other therapies such as oxygen or mechanical ventilation are administered. The patient is positioned to promote chest expansion and repositioned frequently. Frequent oral hygiene with sodium bicarbonate rinses will neutralize mouth acids, and a water-soluble lubricant will prevent lip dryness. A safe environment with minimal stimulation is provided, and preparations should be available if seizures occur. Both patient and family are given oral and written information about prescribed medication and managing related diseases. SEE: *Nursing Diagnoses Appendix.*

renal a. Acidosis caused either by kidney failure, in which phosphoric and sulfuric acids and inorganic anions accumulate in the body, or by renal tubu-

lar diseases. The acidosis is induced by urinary wasting of bicarbonate and inability to excrete phosphoric and sulfuric acids.

PATIENT CARE: Renal acidosis due to one of the renal tubular acidoses responds to treatment either with sodium bicarbonate or with citrated salts (e.g., potassium citrate). The acidosis of chronic renal failure may require therapy with sodium bicarbonate or may be treated by dialysis with a bicarbonate-rich dialysate. Diets are adjusted for patients with renal failure to limit the metabolic production of acids (these usually rely on limitations of daily dietary protein). Foods that are rich in potassium and phosphate are also restricted. Patients with renal failure should be monitored for signs and symptoms of renal acidosis, including loss of appetite, changes in levels of consciousness, or alterations in respiratory rate or effort. Laboratory monitoring may include frequent assessments of arterial blood gas values, serum electrolytes, carbon dioxide levels, and blood urea nitrogen and creatinine. Prescribed intravenous fluids are given to maintain hydration.

respiratory a. Acidosis caused by inadequate ventilation and the subsequent retention of carbon dioxide. SYN: *carbon dioxide acidosis*.

PATIENT CARE: The patient suspected of developing acute respiratory acidosis is monitored using arterial blood gases, level of consciousness, and orientation to time, place, and person. The patient is also evaluated for diaphoresis, a fine or flapping tremor (asterixis), depressed reflexes, and cardiac dysrhythmias. Vital signs and ventilatory effort are monitored, and ventilatory difficulties such as dyspnea are documented. Prescribed intravenous fluids are given to maintain hydration. The patient is oriented as often as necessary, and information and reassurance are given to allay the patient's and family's fears and concerns. Prescribed therapies for associated hypoxemia and underlying conditions are provided, responses are evaluated, and related patient education is given.

The respiratory therapist (RT) works with the attending physician to determine when to intubate and mechanically ventilate the patient with acute respiratory acidosis. Once the patient is intubated and is receiving mechanical ventilation, the RT monitors and maintains the patient's airway and tolerance of the positive pressure ventilation. This requires the RT to perform frequent q1-2m assessments of the patient and the ventilator and report side effects to the attending physician. Some patients with advanced chronic obstructive lung disease develop chronic respiratory acidosis (as a result of CO_2 retention), usually with a compensatory metabolic (renal) alkalosis.

Acute respiratory acidosis is a medical emergency in which immediate efforts to improve ventilation are required.

acid rain Rain that, in passing through the atmosphere, is contaminated with acid substances, esp. sulfur dioxide and nitrogen oxide. These pollutants are oxidized in the atmosphere to sulfuric acid and nitric acid. Rainwater is considered abnormally acidic if the pH is below 5.6. It may damage ecosystems or individual plants and animal species.

acid-reflux disorder Gastroesophageal reflux disease.

acid reflux test Any of several methods for diagnosing gastroesophageal reflux disease, including endoscopy and direct measurement of esophageal pH. An electrode for detecting the pH is placed in the stomach and a reading taken; then the electrode is withdrawn until it is in the esophagus. Normally, the pH will become more alkaline (i.e., rise) as the electrode is moved from the stomach into the esophagus. If there is acid reflux, the pH will be acid in both the stomach and esophagus.

acidulate (ă-sĭd′ū-lāt″) [L. *acidulus,* slightly acid] To make somewhat sour or acid.

acidulous (ă-sĭd′ū-lŭs) Slightly sour or acid.

aciduria (ăs-ĭd-ū′rē-ă) [L. *acidum,* acid, + Gr. *ouron,* urine] The condition of excessive acid in the urine.

glutaric a. An inherited disorder marked by multiple neurological deficits in childhood, including motor dysfunction, developmental delay, and brain atrophy. It is caused by defective manufacture of glutaryl-coenzyme A dehydrogenase.

orotic a. A rare, autosomal recessive disorder of pyrimidine metabolism in which orotic acid accumulates in the body. Clinically, children fail to grow and have megaloblastic anemia and leukopenia. The disease responds to administration of uridine or cytidine.

aciduric (ăs″ĭd-ū′rĭk) [″ + *durare,* to endure] Pertaining to bacteria that are able to survive moderate acidity.

acinar (ăs′ĭ-năr) [L. *acinus,* grape] Pert. to an acinus.

Acinetobacter (ăs″ĭ-nĕt″ō-băk′tĕr) [Gr. *akinetos,* immovable, + *bakterion,* rod] A genus of gram-negative, aerobic coccobacilli that is an increasingly important cause of serious infections, esp. in hospitalized patients.

acini (ăs′ĭ-nī) Pl. of acinus.

aciniform (ă-sĭn′ĭ-form) [L. *acinus,* grape, + *forma,* shape] Resembling grapes. SYN: *acinous*.

acinitis (ăs″ĭ-nī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of glandular acini.

acinose (ăs′ĭ-nōs) [L. *acinosus,* grapelike] Composed of acini.

acinous (ăs′ĭ-nŭs) Pert. to glands resembling a bunch of grapes, such as acini and alveolar glands. SYN: *aciniform*.

acinus (ăs′ĭ-nŭs) *pl.* **acini** [L., grape] **1.** The smallest division of a gland; a group of secretory cells surrounding a cavity. **2.** The terminal respiratory gas exchange unit of the lung, composed of airways and alveoli distal to a terminal bronchiole.

ACIP *The Advisory Committee on Immunization Practices of the U.S. Public Health Service.*

AC joint *acromioclavicular joint.*

ackee (ă′kē) Akee.

acladiosis (ăk-lăd″ē-ō′sĭs) An ulcerative skin disease believed to be caused by fungi of the genus *Acladium.*

aclasis, aclasia (ăk′lă-sĭs, ă-klā′zē-ă) [Gr. *a-,* not, + *klasis,* a breaking away] Abnormal tissue arising from and continuous with a normal structure, as in achondroplasia.

diaphyseal a. Imperfect formation of cancellous bone in cartilage between diaphysis and epiphysis.

acleistocardia (ă-klīs″tō-kăr′dē-ă) [Gr. *akleistos,* not closed, + *kardia,* heart] Patent foramen ovale of the heart.

ACLS *Advanced Cardiac Life Support.*

acme (ăk′mē) [Gr. *akme,* point] **1.** The highest point; peak. **2.** Apogee. **3.** The segment of uterine labor contraction during which muscle tension is greatest.

acne (ăk′nē) [Gr. *akme,* point] **1.** An inflammatory disease of the sebaceous follicles of the skin, marked by comedones, papules, and pustules. It is exceptionally common in puberty and adolescence. Acne usually affects the face, chest, back, and shoulders. In severe cases, cysts, nodules, and scarring occur.

ETIOLOGY: The cause is unknown, but predisposing factors include hereditary tendencies and disturbances in the androgen-estrogen balance. Acne begins at puberty when the increased secretion of androgen in both males and females increases the size and activity of the pilosebaceous glands. Specific inciting factors may include food allergies, endocrine disorders, therapy with adrenal corticosteroid hormones, and psychogenic factors. Vitamin deficiencies, ingestion of halogens, and contact with chemicals such as tar and chlorinated hydrocarbons may be specific causative factors. The fact that bacteria are important once the disease is present is indicated by the successful results following antibiotic therapy. The lesions may become worse in women and girls before the menstrual period.

SYMPTOMS: Acne vulgaris is marked by either papules, comedones with black centers (pustules), or hypertrophied nodules caused by overgrowth of connective tissue. In the indurative type, the lesions are deep-seated and cause scarring. The face, neck, and shoulders are common sites. Acne may be obstinate and recurrent.

TREATMENT: Treatments include skin cleansing, topical agents (e.g., azelaic acid or benzoyl peroxide or vitamin A derivatives), and oral or topical antibacterial drugs.

PATIENT CARE: The patient is instructed to wash the skin thoroughly but gently, avoiding intense scrubbing and skin abrasion; to keep hands away from the face and other sites of lesions; to limit the use of cosmetics; and to observe for, recognize, and avoid or modify predisposing factors that may cause exacerbations. The need to reduce sun exposure is explained, and the patient is advised to use a sunscreen agent when vitamin A acid or tetracycline is prescribed. Information is provided to fill knowledge gaps or correct misconceptions, and emotional support and understanding are offered, particularly if the patient is an adolescent. Patients (and others) need to be aware that extensive use of antibiotic treatment for acne increases the prevalence of antibiotic-resistant facial bacteria and can affect treatment response. Most improvement occurs during the first 6 weeks of therapy, whatever the regimen. More than half of all patients respond to therapy. Colonization with tetracycline-resistant propionibacteria diminishes response to all oral antibiotic regimens. Skin irritation as an adverse effect to treatment occurs most commonly with topical benzoyl peroxide alone, which is the most cost-effective treatment. Adding topical erythromycin may help reduce irritation and increase efficacy.

Because of the teratogenicity of some acne medications (such as isotretinoin), pregnancy must be avoided during their use.

2. Acne vulgaris.

a. atrophica Acne with residual pitting and scarring.

bromide a. Characteristic acne caused by bromide.

a. ciliaris Acne that affects the edges of the eyelids.

a. conglobata Acne vulgaris with ab-

scesses, cysts, and sinuses that leave scars.

cystic a. Acne with cysts containing keratin and sebum. SEE: illus.

CYSTIC ACNE

TREATMENT: Isotretinoin, a vitamin A derivative, has been effective in treating this condition. For Caution concerning its use, SEE: *isotretinoin*.

a. fulminans A rare type of acne in teenage boys, marked by inflamed, tender, ulcerative, and crusting lesions of the upper trunk and face. It has a sudden onset and is accompanied by fever, leukocytosis, and an elevated sedimentation rate. About half of the cases have inflammation of several joints.

halogen a. Acne due to exposure to halogens such as bromine, chlorine, or iodine.

a. indurata Acne vulgaris with chronic, discolored, indurated surfaces.

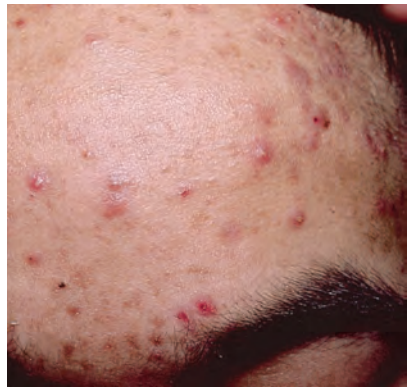
keloid a. Infection about the hair follicles at the back of the neck, causing scars and thickening of the skin.

a. keratosa Acne vulgaris in which suppurating nodules crust over to form horny plugs. These occur at the corners of the mouth.

a. neonatorum Newborn, or neonatal acne. Acne in the newborn is a common occurrence, appearing about the second to fourth week of life. Comedones, inflamed papules, and pustules may be seen (the latter yield staphylococcal species when cultured). The rash resolves spontaneously in most cases by the third or fourth month of life; usually no treatment is required.

a. papulosa Acne characterized by formation of papules with very little inflammation. SEE: illus.

petroleum a. Acne that may occur in those who work with petroleum and oils.



ACNE PAPULOSA

a. pustulosa Acne with pustule formation and subsequent deep scars.

a. rosacea Rosacea.

steroid a. Acne caused by systemic or topical use of corticosteroid drugs.

summer a. Acne that appears only in hot, humid weather or that is much worse in such weather. Although the exact cause is unknown, the condition is not caused by increased exposure to the sun's rays.

tropical a. Severe acne caused by or aggravated by living in a hot, humid climate. The skin of the thorax, back, and legs is most commonly affected.

a. urticaria An acneiform eruption of itching wheals.

a. varioliformis Vesiculopustular folliculitis that occurs mostly on the temples and frontal margins of the scalp but may be seen on the chest, back, or nose.

a. vulgaris Common acne. SEE: *acne*.

acne-associated arthritis ABBR: AAA. Joint inflammation accompanying acne fulminans, typically in adolescent boys. It is a rare type of spondyloarthropathy. The joint disease in AAA commonly involves the acromioclavicular and sacroiliac joints. Painful hyperostosis of the sternum and clavicles are typical findings. The syndrome is also known as SAPHO syndrome (synovitis, acne, pustulosis, hyperostosis, and osteomyelitis). Affected boys are HLA-B27 negative. SYN: *synovitis acne pustulosis hyperostosis and osteomyelitis syndrome*.

acnegenic (ăk″nē-jĕn′ĭk) [Gr. *akme,* point, + *gennan,* to produce] Causing acne.

acneiform (ăk-nē′ĭ-form) [″ + L. *forma,* shape] Resembling acne; also spelled *acneform.*

acnemia (ăk-nē′mē-ă) [Gr. *a-,* not, + *kneme,* lower leg] Wasting of the calves of the legs.

ACNM *American College of Nurse Midwives.*

ACOG *American College of Obstetricians and Gynecologists.*

aconite (ăk′ō-nīt) [Gr. *akoniton*] The dried tuberous root of *Aconitum,* esp. *A. napellus* (monkshood) and *A. lycoctonum* (wolfsbane); a poisonous alkaloid that may cause life-threatening cardiac arrhythmias. Aconite is believed to have been used as an arrow poison early in Chinese history and perhaps also by the inhabitants of ancient Gaul. It was also used as an herbal remedy in traditional Chinese medicine.

aconitine (ă-kŏn′ĭ-tĭn) The active ingredient in aconite.

acorea (ă-kō-rē′ă) [Gr. *a-,* not, + *kore,* pupil] Absence of the pupil of the eye.

acoria (ă-kō′rē-ă) [″ + *koros,* satiety] Feeling unsatisfied after a meal for some reason other than hunger.

acormus (ă-kor′mŭs) [″ + *kormos,* trunk] **1.** Lack of a trunk. **2.** A fetal abnormality consisting of a head and extremities without a trunk.

ACOTE *Accreditation Council for Occupational Therapy Education.*

acous- SEE: *acousto-*.

acousmatamnesia (ă-kooz″măt-ăm-nē′zē-ă) [″ + *amnesia,* forgetfulness] Inability to recall and identify sounds.

acoust- SEE: *acousto-*.

acoustic (ă-koos′tĭk) [Gr. *akoustikos*] Pert. to sound or to the sense of hearing.

acoustic apparatus Auditory apparatus; the anatomical structures essential for hearing.

acoustic area A part of the brain that lies over the vestibular and cochlear nuclei.

acousticophobia (ă-koos″tĭ-kō-fō′bē-ă) [Gr. *akoustos,* heard, + *phobos,* fear] Abnormal fear of loud sounds.

acoustic reflectometry Diagnostic technique for the detection of middle ear effusion. It measures the level of sound transmitted and reflected from the middle ear to a microphone located in a probe tip placed against the ear canal and directed toward the tympanic membrane.

acoustics (ă-koos′tĭks) The science of sound, its production, transmission, and effects.

acousto-, acoust-, acous- [Gr. *akouenin,* hear] Combining forms meaning *hearing*.

ACP *American College of Physicians; American College of Pathologists.*

acquired (ă-kwīrd′) [L. *acquirere,* to get] Not hereditary or innate.

acquired brain injury Any structural damage to the brain occurring after childbirth. It includes traumatic brain injury and insults to the brain resulting from strokes, tumors, or neurological diseases such as multiple sclerosis.

acquired immunodeficiency syndrome AIDS.

acquisition (ăk″wĭ-zĭsh′ĭn) [L. *acquisitio,* fm. *acquirere,* to get] The measurement of image data during a radiological study and of its subsequent storage in memory.

acquisitus (ă-kwĭs′ĭ-tŭs) [L.] Acquired.

ACR *American College of Radiology*.

acral (ăk′răl) [Gr. *akron,* extremity] Pert. to extremities.

acrania (ă-krā′nē-ă) [Gr. *a-,* not, + *kranion,* skull] Partial or complete congenital absence of the cranium.

acrid (ăk′rĭd) [L. *acer,* sharp] Burning, bitter, irritating.

acridine (ăk′rĭ-dĭn) A coal tar hydrocarbon from which certain dyes are prepared.

acrimony (ăk′rĭ-mō″nē) Quality of being pungent, acrid, irritating, rancorous, or caustic.

acritical (ă-krĭt′ĭ-kăl) [Gr. *a-,* not, + *kritikos,* critical] Not marked by a crisis.

ACRM *American Congress of Rehabilitation Medicine.*

acro- [Gr. *akron,* extremity] Combining form meaning *extremity, top, extreme point.*

acroagnosis (ăk″rō-ăg-nō′sĭs) [″ + *gnosis,* knowledge] Absence of feeling of one's limb.

acroanesthesia (ăk″rō-ăn-ĕs-thē′zē-ă) [″ + *an-,* not, + *aisthesis,* sensation] Lack of sensation in one or more of the extremities.

acroblast (ăk′rō-blăst) [″ + *blastos,* germ] A part of the Golgi apparatus in the spermatid from which the acrosome arises.

acrobrachycephaly (ăk″rō-brăk″ĭ-sĕf′ă-lē) [″ + *brachys,* short, + *kephale,* head] The condition of having an abnormally short head in the anterior-posterior diameter due to fusion of the coronal suture.

acrocentric (ăk″rō-sĕn′trĭk) [Gr. *akron,* extremity + L. *centrum,* center] Pert. to a chromosome in which the centromere is located near one end. At metaphase it has the appearance of a wishbone.

acrocephalia (ăk″rō-sĕf-ā′lē-ă) [″ + *kephale,* head] Acrocephaly.

acrocephalosyndactylia, acrocephalosyndactyly (ăk″rō-sĕf″ă-lō-sĭn-dăk-tĭl′ē-ă, -sĭn-dăk′tĭl-ē) [″ + ″ + *syn,* together, + *daktylos,* a finger] A congenital condition marked by a peaked head and webbed fingers and toes. SYN: *Apert's syndrome*.

acrocephaly (ăk″rō-sĕf′ă-lē) [″ + *kephale,* head] The condition of having a malformed cranial vault with a high or peaked appearance and a vertical index above 77. It is caused by premature closure of the coronal, sagittal, and lambdoidal sutures. SYN: *acrocephalia; oxycephaly*. **acrocephalic** (-sĕ-făl′ĭk), *adj.*

acrochordon (ăk″rō-kor′dŏn) [″ + *chorde,* cord] A small, benign, polyp-shaped growth composed of skin and

subcutaneous tissue; typically found on the neck, in the axilla, or near the eyelids. SYN: *fibroepithelial polyp; skin tag*.

acrocontracture (ăk″rō-kŏn-trăk′chĕr) [″ + ″] Contracture of the hands or feet.

acrocyanosis (ăk″rō-sī-ă-nō′sĭs) [″ + *kyanosis,* dark-blue color] A blue or purple mottled discoloration of the extremities, esp. the fingers, toes, and/or nose. This physical finding is associated with many diseases and conditions, such as anorexia nervosa, autoimmune diseases, cold agglutinins, or Raynaud's disease or phenomenon. Cyanosis of the extremities may be commonly observed in newborns and in others after exposure to cold temperatures, and in those patients with reduced cardiac output. In patients with suspected hypoxemia, it is an unreliable sign of diminished oxygenation. (Instead of relying on this physical sign, pulse oximetry or arterial blood gases should be measured.)

acrodermatitis (ăk″rō-dĕr-mă-tī′tĭs) [″ + *derma,* skin, + *itis,* inflammation] Dermatitis of the extremities.

a. chronica atrophicans Dermatitis of the hands and feet that progresses slowly upward on the affected limbs.

a. continua An obstinate eczematous eruption confined to the extremities.

a. enteropathica Rare disease in children aged 3 weeks to 18 months that may be fatal if untreated. The genetically determined cause is malabsorption of zinc. Onset is insidious with failure to thrive, diarrhea, loss of hair, and development of vesiculobullous lesions, particularly around body orifices.

TREATMENT: Zinc sulfate given orally will abolish all clinical manifestations of the disease within a few days.

a. hiemalis Dermatitis that occurs in winter and affects the extremities. It tends to disappear spontaneously.

a. perstans Acrodermatitis continua.

acrodermatosis (ăk″rō-dĕr″mă-tō′sĭs) [Gr. *akron,* extremity, + *derma,* skin, + *osis,* condition] Any skin disease that affects the hands and feet.

acrodolichomelia (ăk″rō-dŏl″ĭ-kō-mē′lē-ă) [″ + *dolichos,* long, + *melos,* limb] A condition in which the hands and feet are abnormally long.

acrodynia (ăk″rō-dĭn′ē-ă) [″ + *odyne,* pain] A disease of infants and young children caused by chronic mercury poisoning. It has a prolonged clinical course with various grades of severity. Affected children are listless, irritable, and no longer interested in play. The rash has several variations. Initially, the tips of the fingers and toes become pink; the hands and feet become pink but color shades off at the wrists and ankles. As the disease progresses, the skin of the extremities desquamates, profuse sweating and pruritus occur, and there is excruciating pain in the hands and feet. Neurological symptoms with neuritis and mental apathy develop. SYN: *pink disease*.

TREATMENT: Treatment consists of removing the source of the mercury, administering dimercaprol (BAL) antidote, and providing supportive therapy.

acrodysesthesia (ăk″rō-dĭs″ĕs-thē′zē-ă) [″ + *dys,* bad, + *aisthesis,* sensation] Dysesthesia in the arms and legs.

acroesthesia (ăk″rō-ĕs-thē′zē-ă) [″ + *aisthesis,* sensation] **1.** Abnormal sensitivity of the extremities. **2.** Pain in the extremities.

acrofacial (ăk″rō-fā′shăl) Pert. to the hands, feet, and face.

acrogeria (ăk″rō-jēr′ē-ă) [″ + *geron,* old man] A condition in which the skin of the hands and feet shows signs of premature aging.

acrognosis (ăk″rŏg-nō′sĭs) [″ + *gnosis,* knowledge] Sensory perception of limbs.

acrohyperhidrosis (ăk″rō-hī″pĕr-hī-drō′sĭs) [″ + *hyper,* excessive, + *hidrosis,* sweating] Excessive perspiration of the hands and feet.

acrohypothermy (ăk″rō-hī″pō-thĕr′mē) [″ + *hypo,* below, + *therme,* heat] Abnormal coldness of the extremities.

acrokeratosis verruciformis (ăk″rō-kĕr″ă-tō′sĭs vĕ-roo′sĭ-for″mĭs) [″ + *keras,* horn, + *osis,* condition; L. *verruca,* wart, + *forma,* form] Hereditary disease of the skin characterized by warty growths on the extremities, principally on the backs of the hands and on the feet.

acrokinesia (ăk″rō-kĭn-ē′sē-ă) [″ + *kinesis,* movement] Excessive motion of the extremities.

acromacria (ăk″rō-măk′rē-ă) [Gr. *akron,* extremity, + *makros,* long] Abnormal length of the fingers. SYN: *arachnodactyly*. SEE: *Marfan's syndrome*.

acromastitis (ăk″rō-măs-tī′tĭs) [″ + *mastos,* breast, + *itis,* inflammation] Inflammation of the nipple. SYN: *thelitis*.

acromegaly (ăk″rō-mĕg′ă-lē) [″ + *megas,* big] A chronic syndrome of growth hormone excess, most often caused by a pituitary macroadenoma. It is characterized by gradual coarsening and enlargement of bones and facial features. The diagnosis is suggested by a growth hormone level that does not suppress after glucose administration. It is confirmed by radiologic imaging of the pituitary gland. SYN: *Marie's disease*.

ETIOLOGY: Overproduction of growth hormone by somatotroph cells of the anterior pituitary is responsible in most cases.

SYMPTOMS: The onset is often so gradual that patients and their close associates may not notice a change in appearance or function. Increased sweat-

ing, decreased libido, somnolence, mood disorders, muscular pain, weakness, and loss of vision may occur eventually. Signs include a thickening of facial features, enlargement of hands and feet, deepening voice, and separation of the teeth. A quarter of patients develop diabetes mellitus.

TREATMENT: Transsphenoidal resection of a growth-hormone secreting adenoma is the primary method of therapy. When this fails, medications, such as bromocriptine or octreotide, or radiotherapy may provide some relief.

acromelalgia (ăk″rō-měl-ăl′jē-ă) [Gr. *akron,* extremity, + *melos,* limb, + *algos,* pain] Erythromelalgia.

acromelic (ăk″rō-měl′ĭk) [″ + *melos,* limb] Pert. to the ends of the extremities.

acrometagenesis (ăk″rō-mĕt″ă-jĕn′ĕ-sĭs) [″ + *meta,* beyond, + *genesis,* generation, birth] Abnormal growth of the extremities.

acromial (ăk-rō′mē-ăl) [″ + *omos,* shoulder] Rel. to the acromion.

acromicria (ăk″rō-mĭk′rē-ă) [Gr. *akron,* extremity, + *mikros,* small] Congenital shortness or smallness of the extremities and face.

acromioclavicular traction test (ă-krō″mē-ō-klă-vĭk′ū-lĕr) A maneuver used to identify acromioclavicular and costoclavicular ligament sprains. As the patient sits or stands with the involved shoulder hanging in the neutral position, the clinician pulls the humerus down. A positive test result is marked by a visible separation between the acromion and distal clavicle.

acromiohumeral (ăk-rō″mē-ō-hū′mĕr-ăl) [″ + ″ + L. *humerus,* shoulder] Pert. to the acromion and humerus.

acromion (ă-krō′mē-ŏn) [Gr. *akron,* extremity, + *omos,* shoulder] The lateral triangular projection of the spine of the scapula that forms the point of the shoulder and articulates with the clavicle. SYN: *acromial process*. SEE: *acromioclavicular joint*.

acromioplasty (ă-krō″mē-ō-plăs′tē) The surgical removal of the distal inferior acromion process of the scapula to relieve impingement of soft tissues in the subacromial space, esp. the supraspinatus tendon. This is usually performed with release of the coracoacromial ligament, arthroscopically or through open incision.

acromyotonia, acromyotonus (ăk″rō-mī-ō-tō′nē-ă, -ōt′ō-nŭs) [″ + *mys,* muscle, + *tonos,* tension] Myotonia of the extremities, causing spasmodic deformity.

acroneurosis (ăk″rō-nŭ-rō′sĭs) [Gr. *akron,* extremity, + *neuron,* nerve, + *osis,* condition] Any peripheral neuropathy affecting the extremities.

acro-osteolysis (ăk″rō-ŏs″tē-ŏl′ĭ-sĭs) [Gr. *akron,* extremity, + *osteon,* bone, + *lysis,* dissolution] **1.** A familial disease causing dissolution of the tips of the bones in the extremities of young children. There is no history of trauma, and spontaneous amputation does not occur. The etiology is unknown. **2.** An occupational disease seen in workers who come in contact with vinyl chloride polymerization processes. It is marked by Raynaud's phenomenon, scleroderma-like skin changes, and radiological evidence of bone destruction of the distal phalanges of the hands. Recovery follows removal from exposure. SEE: *Raynaud's disease*.

acropachyderma (ăk″rō-păk″ē-dĕr′mă) [″ + ″ + *derma,* skin] Clubbing of the fingers, deformed long bones, and thickening of the skin of the scalp, face, and extremities.

acroparalysis (ăk″rō-pă-răl′ĭ-sĭs) [″ + *paralyein,* to disable] Paralysis of one or more extremities.

acroparesthesia (ăk″rō-păr-ĕs-thē′zē-ă) [″ + *para,* abnormal, + *aisthesis,* sensation] Sensation of prickling, tingling, or numbness in the extremities.

acropathology (ăk″rō-pă-thŏl′ō-jē) [″ + *pathos,* disease, suffering, + *logos,* word, reason] Any disease of the extremities (e.g., the fingers or toes).

acrophobia (ăk-rō-fō′bē-ă) [″ + *phobos,* fear] Morbid fear of high places. SYN: *hypsophobia*.

acroposthitis (ăk″rō-pŏs-thī′tĭs) [Gr. *akroposthis,* prepuce, + *itis,* inflammation] Inflammation of the prepuce of the penis. SYN: *posthitis*.

acropustulosis, infantile (ăk″rō-pŭs′tū-lō-sĭs) Cyclical eruption of pustules on the soles and feet of infants 2 to 10 months of age. The pustules become vesicopapular, crust over, and heal in 7 to 10 days. A new crop appears in 2 to 3 weeks and they also heal. Periodic outbreaks occur for about 2 years and then stop. The cause is unknown; symptomatic therapy is all that is required.

acroscleroderma (ăk″rō-sklĕr-ō-dĕr′mă) [Gr. *akron,* extremity, + *scleros,* hard, + *derma,* skin] Hard, thickened skin condition of toes and fingers. SYN: *sclerodactylia*.

acrosclerosis (ăk″rō-sklĕr-ō′sĭs) [″ + ″ + *osis,* condition] A scleroderma of the upper extremities, sometimes extending to the neck and face, that usually follows Raynaud's disease.

acrosomal reaction (ăk″rō-sōm′ăl rē-ăk′shŭn) The release of enzymes from acrosome on the head of the sperm, a complex process that helps sperm to penetrate the zona pellucida of the egg and thus to begin fertilization.

acrosome (ăk′ră-sōm″) [″ + *soma,* body] A specialized lysosome on the head of a sperm cell that contains enzymes to digest the membrane of an egg cell. SEE: *spermatozoon* for illus. **acrosomal** (ăk″ră-sōm′ăl), *adj.*

acrotism (ăk′rō-tĭzm) [Gr. *a-,* not, + *krotos,* striking, + *-ismos,* condition] Imperceptibility of the pulse.

acrotrophoneurosis (ăk″rō-trŏf″ō-nū-rō′sĭs) [Gr. *akron,* extremity, + *trophe,* nourishment, + *neuron,* nerve, + *osis,* condition] Trophoneurosis of the extremities with trophic, neuritic, and vascular changes. It is usually caused by prolonged immersion in water.

acrylamide (ă-krĭl′ă-mīd) **1.** The amide of acrylic acid, C_3H_5NO. Acrylamide is used in many types of gel electrophoresis to separate and to identify proteins. **2.** A chemical byproduct formed in foods cooked at high temperatures. Acrylamides cause cancer and have adverse effects on reproduction. SEE: *carcinogen*.

⚠ Acrylamide, a suspected carcinogen, is found in starch-rich foods prepared at high temperatures; these include potato chips, french fries, and bread.

acrylate (ăk′rĭ-lāt) A salt or ester of acrylic acid.

acrylonitrile (ăk″rĭ-lō-nī′trĭl) C_3H_3N; a toxic compound used in making plastics. SYN: *vinyl cyanide*.

ACS, ACS *American Cancer Society; American Chemical Society; American College of Surgeons; acute confusional state; anodal closing sound.*

ACSM *American College of Sports Medicine.*

act (ăkt) **1.** To accomplish a function. **2.** The accomplishment of a function. **3.** Legislation that has been passed and made law; a statutory law.

compulsive a. The repetitive, ritualistic performance of an act. This may be done despite the individual's attempts to resist the act.

impulsive a. A sudden, unexplained action, esp. one that may potentially cause danger to oneself or to others.

ACTH *adrenocorticotropic hormone.* SEE: under *hormone*.

ACTH stimulation test A test to determine the presence of adrenal insufficiency.

PATIENT CARE: Synthetic adrenocorticotropic hormone (ACTH) is injected intravenously, and the serum cortisol level is measured at timed intervals (30 or 60 min after the injection). A patient with normal adrenal function will respond to the test with increased serum cortisol levels above 18 μg/dl. Serum cortisol levels <15 μg/dl are diagnostic of adrenal insufficiency. The test has been traditionally performed with an injection of 250 μg of ACTH, but studies have shown that 1 μg is an equally effective test dose.

actigraphy (ăk-tĭg′ră-fē) [acti(vity) + ″] The monitoring of body movements with a small device usually attached to the wrist or foot, used in sleep medicine (and sometimes in anesthesia or critical care medicine) to determine whether and how well a person is resting or sleeping. In sleep medicine actigraphy can aid in the diagnosis of insomnia, obstructive sleep apnea, and periodic limb movements. It is used in anesthesia to determine depth of sedation (e.g., during recovery from surgery).

actin (ăk′tĭn) One of the contractile proteins that make up the sarcomeres of muscle tissue. During contraction, the actin filaments are pulled toward the center of the sarcomere by the action of myosin filaments, and the sarcomere shortens. Actin is also found in the cytoskeleton of many kinds of cells, where it contributes to cell shape and movement. Polymerized actin is known as filamentous actin; the monomeric form of the protein is known as globular actin

actin- SEE: *actino-*.

acting out Expressing oneself through actions rather than speech.

neurotic a.o. **1.** A form of transference, in which tension is relieved when one responds to a situation as if it were the same situation that originally gave rise to the tension; a displacement of behavioral response from one situation to another. **2.** In psychoanalysis, a form of displacement, in which the patient relives memories rather than expressing them verbally.

actinic (ăk-tĭn′ĭk) [Gr. *aktis,* ray] **1.** Pert. to radiant energy, such as x-rays, ultraviolet light, and sunlight, esp. the photochemical effects. **2.** Pert. to the ability of radiant energy to produce chemical changes.

actinism (ăk′tĭn-ĭzm) The property of radiant energy that produces chemical changes, as in photography or heliotherapy.

actinium (ăk-tĭn′ē-ŭm) [Gr. *aktis,* ray] SYMB: Ac. A radioactive element; atomic weight 227; atomic number 89.

actino-, actin- [Gr. *aktis,* ray] Combining forms meaning *ray* or *radiation*.

Actinobacillus (ăk″tĭ-nō-bă-sĭl′ŭs) [″ + ″] A genus of gram-negative coccobacilli that are parasites of hoofed mammals, and, rarely, of humans.

A. actinomycetemcomitans A bacterium that is an important cause of periodontal infection and is sometimes implicated in endocarditis.

actinodermatitis (ăk″tĭn-ō-dĕr-mă-tī′tĭs) [″ + *derma,* skin, + *itis,* inflammation] Dermatitis caused by exposure to radiation.

actinogenic (ăk″tĭn-ō-jĕ′nĭk) Radiogenic.

Actinomyces (ăk″tĭn-ō-mī′sēz) [″ + *mykes,* fungus] A genus of bacteria of the family Actinomycetaceae that contains gram-positive staining filaments.

These bacteria cause various diseases in humans and animals.

A. antibioticus A species from which the antibiotic actinomycin is obtained.

A. bovis A species that causes actinomycosis in cattle.

A. israelii A species that causes actinomycosis in humans. One clinical form is called lumpy jaw because of the characteristic appearance of the swollen jaw produced by the infection. Prolonged therapy with very high doses of penicillin G is required.

Actinomycetales (ăk″tĭ-nō-mī″sĕ-tā′lēz) An order of bacteria that includes the families Mycobacteriaceae, Actinomycetaceae, Actinoplanaceae, Dermatophilaceae, Micromonosporaceae, Nocardiaceae, and Streptomycetaceae.

actinomycete (ăk″tĭ-nō-mī′sēt) Any bacterium of the order Actinomycetales. **actinomycetic** (-mī-sēt′ĭk), *adj.*

actinomycetin (ăk″tĭn-ō-mī-sēt′ĭn) A lytic substance obtained from *Actinomyces;* it destroys some gram-positive and gram-negative organisms.

actinomycoma (ăk″tĭ-nō-mī-kō′ma) [Gr. *aktis,* ray, + *mykes,* fungus, + *oma,* tumor] A tumor produced by actinomycosis.

actinomycosis (ăk″tĭn-ō-mī-kō′sĭs) [″ + ″ + *osis,* condition] An infectious bacterial disease in animals and humans. Infection may be of the cervicofacial, thoracic, or abdominal regions, or it may be generalized. **actinomycotic** (-kŏt′ĭk), *adj.*

ETIOLOGY: Causative organisms are *Actinomyces bovis* in cattle and *Actinomyces israelii* (which is normally present in the mouth) in humans. SEE: *nocardiosis*.

SYMPTOMS: Slow-growing granulomas form and later break down, discharging viscid pus-containing minute yellowish (sulfur) granules.

TREATMENT: Prolonged administration of penicillin is usually effective. Tetracyclines are the second choice. Surgical incision and drainage of accessible lesions are helpful when combined with chemotherapy.

actinon (ăk′tĭn-ŏn″) [Gr. *aktis,* ray] A radioactive isotope of actinium.

actinoneuritis (ăk″tĭn-ō-nū-rī′tĭs) [″ + *neuron,* nerve, + *itis,* inflammation] A rare term indicating nerve damage caused by radiation.

actinophytosis (ăk″tĭ-nō-fī-tō′sĭs) [″ + *phyton,* plant, + *osis,* condition] Infection due to *Actinomyces.*

actinotherapy (ăk″tĭn-ō-thĕr′ă-pē) [″ + *therapeia,* treatment] Treatment of disease by rays of light, esp. actinic or photochemically active rays, or by x-rays or radium.

action (ăk′shŭn) [L. *actio*] **1.** Performance of a function or process. **2.** In pathology, a morbid process.

adipokinetic a. The action of substances to promote formation of free fatty acids from body fat stores.

antagonistic a. The ability of a drug or a muscle to oppose or resist the action or effect of another drug or muscle; opposite of synergistic action.

bacteriocidal a. Action that kills bacteria.

bacteriostatic a. Action that stops or prevents the growth of bacteria without killing them.

ball-valve a. Intermittent obstruction of a passageway or opening so that the flow of fluid or air is prevented from moving in and out in equal amounts.

calorigenic a. Heat produced by the metabolism of food.

capillary a. A surface tension effect shown by the elevation or depression of a liquid at the region of contact with a solid, as in capillary tubes. SYN: *capillarity*.

cumulative a. Sudden increased action of a drug after several doses have been given.

drug a. The function of a drug in various body systems.

Local: When the drug is applied locally or directly to a tissue or organ, it may combine with the cell's membrane or penetrate the cell. Its action may be (1) astringent when the drug causes the cell or tissue to contract, (2) corrosive when the drug is strong enough to destroy cells, or (3) irritating when too much of the drug combines with cells and impairs them.

General, or systemic: This type of action occurs when the drug enters the bloodstream by absorption or direct injection, affecting tissues and organs not near the site of entry. Systemic action may be (1) specific, when it cures a certain disease; (2) substitutive or replenishing, when it supplies substances deficient in the body; (3) physical, when some cell constituents are dissolved by the action of the drug in the bloodstream; (4) chemical, when the drug or some of its principles combine with the constituents of cells or organs to form a new chemical combination; (5) active by osmosis, caused by dilution of salt (also acids, sugars, and alkalis) in the stomach or intestines by fluid withdrawn from the blood and tissues; or by diffusion, when water is absorbed by cells from the lymph; (6) selective, when action is produced by drugs that affect only certain tissues or organs; (7) synergistic, when one drug increases the action of another; (8) antagonistic, when one drug counteracts another; (9) physiological, when the drug exerts a potentially beneficial effect similar to that which the body normally produces; (10) therapeutic, when the effect is to treat or repair diseased organs or tissues; (11)

side active, creating an undesired effect; (12) empirical, producing results not proved by clinical or laboratory tests to be effective; or (13) toxicological, having a toxic or undesired effect, generally the result of overdose or long-term usage.

Cumulative: Some drugs are slowly excreted or absorbed so that with repeated doses an accumulation in the body produces a toxic effect. Such drugs should not be administered continuously.

Incompatible: Undesired side effects occur when some drugs are administered together. This may be due to the antagonistic action of one drug on others or to a physical interaction of the drugs that inactivates one of them (e.g., precipitation of some drugs mixed in intravenous fluids).

reflex a. Involuntary movement produced by sensory nerve stimulation.

sparing a. The effect of a nonessential nutrient in the diet such that it decreases the requirement for an essential nutrient. For example, protein is esp. important for tissue growth and development in children. If protein intake is sufficient but caloric intake is inadequate, a protein deficiency will develop. In this situation, the addition of sufficient carbohydrates to the diet is said to spare the protein.

specific a. The particular action of a drug on another substance or on an organism or part of that organism.

specific dynamic a. Stimulation of the metabolic rate by ingestion of certain foods, esp. proteins.

synergistic a. The ability of a drug or muscle to aid or enhance the action or effect of another drug or muscle; opposite of antagonistic action.

tendon a. Passive movement of a joint when a two-joint or multijoint muscle is stretched across it.

thermogenic a. Action of a food, drug, or physical agent to cause a rise in output of body heat.

action study In cancer research any investigation designed to determine whether a particular lifestyle choice made by patients can be used to prevent cancer.

activate (ăk′tĭ-vāt) To make active.

activated carrier A term sometimes used as a synonym for coenzyme.

activated partial thromboplastin time ABBR: APTT. A laboratory test used to measure the intrinsic pathway of coagulation. In health, the APTT is about 16 to 40 sec, depending on the laboratory methods used. Prolonged PTT may indicate cirrhosis of the liver, disseminated intravascular coagulation, blood clotting factor deficiencies (VIII, IX, X), decreased levels of fibrinogen in the blood, von Willebrand's disease, or the presence of a lupus anticoagulant.

activation **1.** In immunology, the process that stimulates resting (nonfunctional) white blood cells to assume their role in the immune response. The process involves recognition of an antigen or a response to cytokines. **2.** In neuropsychology, arousal. **3.** In physiology, the triggering of a cell response, as when a neurotransmitter causes ionic channels to open in an excitable cell membrane, setting off an action potential. SEE: *antigen processing; cytokine; immune response*.

activator (ăk′tĭ-vā″tor) **1.** A substance in the body that converts an inactive molecule into an active agent, such as the conversion of pepsinogen into pepsin by hydrogen ions. **2.** Any substance that specifically induces an activity, such as an inductor or organizer in embryonic development or a trophic hormone. **3.** A removable orthodontic appliance that transmits force passively from muscles to the teeth and alveolar process in contact with it. Also called *myofunctional appliance*.

urokinase-type plasminogen a. ABBR: uPA. A protein that degrades extracellular tissues. It has been linked to the spread of some cancers by invasion and metastasis.

active assistive range of motion ABBR: AAROM. An exercise in which an external force assists specific muscles and joints to move through their available excursion. AAROM exercises are used when the patient has difficulty moving or when tissue forces need to be reduced.

active compression decompression cardiopulmonary resuscitation ABBR: ACD CPR. The use of a hand–held suction device applied to the chest wall during CPR to depress and then decompress the chest. The technique has not been shown to improve outcomes consistently.

active electrode In electrosurgery, the electrode used for cutting or coagulating tissue; the lead where the electrical current concentrates.

active heat and moisture exchanger An addition to a ventilator circuit that filters, heats, humidifies, and exchanges moisture with the gases supplied to the ventilated patient.

active range of motion ABBR: AROM. The amount of joint motion produced by voluntary muscle contraction.

active treatment Treatment directed specifically toward cure of a disease or the resolution of injury.

activins (ăk′tĭ-vĭnz) A family of polypeptide growth factors that help regulate various biological functions, esp. fertility. SEE: *inhibin*.

activities of daily living ABBR: ADL. Tasks performed by individuals in a typical day that allow independent liv-

Activities of Daily Living and Factors Affecting Them

Category	Activities	Affecting Factors
Personal care	Climbing stairs, moving into and out of chair or bed, feeding oneself, opening containers, dressing, using toilet, maintaining hygiene, taking medication	Altered mobility, physical, mental, or emotional illness, elimination problems
Family responsibilities	Shopping, cooking, doing laundry, cleaning, caring for yard, caring for family and pets, managing money	Altered mobility, heavy work schedule, insomnia, physical, mental, or emotional illness
Work or school	Fulfilling work responsibilities or school assignments, getting to and from work or school	Altered mobility, stress, heavy family demands, job dissatisfaction, difficulties in school, physical, mental, or emotional illness
Recreation	Pursuing hobbies and interests, exercising, reading, watching television	Altered mobility, physical, mental, or emotional illness
Socialization	Using the telephone, traveling, visiting family and friends, joining group activities, expressing sexuality	Altered mobility, physical, mental, or emotional illness, relocation

ing. Basic activities of daily living (BADL) include feeding, dressing, hygiene, and physical mobility. Instrumental activities of daily living (IADL) include more advanced skills such as managing personal finances, using transportation, telephoning, cooking, performing household chores, doing laundry, and shopping.

The ability to perform activities of daily living may be hampered by illness or accident resulting in physical or mental disability. Health care rehabilitation workers play a significant role in teaching individuals to maintain or relearn these skills so that the individual may achieve the highest possible degree of independence.

PATIENT CARE: The nurse and other members of the rehabilitation team, including occupational and physical therapists, assess the patient's ability to perform ADLs. The rehabilitation team instructs and trains the patient in techniques to relearn the skill, or to accommodate for inability to perform the task, with a goal of achieving the maximum possible independence. Where appropriate, family members are involved in the rehabilitation program. Referrals to community agencies are arranged when specific tasks cannot be performed independently. SEE: table.

electronic aids to a.d.l. ABBR: EADLs. Computerized or electronic devices that help people with functional limitations gain entry to and exit from buildings, use telephones and other household items, and enjoy leisure activities.

extended a.d.l. Instrumental activities of daily living.

instrumental a.d.l. ABBR: IADL. Those activities and tasks of living beyond basic self-care that are necessary for living independently, such as mobility, communication, cooking, shopping, cleaning the house, and doing laundry. M. Powell Lawton, U.S. gerontologist, identified these complex tasks. Other tasks considered necessary for living independently in the community include using the telephone, managing medications, and banking. SEE: *activities of daily living; self-care*.

activities of daily living, index of An assessment tool developed by American gerontologist S. Katz and his colleagues. It assesses self-maintenance in older adults and focuses on the unaided performance of six basic personal care activities: eating, toileting, dressing, bathing, transferring, and continence.

Activities-Specific Balance Confidence Scale ABBR: ABC. A 16-item instrument designed to measure a patient's perception of balance and his or her subsequent fear of falling. The patient ranks his or her confidence to complete each item from 0% (no confidence) to 100% (complete confidence).

activity (ăk-tĭv′ĭ-tē) **1.** The production of

energy or motion; the state of being active. The word *activity* describes various conditions: enzyme activity describes the rate of influence of an enzyme on a particular system; extravehicular activity indicates the actions of space travelers while outside a space vehicle; radiation activity indicates the energy produced by a source of radiation. **2.** The use of time by an individual.

graded a. In occupational therapy, a principle of therapeutic intervention in which tasks are classified and presented gradually according to the individual's level of function and the challenge or degree of skill (physical, social, or cognitive) required by the task.

leisure a. Activities chosen because they are pleasurable, relaxing, or in other ways emotionally satisfying, typically after work and other responsibilities are done.

meaning of a. The significance, value, or representation conveyed by an act, activity, or daily occupation. In occupational health theory, activities or daily occupations are more than acts. They represent an expression of the individual and often have purposes of symbolic significance in the life of the doer.

optical a. In chemistry, the rotation of the plane of polarized light when the light passes through a chemical solution. Measurement of this property, called polarimetry, is useful in the determination of optically active substances such as dextrose. Sugars are classified according to this criterion. Optical activity of a substance in solution can be detected by placing it between polarizing and analyzing prisms.

pulseless electrical a. ABBR: PEA. SEE: *pulseless electrical activity*.

purposeful a. The goal-directed use of time, energy, or attention that involves the active participation of the doer. Purposeful activity by humans often involves a social environment (others), a physical environment (objects, tools, and materials), and a process, which often culminates in a product.

activity analysis The process used by occupational therapists to determine the social, symbolic, physical, cognitive, and developmental characteristics of a task or activity. Typical characteristics of interest include safety, cost, gradability, required space, tools or supplies, complexity, and social or cultural significance or meaning.

activity intolerance Inadequate mental or physical energy to accomplish daily activities. Risk factors include debilitating physical conditions such as anemia, obesity, musculoskeletal disorders, neurological deficits (such as those following stroke), severe heart disease, chronic pulmonary disease, metabolic disorders, and prolonged sedentary lifestyle. SEE: *Nursing Diagnoses Appendix.*

activity intolerance, risk for A state in which an individual is at risk of experiencing insufficient physiological or psychological energy to endure or complete required or desired daily activities. SEE: *Nursing Diagnoses Appendix.*

activity therapist An allied health professional who assists patients or residents of care facilities with activities for leisure, recreation, habilitation, or rehabilitation purposes.

actomyosin (ăk″tō-mī′ō-sĭn) The combination of actin and myosin in a muscle.

Actos Pioglitazone.

actual (ăk′chū-ăl) [L. *actus,* doing] Real, existent.

actuator (ăk′chū-ā-tŏr) A component of a mechanical or electronic device that initiates a given action.

acu- [L. *acus,* needle] Prefix meaning *clarity, sharpness,* or *needle*.

acuity (ă-kū′ĭ-tē) [L. *acuere,* to sharpen] **1.** Clearness, sharpness of a sensory function (i.e., visual acuity). **2.** In emergency and critical care medicine, the severity of a hospitalized patient's illness and the level of attention or service he or she will need from professional staff.

distant a. The ability to register optical details of objects that are far from the eye, e.g., on a chart positioned 20 ft away from the viewer in a test of visual acuity.

near a. The ability to register optical details when objects are only 12–14 in from the eye.

visual a. SEE: *visual acuity*.

acuminate (ă-kū′mĭn-āt) [L. *acuminatus,* sharpened] Conical or pointed.

acupoint (ăk″ū-point′) [L. *acus,* needle + ″] A specific location on the body where an acupuncture needle is inserted or pressure is applied for therapeutic purposes (e.g., the control of postoperative nausea and vomiting).

acupressure (ăk′ū-prĕsh″ŭr) [L. *acus,* needle, + *pressura,* pressure] Finger pressure applied therapeutically at selected points on the body. In traditional Chinese medicine, the pressure points follow lines along the body called meridians. Techniques include shiatsu, tsubo, jin shin yutsu, and jon shin do.

acupuncture (ăk′ū-pŭngk″chūr) [L. *acus,* needle, + *punctura,* puncture] A technique for treating painful conditions, producing regional anesthesia, treating acute or chronic illness, or preventing future disease by passing thin needles through the skin into specific points on the body. The free ends of the needles are manually twirled, heated with burned mugwort (a technique called "moxa" or "moxibustion"), or connected to a weak electrical current. They are then typically left in place for

about 20 minutes. Although in Asia and Europe acupuncture has a variety of uses, in the U.S. it is principally considered a treatment for local pain syndromes. It is often used in combination with other therapies, including but not limited to massage, meditation, and herbal remedies. Research suggests that acupuncture relieves pain by stimulating the release of endogenous opioids, other neurotransmitters including serotonin, and by directly affecting afferent nerve fibers. Acupuncture has also been found to be effective in veterinary applications. In the U.S., professional proficiency in acupuncture is attained by passing an examination administered by the National Commission for the Certification of Acupuncture and Oriental Medicine of the American Academy of Medical Acupuncture.


It is important that the acupuncturist use sterile or disposable needles and that care be taken to prevent puncturing adjacent organs.

acusis SEE: *presbycusis*.

acustimulation (ăk″ū-stĭm″ū-lā-shĭn) [Fm. *acu(puncture)* + ″] The application of electrical energy (typically 4–4.5 volts at 0.28 mA) to acupuncture points, commonly to control nausea, vomiting, or pan.

acute (ă-kūt′) [L. *acutus,* sharp] **1.** Sharp, severe. **2.** Having rapid onset, severe symptoms, and a short course; not chronic.

acute care Health care delivered to patients experiencing sudden illness or trauma. Acute care generally occurs in the prehospital, hospital, or emergency department and is usually short-term rather than long-term or chronic care.

acute chest syndrome A complication of sickle cell disease resulting from vascular occlusion or infection in the lungs and marked by chest pain, tachypnea, fever, rales and rhonchi, leukocytosis, and lobar consolidation.

acute confusional state SEE: *confusional state, acute*.

acute coronary syndrome ABBR: ACS. Any circumstance that suddenly impairs blood flow through the coronary arteries. Acute coronary syndrome includes all forms of acute myocardial infarction (i.e., those that cause Q waves on the electrocardiogram and those that do not, as well as those that cause S–T segment elevation and those that do not), and unstable angina pectoris.

acute effect Any adverse effect of a transient exposure to a noxious agent, such as an infectious microorganism, ionizing radiation, or a toxin.

acute panmyelosis with myelofibrosis ABBR: APMF. A form of acute leukemia in which multiple cell lines develop aberrantly, infiltrate internal organs, e.g., the spleen, and cause extensive bone marrow fibrosis.

acute phase reaction The release of physiologically active proteins by the liver into the blood in response to interleukin-6 or other cytokines that participate in the destruction of pathogens and promote healing during inflammation. The acute phase response involves the production of plasma proteins as well as other metabolic, hematological, and neuroendocrine events. Cytokines, produced by white blood cells, esp. macrophages, stimulate the liver's production of acute phase proteins: interleukin-6, interleukin-1β, tumor necrosis factor α, interferon-γ, and transforming growth factor β. These proteins, which increase or decrease in the blood by at least 25%, include C-reactive protein, complement, and coagulation factors; they enhance the immune response and tissue repair. Cytokines also stimulate systemic changes, producing diverse beneficial effects including fever, which enhances the immune response and stabilizes cell membranes; increased adrenal cortisol and catecholamine production, which helps maintain hemodynamic stability; thrombocytosis and leukocytosis; and increased gluconeogenesis and lipolysis, which provide nutrients for cells. There are also negative effects, however, including decreased production of erythropoietin, causing anemia; impaired growth; anorexia; lethargy; and, if prolonged, the loss of skeletal muscle and fat (cachexia). SYN: *acute phase response.* SEE: *cytokine; inflammation; interleukin-6; protein, acute phase*.

acute respiratory distress syndrome ABBR: ARDS. Respiratory insufficiency marked by progressive hypoxemia due to severe inflammatory damage causing abnormal permeability of the alveolocapillary membrane. The alveoli fill with fluid, which interferes with gas exchange. SEE: *disseminated intravascular coagulation; sepsis; systemic inflammatory response syndrome; Nursing Diagnoses Appendix* .

ETIOLOGY: Acute respiratory distress syndrome may result from direct trauma to the lungs (e.g., near drowning, aspiration of gastric acids, severe lung infection) or systemic disorders, (e.g., shock, septicemia, disseminated intravascular coagulation [DIC], cardiopulmonary bypass, or reaction to multiple blood transfusions). Widespread damage to the alveolocapillary membranes is initiated through the aggregation and activity of neutrophils and macrophages and the activation of complement. Cytokines, oxygen-free radicals, and other inflammatory mediators

damage the walls of capillaries and alveoli, producing diffuse inflammatory interstitial and alveolar edema, fibrin exudates, and hyaline membranes that block oxygen delivery to the blood.

DIAGNOSIS: Diagnosis is based on a history of a recent event associated with the onset of ARDS, the presence of noncardiogenic pulmonary edema on the chest radiograph, and persistent hypoxemia and a PaO_2/FIO_2 ratio of < 200.

SYMPTOMS: Dyspnea and tachypnea are followed by a progressive hypoxemia that, despite oxygen therapy, is the hallmark of ARDS. Diffuse, fluffy infiltrates can be seen on chest radiographs, as inflammation increases alveolar permeability, causing visible alveolar flooding and collapse.

TREATMENT: Endotracheal intubation, mechanical ventilation with positive end-expiratory pressure (PEEP), supplemental oxygen, and tidal volumes of 4 to 8 ml/kg optimize respiratory outcomes. PEEP increases intrathoracic pressure, keeping alveoli open during exhalation. This reduces the pressure required to open alveoli during inhalation, improves gas exchange, and reduces oxygen need. The patient should be monitored and treated for acidosis, cardiac arrhythmias, DIC, oxygen toxicity, renal failure, and sepsis.

PROGNOSIS: Mortality is high, approx. 50% to 60%, depending on the amount of lung tissue affected and the ability to maintain adequate oxygen flow to vital organs. After resolution of the inflammation, the damaged lung tissue becomes fibrotic and can cause chronic restrictive lung disease. Prolonged use of more than 50% oxygen increases the risk of residual lung damage.

PATIENT CARE: To avert ARDS, respiratory status must be monitored in at-risk patients. Recognizing and treating early signs and symptoms can be crucial to a patient's survival. Ventilatory rate, depth, and rhythm must be monitored, and subtle changes noted. The onset of ARDS is marked by the onset of a rapid, shallow breathing pattern, and pulse oximetry must be monitored continuously for subtle changes. If shock ensues and blood is shunted away from body surfaces, resulting in cool skin, O_2 readings may become inaccurate, necessitating use of arterial blood gas monitoring for respiratory alkalosis (early) and mixed metabolic and respiratory acidosis (later). Serial chest x-rays should be obtained to assess for bilateral consolidation progressing to lung "whiteout." The patient must also be observed for chest wall retractions on inspiration, use of accessory breathing muscles, and level of dyspnea. The patient's consciousness level, cardiac rate and rhythm, blood pressure, arterial blood gas (ABG) values, serum electrolyte levels, and chest radiograph results must be monitored. Fluid balance must be closely watched by 1) measuring intravenous (IV) fluid intake, urinary output, and central venous pressure; 2) weighing the patient daily; and 3) assessing for peripheral edema. A patent airway must be maintained, and oxygen therapy with continuous positive airway pressure or mechanical ventilation with positive end-expiratory pressure (PEEP) must be provided by the respiratory therapist as prescribed by the attending physician. Routine management of a mechanically ventilated patient includes 1) monitoring breath sounds, chest wall movement, vital signs and comfort, and ventilator settings and function; 2) suctioning the endotracheal tube and oropharynx; and 3) assessing changes in pulse oximetry and ABG values.

Cardiac output may be decreased because PEEP increases intrathoracic pressure and reduces venous return. For this reason, health care professionals must monitor blood pressure, urine output, mental status, peripheral pulses, and pulmonary capillary wedge pressure to determine the effects of positive-pressure ventilation on hemodynamics. Inotropic drugs must be administered as prescribed if cardiac output falls. Hemoglobin levels and oxygen saturation values must also be monitored closely because packed red blood cell transfusion may be required if hemoglobin is inadequate for oxygen delivery. The nurse and respiratory therapist must observe for signs and symptoms of barotrauma, e.g., subcutaneous emphysema, pneumothorax, and pneumomediastinum. If mechanical ventilation is used, sedation may help calm the patient and reduce the incidence of poor synchronization between the patient and the ventilator. Nutritional support should begin early to promote pulmonary cell regeneration and to provide proteins needed for successful weaning from a ventilator. Enteral nutrition is preferred over parenteral means because it reduces the risk of infection. A formula that is lower in carbohydrates helps decrease CO_2 formation during metabolism in ARDS patients retaining CO_2. Fluid replacement should maintain sufficient circulating volume without causing overhydration as determined by central venous pressure readings. Nursing measures must be used to prevent problems of immobility. Prone positioning may be prescribed to improve oxygenation while lessening the risk of barotrauma, but it complicates some elements of nursing care. Prone positioning, if prescribed (usually

for 4 to 6 hours daily), is often labor-intensive and requires several staff members to position the patient and therefore is best accomplished on day shift when more staff are available in an emergency. To limit the patient's fear and isolation, the procedure should be explained to the patient, assuring him or her of its safety. Sedation or analgesia are prescribed 30 to 60 minutes before turning the patient on his or her abdomen. To reduce compression of the lungs by the heart and mediastinum, a specialty bed may be used, or a pronator device (a padded metal frame that is placed against the patient's chest and abdomen, with belt buckles that secure and protect the head, chest, and abdomen during the procedure) is strapped to the patient. To use this device, the side rails on the patient's bed are lowered, and the patient is pulled close to the edge of the bed farthest from the ventilator. The patient's face is turned away from the ventilator, his/her arm tucked under the body, and the leg farthest from the ventilator crossed over the other leg at the ankle to aid in turning the patient. The patient can then be turned by one staff member on each side of the bed and one (usually a respiratory therapist [RT]) at the head, who protects the endotracheal tube, IV lines, and other attachments. The prone patient's blood pressure and heart and respiratory rates must be closely monitored for evidence of position tolerance, and the RT may confirm correct endotracheal tube position by capnography. Vital signs should return to baseline within 5 min after prone positioning, repositioning the patient in the supine position if there is any drop in O_2 saturation, deterioration in ABG results, or uncontrollable patient anxiety. Once in the prone position, the patient's feet and elbows should be padded to prevent pressure injuries. The patient's head should be repositioned every hour to prevent necrosis of facial skin and to provide oral care and airway suctioning. Range of motion exercises should be performed at least every 2 hr. The patient should be repositioned to the supine position after 4 or 6 hr, as prescribed. Strict asepsis must be observed in dressing changes, suctioning, hand hygiene, and oral care. The patient must be routinely assessed for fever, changes in sputum color, and elevated WBC count. Response to therapy must be evaluated and adverse reactions noted. The family must be encouraged to talk to the patient even though he or she may not be able to respond verbally.

Respiratory therapists play a key role in the care of patients with ARDS. They initiate mechanical ventilation as prescribed by the attending physician and monitor arterial blood gases and pulse oximetry to ensure adequate oxygenation. They adjust the tidal volume, respiratory rate, and PEEP levels to optimize tissue oxygenation. They also help determine when the patient may be ready for weaning from mechanical ventilation by periodic assessment of the patient's cardiopulmonary status.

primary a.r.d.s. Acute respiratory distress syndrome that results from direct injury to lung tissues.

secondary a.r.d.s. Acute respiratory distress syndrome that results from indirect injury to the lungs, e.g., as a consequence of severe sepsis, pancreatitis, or shock.

acute respiratory failure SEE: *respiratory failure, acute*.

acute stress disorder ABBR: ASD. The emotional and behavioral consequences of a sudden alteration in one's sense of safety. They include intense anxiety, fear or helplessness, or dissociative symptoms.

acute urethral syndrome Syndrome experienced by women, marked by acute dysuria, urinary frequency, and lack of significant bacteriuria; pyuria may or may not be present. The cause is unknown, but it is important to determine whether a specific bacterial infection of the bladder or vagina is present to ensure that appropriate drugs are given as needed. The syndrome is referred to colloquially as "honeymoon cystitis" because it may occur during periods of increased sexual activity.

PATIENT CARE: A history of the illness, including events that increase or decrease symptoms, is obtained. The degree and nature of the patient's pain, its location and possible radiation, and its frequency and duration are ascertained. The patient is instructed in the procedure for collecting a clean-catch, midstream urine specimen and is prepared for vaginal examination. If a bladder or vaginal bacterial, fungal, or protozoal infection is diagnosed, prescribed treatment measures are explained and demonstrated.

acyanoblepsia (ă-sī″ă-nō-blĕp′sē-ă) [Gr. *a-,* not, + *kyanos,* blue, + *blepsis,* vision] Inability to discern blue colors. Also called *acyanopsia*.

acyanotic (ă-sī″ă-nŏt′ĭk) [″ + *kyanos,* blue] Pert. to the absence of cyanosis.

acyclic (ă-sī′klĭk) **1.** Without a cycle. **2.** In chemistry, aliphatic.

acyclovir (ă-sī′klō-vĭr) An antiviral drug approved for use in herpes simplex infections of the genitals, face, and central nervous system.

acyl (ăs′ĭl) General formula RC=O; in organic chemistry, the radical derived from an organic acid when the hydroxyl group (OH) is removed.

acylation (ăs″ĭ-lā′shŭn) Incorporation of

an acyl (alkanoyl) group into a chemical compound.

acystia (ă-sĭs′tē-ă) [Gr. *a-*, not, + *kystis,* bladder] Congenital absence of the bladder.

acystinervia, acystineuria (ă-sĭs″tĭ-nĕr′vē-ă, -nū′rē-ă) [″ + ″ + *neuron,* nerve] Defective nerve supply to or paralysis of the bladder.

AD *anodal duration; average deviation.*

ad [L., to] In prescription writing, an indication that a substance should be added to the formulation up to a specified volume.

a.d. [L.] *auris dextra,* right ear.

-ad [L., to] Suffix meaning *toward* or *in the direction of,* as in cephalad.

ad- [L., to] Prefix indicating *adherence, increase, toward,* as in adduct.

ADA *American Dental Association; American Diabetes Association; American Dietetic Association; Americans with Disabilities Act.*

ADAA *American Dental Assistants Association.*

ADAAG *Americans with Disabilities Act Accessibility Guidelines.*

Adacel (ăd′ŭ-sĕl″) Tetanus toxoid, diphtheria, and acellular pertussis, adsorbed vaccine.

adactylia, adactylism, adactyly (ă″dăk-tĭl′ē-ă, ā-dăk′tĭ-lĭzm, -lē) [Gr. *a-*, not, + *daktylos,* finger] Congenital absence of digits of the hand or foot.

adamantine (ăd″ă-măn′tĭn) [Gr. *adamantinos*] Very hard; said of enamel of teeth.

adamantinoma (ăd″ă-măn″tĭ-nō′mă) [″ + *oma,* tumor] A tumor of the jaw, esp. of the lower one, that arises from enamel-forming cells and may be partly cystic, partly solid. It may be benign or of low-grade malignancy. SYN: *ameloblastoma.*

adamantoblast (ăd″ă-măn′tō-blăst) [Gr. *adamas,* hard surface, + *blastos,* germ] An enamel-forming cell present only during tooth formation. SYN: *ameloblast.*

adamantoblastoma (ăd″ă-măn″tō-blăs-tō′mă) [″ + ″ + *oma,* tumor] Overgrowth of an adamantoblast.

adamantoma (ăd″ă-măn-tō′mă) [Gr. *adamas,* hard surface, + *oma,* tumor] Adamantinoma.

Adam's apple (ăd′ăm) The laryngeal prominence formed by the two laminae of the thyroid cartilage at the top of the trachea along the front (ventral surface) of the neck. It is more prominent in men than in women. SYN: *pomum adami; prominentia laryngea.*

Adams-Stokes syndrome (ăd′ămz-stōks′ sĭn′drōm″) SEE: *Stokes-Adams syndrome.*

Adams test, Adams forward bend test (ăd′ămz) A measurement of lateral spinal curvature (scoliosis) after the patient bends forward at the waist. A scoliometer is used to measure the degree of curvature.

adaptation (ăd″ăp-tā′shŭn) [L. *adaptare,* to adjust] **1.** Adjustment of an organism to a change in internal or external conditions or circumstances. **2.** Adjustment of the eye to various intensities of light, accomplished by changing the size of the pupil and accompanied by chemical changes occurring in the rods. **3.** In psychology, a change in quality, intensity, or distinctness of a sensation that occurs after continuous stimulation of constant intensity. **4.** In dentistry, the proper fitting of dentures or bands to the teeth or closeness of a filling to the walls of a cavity.

chromatic a. A change in hue or saturation, or both, resulting from pre-exposure to light of other wavelengths.

color a. The fading of intensity of color perception after prolonged visual stimulation.

dark a. Adjustment of the eyes for vision in dim light. SYN: *scotopia.*

light a. SEE: under *light.*

occupational a. ABBR: OA. A practice model used by the occupational therapist to provide strategies for interpreting and enhancing observed patient performance and for facilitating mastery for the patient over performance challenges. SEE: *conceptual model; occupational therapy.*

postural a. The ability to maintain balance and remain upright during changes in position and challenges to stability. SEE: *control, postural.*

retinal a. Adjustment of the rods and cones of the retina to ambient light.

Adaptation Model A conceptual model of nursing developed by nursing theorist Sister Callista Roy that is based on the individual's adaptation to environmental stimuli. In this model, the goal of nursing is to promote adaptive physiological/physical, self-concept/group identity, role function, and interdependence responses. SEE: *Nursing Theory Appendix.*

adapter (ă-dăp′tĕr) **1.** Device for joining one part of an apparatus to another part. **2.** Device to facilitate connecting electrical supply cords to different receptacles. **3.** Device for adapting one type of electrical supply source to the specific requirements of an instrument.

adaptive therapy Those services and strategies in occupational and physical therapy that make use of assistive technology to help patients with functional disabilities overcome environmental barriers.

adaptive trial A form of research in which data analyzed as the trial progresses are used to reshape or refocus the trial design.

adaptogen (ă-dăp′tŏ-jĕn) [″ + ″] Any agent, e.g., an herb or a nutrient, that

stimulates immunity or provides resistance to disease.

adaptometer (ă-dăp″tŏm′ĕ-tĕr) A device used to determine the time required for visual adaptation to darkness.

adaxial (ăd-ăk′sē-ăl) [L. *ad,* toward, + *axis,* axis] Toward the main axis; opposite of abaxial.

ADCC *Antibody-dependent cellular cytoxicity.*

add **1.** Prescription abbreviation meaning *let there be added.* **2.** The enhancement in the prescription strength of a plus lens, measured in diopters, that is needed to improve the viewing of objects seen at 16 in from the eye (the standard distance a book is held from the eye during reading).

adde (ăd′ē) [L.] *Add,* used as a direction in writing prescriptions.

addict (ăd′ĭkt) [L. *addictus,* given over] **1.** One who cannot control his or her need or craving for a substance or a behavior, esp. when that craving results in adverse consequences or a decline in one's ability to function effectively. **2.** To make someone dependent or to become dependent on a substance or behavior.

addiction (ă-dĭk′shŭn) A compulsive and maladaptive dependence on a substance (e.g., alcohol, cocaine, opiates, or tobacco) or a behavior (e.g., gambling). The dependence typically produces adverse psychological, physical, economic, social, or legal ramifications.

addiction ministry A method of recovery from addiction managed and supervised by a religious agency.

addictionologist (ă-dĭk″shŭn-ŏl′ŏ-jĭst) [″ + ″] A specialist in the diagnosis, study, and treatment of psychological dependence.

Addison's disease (ăd′ĭ-sŏnz) [Thomas Addison, Brit. physician, 1793–1860] A rare illness marked by gradual and progressive failure of the adrenal glands and insufficient production of steroid hormones. Patients with Addison's disease make inadequate amounts of both glucocorticoids (e.g. cortisol) and mineralocorticoids. (e.g. aldosterone). Cortisol is important to glucose metabolism, affects protein, carbohydrate and fat metabolism, and helps to maintain blood pressure and cardiovascular function. Hypovolemia and hypotension may result from aldosterone deficiency.

ETIOLOGY: Primary adrenal failure typically results from autoimmune destruction of the adrenal glands (80% of cases), chronic infections (e.g., tuberculosis, cytomegalovirus, other viruses such as Lyme disease, or histoplasmosis), or cancers that metastasize to the adrenal glands from other organs (e.g., the lungs or breast). Secondary adrenal insufficiency is related to suppression of hypothalamic-pituitary-adrenal axis function.

SYMPTOMS: The patient may be symptom-free until the majority of adrenal tissue is destroyed. Early complaints are usually nonspecific, e.g., a feeling of weakness or fatigue. Subsequently, patients may notice lack of appetite, weight loss, nausea, vomiting, abdominal pain, craving for salt, and dizziness. Physical findings may include postural hypotension and increased skin pigmentation. Laboratory studies may reveal hyponatremia and hyperkalemia. If these findings are present, a cosyntropin stimulation test may be performed to establish the diagnosis.

TREATMENT: Chronic adrenal insufficiency is managed with corticosteroids, such as hydrocortisone or prednisone, usually taken twice a day, at the lowest effective dose to replace cortisol. If the patient requires mineralocorticoid replacement, fludrocortisone is prescribed. Because of the vital role of cortisol in the body's response to stress, the maintenance dose of these medications during episodic illnesses or stresses (e.g., surgeries) is increased and then tapered over several days back to baseline levels. SEE: *adrenal crisis*.

PROGNOSIS: Untreated patients may develop progressive problems with abdominal pain, nausea, vomiting, low blood pressure, electrolyte disturbances, or shock during major illnesses. Patients treated with corticosteroids have an excellent prognosis.

PATIENT CARE: Patients with primary adrenal insufficiency who are suffering other acute conditions are assessed frequently for hypotension, tachycardia, fluid balance, and electrolyte and glucose levels. Prescribed adrenocortical steroids, with sodium and fluid replacement, are administered. The patient is protected from stressors such as infection, noise, and light and temperature changes. Extra time for rest and relaxation is planned.

For chronic maintenance therapy: Both patient and family are taught about the need for lifelong replacement therapy and medical supervision. Patients are taught about self-administration of steroid therapy (typically two thirds of the dose is given in the A.M. and one third in the P.M. to mimic diurnal adrenal activity). Symptoms of overdosage and underdosage and the course of action if either occurs are explained. The patient and family also are taught how to monitor blood pressure, heart rate, and blood glucose level. A medical alert tag should be worn (or a card carried) indicating that the individual has Addison's disease and requires a 100-mg cortisol injection if found severely injured or incapacitated. Patient and family should learn how to administer hydrocortisone by injection

and should have a prepackaged syringe and needle with the drug readily available at all times. The patient also should be taught to recognize physical or mental stressors and how to adjust the usual dosage to prevent a crisis. The patient is instructed to increase fluid and salt replacement if perspiring and to follow a diet high in sodium, carbohydrates, and protein, with small, frequent meals if hypoglycemia or anorexia occurs. Measures to help prevent infection include getting adequate rest, avoiding fatigue, eating a balanced diet, and avoiding people with infections. Verbalization of feelings and concerns is encouraged. The patient is assisted in developing coping strategies and is referred for further mental health or stress management counseling if warranted. Educational materials and support are available from the National Adrenal Diseases Foundation http://www.medhelp.org/nadf or the National Institutes of Health at http://www.niddk.nih.gov/health/endo/pubs/addison/addison.htm. SEE: *Nursing Diagnoses Appendix.*

addisonism (ăd′ĭ-sŭn-ĭzm″) Symptom complex resembling Addison's disease caused by infectious agents such as *Mycobacterium tuberculosis* or *Cytomegalovirus*.

Addison's planes (ăd′ĭ-sŏnz) Imaginary planes that divide the abdomen into nine regions to aid in the location of internal structures. SEE: *abdominal regions*.

addition (ă-dĭ′shŭn) In chemistry, a reaction in which two substances unite without loss of atoms or valence.

additive (ăd′ĭ-tĭv) **1.** In pharmacology, the effect that one drug or substance contributes to the action of another drug or substance. **2.** An adulterant, i.e., any substance that changes the composition or action of another when it is added or combined with the first.

food a. Substance added to food to maintain or impart a certain consistency, to improve or maintain nutritive value, to enhance palatability or flavor, to produce a light texture, or to control pH. Food additives are used to help bread rise during baking, to keep bread mold-free, to color margarine, to prevent discoloration of some fruits, and to prevent fats and oils from becoming rancid. The U.S. Food and Drug Administration regulates the use of food additives.

additive effect The therapeutic effect of a combination of two or more drugs that is equal to the sum of the individual drug effects.

adducent (ă-dū′sĕnt) [L. *adducere,* to bring toward] Causing adduction.

adduct (ă-dŭkt′) [L. *adductus,* brought toward] **1.** To draw toward the long axis of the body or a limb. **2.** A compound formed by the addition of one chemical structure to another.

adduction (ă-dŭk′shŭn) Movement of a limb or eye toward the median plane of the body or, in the case of digits, toward the axial line of a limb. SEE: *abduction* for illus.

convergent-stimulus a. Convergence of the eyes when the gaze is fixed on an object at the near point of vision.

aden- SEE: *adeno-*.

adenalgia (ăd″ĕn-ăl′jē-ă) [Gr. *aden,* gland, + *algos,* pain] Pain in a gland. SYN: *adenodynia*.

adenase (ăd′ĕ-nāz) [″ + *-ase,* enzyme] Enzyme secreted by the pancreas, spleen, and liver that converts adenine into hypoxanthine.

adendric, adendritic (ă-dĕn′drĭk, ă″dĕn-drĭt′ĭk) [Gr. *a-,* not, + *dendrites,* rel. to a tree] Without dendrites, as in certain cells in the spinal ganglia.

adenectomy (ăd″ĕn-ĕk′tō-mē) [Gr. *aden,* gland, + *ektome,* excision] Excision of a gland.

adenectopia (ăd″ĕ-nĕk-tō′pē-ă) [″ + ″ + *topos,* place] Malposition of a gland; a gland in a position that is other than its normal position.

adenia (ă-dē′nē-ă) Chronic inflammation and enlargement of a lymph gland.

Adenia digitata (ă-dēn′ē-ă dĭ″jĭ-tā′tă) [NL] A broad-leafed plant native to southeastern Africa. The tubers contain concentrated modeccin, a protein toxic to mammalian ribosomes.

adenine (ăd′ĕ-nēn) A purine base, $C_5H_5N_5$, that is part of the genetic code of DNA and RNA. In DNA it is paired with thymine and in RNA, with uracil.

adenitis (ăd″ĕ-nī′tĭs) [Gr. *aden,* gland, + *itis,* inflammation] Inflammation of lymph nodes or a gland.

adeno-, aden- [Gr. *aden,* gland] Combining forms meaning *gland.*

adenoacanthoma (ăd″ĕ-nō-ăk″ăn-thō′mă) [″ + *akantha,* thorn, + *oma,* tumor] Adenocarcinoma in which some cells have undergone squamous metaplasia.

adenoameloblastoma (ăd″ĕ-nō-ă-mēl″ō-blăs-tō′mă) [″ + O. Fr. *amel,* enamel, + Gr. *blastos,* germ, + *oma,* tumor] Benign tumor of the jaw, originating from ameloblast cells of forming teeth; an odontogenic tumor.

adenoblast (ăd′ĕ-nō-blăst) [″ + *blastos,* germ] Any tissue that produces secretory or glandular activity.

adenocarcinoma (ăd″ĕ-nō-kăr″sĭn-ō′mă) [″ + *karkinos,* crab, + *oma,* tumor] A malignant tumor arising from a glandular organ.

acinar a. Adenocarcinoma in which the cells are in the shape of alveoli. SYN: *alveolar adenocarcinoma*.

alveolar a. Acinar a.

adenocele (ăd′ĕ-nō-sēl″) [″ + *kele,* tu-

mor, swelling] **1.** A cystic tumor arising from a gland. **2.** A tumor of glandular structure.

adenocellulitis (ăd″ĕ-nō-sĕl″ū-lī′tĭs) [″ + L. *cella,* small chamber, + Gr. *itis,* inflammation] Inflammation of a gland and adjacent cellular tissue.

adenocyst (ăd′ĕ-nō-sĭst″) [″ + *kystis,* sac] A cystic tumor arising from a gland.

adenocystoma (ăd″ĕ-nō-sĭs-tō′mă) [″ + *kystis,* sac, + *oma,* tumor] Cystic adenoma.

adenodynia (ăd″ĕ-nō-dĭn′ē-ă) [″ + *odyne,* pain] Pain in a gland. SYN: *adenalgia*.

adenoepithelioma (ăd″ĕ-nō-ĕp″ĭ-thēl-ē-ō′mă) [″ + *epi,* on, + *thele,* nipple, + *oma,* tumor] A tumor consisting of glandular and epithelial elements.

adenofibroma (ăd″ĕ-nō-fī-brō′mă) [″ + L. *fibra,* fiber, + Gr. *oma,* tumor] A tumor of fibrous and glandular tissue (connective tissue); frequently found in the uterus or breast.

adenofibrosis (ăd″ĕ-nō-fī-brō′sĭs) [″ + ″ + Gr. *osis,* condition] The abnormal growth of fibrous or connective tissue within glandular tissue.

adenogenous (ăd″ĕ-nŏj′ĕ-nŭs) [″ + *gennan,* to produce] Originating in glandular tissue.

adenohypophysis (ăd″ĕ-nō-hī-pŏf′ĭ-sĭs) [″ + *hypo,* under, + *phyein,* to grow] The portion of the pituitary gland containing secretory cells responsible for releasing the hormones adrenocorticotropic hormone (ACTH), follicle-stimulating hormone (FSH), growth hormone (GH), luteinizing hormone (LH), prolactin, and thyroid-stimulating hormone (TSH). The adenohypophysis makes up 80% of the pituitary gland. It is an epithelial tissue that develops from the roof of the embryonic mouth.

adenoid (ăd′ĕ-noyd) [″ + Gr. *eidos,* form, shape] Lymphoid; having the appearance of a gland.

adenoidectomy (ăd″ĕ-noyd-ĕk′tō-mē) [″ + ″ + *ektome,* excision] Excision of the adenoids. SEE: *tonsillectomy; Nursing Diagnoses Appendix.*

PATIENT CARE: Vital signs are monitored, and the patient is observed for signs of shock. The mouth and pharynx are checked for bleeding, large clot formation, or oozing; the patient is observed for frequent swallowing, which indicates bleeding or large clot formation. Clots should be prevented from obstructing the oropharnyx. The patient is placed in either a prone position with the head turned to the side or in a lateral recumbent position to promote drainage. When the operative wound has healed sufficiently, the oral intake of cool (not hot or iced) fluids and soft foods is encouraged. The patient is also advised not to gargle until the surgical site has healed.

Young patients: The child is reassured concerning care routines and procedures. Emotional support is provided, and parental presence is encouraged. The child is evaluated for vomiting swallowed blood, and is monitored for ability to swallow fluids.

adenoiditis (ăd″ĕ-noyd-ī′tĭs) [Gr. *aden,* gland, + *eidos,* form, + *itis,* inflammation] Inflammation of adenoid tissue.

adenoids (ăd′ĕ-noyds) **1.** Lymphatic tissue forming a prominence on the wall of the pharyngeal recess of the nasopharynx. **2.** A colloquial term for enlarged pharyngeal tonsils in children. SEE: *pharyngeal tonsil*.

adenolipoma (ăd″ĕ-nō-lĭp-ō′mă) [Gr. *aden,* gland, + *lipos,* fat, + *oma,* tumor] A benign tumor having glandular characteristics but composed of fat.

adenolymphocele (ăd″ĕ-nō-lĭm′fō-sēl) [″ + ″ + Gr. *kele,* tumor, swelling] Cystic dilatation of a lymph node from obstruction.

adenolymphoma (ăd″ĕ-nō-lĭm-fō′mă) [″ + ″ + Gr. *oma,* tumor] A lymph gland adenoma.

adenoma (ăd″ĕ-nō′mă) *pl.* **adenomata** [″ + ″] A benign tumor made of epithelial cells, usually arranged like a gland. **adenomatous** (-nō′mă-tŭs), *adj.*

acidophil(ic) a. A tumor of the pituitary gland in which cells stain with acid dyes. In the past, such staining was used to suggest the presence of growth hormones, the cause of acromegaly and gigantism. The contemporary means of classifying pituitary tumors is with immunocytochemistry. SYN: *eosinophil(ic) adenoma; somatotroph adenoma*.

adrenocorticotrophin-secreting a. A pituitary tumor that secretes adrenocorticotropic hormone, the substance responsible for Cushing's syndrome.

basophil(ic) a. Tumor of the pituitary gland in which cells stain with basic dyes. The term was used in the past to suggest tumors that secreted adrenocorticotrophin (ACTH), the cause of Cushing's syndrome. Those tumors are now identified more directly, based on the identification (using immunocytochemistry) of ACTH in tumor cells. The use of hematoxylin and eosin staining to identify pituitary tumors is obsolete.

chromophobe a. A tumor of the pituitary gland composed of cells that do not stain readily. The term has more historical value than descriptive value and is no longer in use.

eosinophil(ic) a. Acidophil(ic) a.

fibroid a. Fibroadenoma.

follicular a. Adenoma of the thyroid.

gonadotroph-cell a. The most common macroadenoma of the pituitary

gland. It secretes either luteinizing hormone or follicle-stimulating hormone.

Hürthle cell a. Tumor of the thyroid that contains mostly eosinophil-staining cells; occasionally found in diseases such as Hashimoto's thyroiditis.

malignant a. Adenocarcinoma.

papillary a. Adenoma with nipple-shaped glands.

pituitary a. Adenoma of the pituitary gland.

prolactin-secreting a. Prolactinoma.

sebaceous a. Enlarged sebaceous glands, esp. of the face. SYN: *adenoma sebaceum*.

a. sebaceum Sebaceous a.

somatotroph a. A growth-hormone-secreting tumor of the anterior pituitary that causes acromegaly or giantism.

villous a. Large polyp of the mucosal surface of the large intestine. It has the potential to develop into cancer.

adenomatome (ăd″ĕ-nō′mă-tōm) [″ + *oma,* tumor, + *tome,* incision] An instrument for removing adenoids.

adenomatosis (ăd″ĕ-nō-mă-tō′sĭs) [″ + *oma,* tumor, + *osis,* condition] The condition of multiple glandular tissue overgrowths.

adenomyoma (ăd″ĕ-nō-mī-ō′mă) [″ + *mys,* muscle, + *oma,* tumor] Tumor containing glandular and smooth muscular tissue.

adenomyometritis (ăd″ĕ-nō-mī″ō-mĕ-trī′tĭs) [″ + ″ + *metra,* womb, + *itis,* inflammation] Adenomyosis.

adenomyosarcoma (ăd″ĕ-nō-mī″ō-săr-kō′mă) [″ + ″ + *sarx,* flesh, + *oma,* tumor] Adenosarcoma that includes muscle tissue.

adenomyosis (ăd″ĕ-nō-mī-ō′sĭs) [″ + *mys,* muscle, + *osis,* condition] Benign invasive growth of the endometrium into the muscular layer of the uterus. SYN: *adenomyometritis.* SEE: *endometriosis*for illus.

adenopathy (ăd-ĕ-nŏp′ă-thē) [″ + *pathos,* disease, suffering] Swelling and morbid change in lymph nodes; glandular disease.

adenopharyngitis (ăd″ĕ-nō-făr″ĭn-jī′tĭs) [″ + *pharynx,* throat, + *itis,* inflammation] Inflammation of tonsils and pharyngeal mucous membrane.

adenophthalmia (ăd″ĕ-nŏf-thăl′mē-ă) [″ + *ophthalmos,* eye] Meibomitis.

adenosarcoma (ăd″ĕ-nō-săr-kō′mă) [″ + *sarx,* flesh, + *oma,* tumor] A tumor with adenomatous and sarcomatous characteristics.

adenosclerosis (ăd″ĕ-nō-sklĕ-rō′sĭs) [″ + *sklerosis,* hardening] Glandular hardening.

adenose (ăd′ĕ-nōs) Glandlike.

adenosine (ă-dĕn′ō-sēn) A nucleotide containing adenine and ribose.

a. 3′,5′-cyclic monophosphate ABBR: AMP. A cyclic form of adenosine. Its synthesis from adenosine triphosphate (ATP) is stimulated by an enzyme, adenylate cyclase (also called cyclic AMP synthetase). Adenosine 3′,5′-cyclic monophosphate is important in a wide variety of metabolic responses to cell stimuli.

a. deaminase conjugated with polyethylene glycol ABBR: PEG-ADA. A cytoplasmic enzyme used to treat severe combined immunodeficiency disease (SCID) due to adenosine deaminase deficiency. Trade name is Adagen. SEE: *severe combined immunodeficiency disease*.

a. diphosphate ABBR: ADP. A compound of adenosine containing two phosphoric acid groups. ADP is used to synthesize ATP with the energy released in cell respiration. When ATP is used for cellular functions such as protein synthesis, ADP is reformed.

a. monophosphate ABBR: AMP; 5′-AMP. Substance formed by condensation of adenosine and phosphoric acid. It is one of the hydrolytic products of nucleic acids and is present in muscle, red blood cells, yeast, and other nuclear material. SYN: *adenylic acid*.

a. triphosphatase ABBR: ATPase. Enzyme that splits adenosine triphosphate to yield phosphate and energy.

a. triphosphate ABBR: ATP. A compound of adenosine containing three phosphoric acid groups. Its chemical formula is $C_{10}H_{16}N_5O_{13}P_3$. ATP is present in all cells; it is formed when energy is released from food molecules during cell respiration. Cells contain enzymes to split ("hydrolyze") ATP into ADP, phosphate, and energy, which is then available for cellular functions such as mitosis.

adenosis (ăd″ĕ-nō′sĭs) [Gr. *aden,* gland, + *osis,* condition] Any disease of a gland or of glandular tissue.

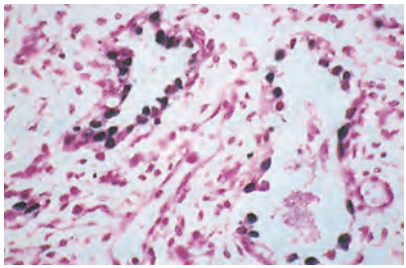
vaginal a. Disordered growth of the glandular cells of the vagina. It is a common finding in women whose mothers were exposed to diethylstilbesterol (DES) during pregnancy. Close follow-up of women with vaginal adenosis is needed because the condition is occasionally a harbinger of glandular cancer.

adenotome (ăd′ĕ-nō-tōm) [″ + *tome,* incision] Device for excising a gland, esp. the adenoid glands.

adenotonsillectomy (ăd″ĕ-nō-tŏn″sĭl-lĕk′tō-mē) [″ + L. *tonsilla,* almond, + Gr. *ektome,* excision] Surgical removal of the tonsils and adenoids.

adenous (ăd′ĕ-nŭs) Like a gland.

adenovirus (ăd′ĕ-nō-vī′rŭs) Any of a group of double-stranded DNA viruses that can cause infections of the upper respiratory tract. A large number have been isolated. SEE: illus.



ADENOVIRUS

Adenovirus inclusions (stained blue-black) in the cells lining a bronchiole

adenyl (ăd′ĕ-nĭl) The radical $C_5H_4N_5$; present in adenine.

a. cyclase An enzyme that catalyzes the production of cyclic AMP (adenosine 3′,5′-cyclic monophosphate) from ATP (adenosine triphosphate). It is present on most cell surfaces.

adenylate cyclase (ă-dĕn′ĭ-lāt sī′klās) An enzyme important in the synthesis of cyclic AMP (adenosine 3′,5′-cyclic monophosphate) from adenosine triphosphate. SYN: *cyclic AMP synthetase*.

adermia (ă-dĕr′mē-ă) [Gr. *a-,* not, + *derma,* skin] Congenital or acquired defect in or lack of skin.

adermogenesis (ă-dĕr″mō-jĕn′ĕ-sĭs) [″ + ″ + *genesis,* generation, birth] Imperfect development of skin.

ADH *antidiuretic hormone* (vasopressin). SEE: under *hormone*.

ADHA *American Dental Hygienists' Association.*

adherence (ăd′hēr-ĕns) **1.** Stickiness. **2.** The extent to which a patient's behavior coincides with medical advice. Adherence may be estimated by carefully questioning the patient and family members; evaluating the degree of clinical response to therapy or the presence or absence of side effects from drugs; measuring serum drug levels or testing for excretion of the drug in the urine; and counting remaining pills. SEE: table.

adherent (ăd-hē′rĕnt) [L. *adhaerere,* to stick to] Attached to, as of two surfaces.

adhesin (ăd-hē′zĭn) **1.** In conjugation of some bacteria, a protein on the cell surface that causes aggregation of cells. **2.** A protein found on the cell wall of bacteria such as *Escherichia coli* that enables the bacteria to bind to the host's cells.

adhesio interthalamica (ăd-hē′zē-ō ĭn″tĕr-thă-lăm′ĭ-kă) [NL] ABBR: AI. The massa intermedia that connects the two lobes of the thalamus.

adhesion (ăd-hē′zhŭn) [L. *adhaesio,* stuck to] **1.** A holding together or uniting of two surfaces or parts, as in wound healing. **2.** A fibrous band holding parts together that are normally separated. **3.** An attraction to another substance (e.g., of molecules or blood platelets to each other or to dissimilar materials).

abdominal a. Adhesion in the abdominal cavity, usually involving the intestines; caused by inflammation or trauma. If adhesions cause great pain or intestinal obstruction, they are treated surgically.

pericardial a. Sticking of the pericardium to the myocardium, e.g., after heart surgery. If extensive, adhesions may lead to restriction of the normal contraction of the heart. SEE: *pericarditis*.

adhesiotomy (ăd-hē″zē-ŏt′ō-mē) [L. *adhaesio,* stuck to, + Gr. *tome,* incision] Surgical division of adhesions.

adhesive (ăd-hē′sĭv) [L. *adhaesio,* stuck to] **1.** Causing adhesion. **2.** Sticky; adhering. **3.** A substance that causes two bodies to adhere.

adiadochokinesia, adiadochokinesis (ă-dī″ă-dō″kō-kĭ-nē′sē-ă, -nē′sĭs) [Gr. *a-,* not, + *diadochas,* successive, + *kinesis,* movement] Inability to make rapid alternating movements.

adiaphoresis (ă-dī″ă-fō-rē′sĭs) [″ + *diaphorein,* to perspire] Deficiency or absence of sweat.

adiastole (ā″dī-ăs′tō-lē) [″ + *diastole,* dilatation] Imperceptibility of diastole.

Adie's pupil, Adie's syndrome (ā′dēz) [William John Adie, Brit. neurologist, 1886–1935] Tonic pupil.

adip- SEE: *adipo-*.

adipectomy (ăd″ĭ-pĕk′tō-mē) [L. *adeps,* fat, + Gr. *ektome,* excision] Excision of fat or adipose tissue, usually a large quantity. SEE: *liposuction*.

adipic (ă-dĭp′ĭk) Rel. to adipose tissue.

adipo-, adip- [L. *adeps,* fat] Combining forms meaning fat. See also *lipo-, steato-*.

adipocele (ăd′ĭ-pō-sēl″) [L. *adeps,* fat, +

Factors That May Decrease Patient Adherence to Therapy in the U.S.

Cultural barriers between patient and provider
Dementia and other forms of cognitive dysfunction
Denial of illness
Depression or anxiety
Lack of finances; excessive expense associated with obtaining care
Lack of social support
Language barriers
Male gender
Marital status (unmarried)
Mistrust of health care institutions or specific forms of therapy
Personality disorders
Psychoses
Religious proscriptions against particular forms of treatment
Substance abuse

Gr. *kele,* tumor] A hernia that contains fat or fatty tissue. SYN: *lipocele*.

adipocellular (ăd″ĭ-pō-sĕl′ū-lăr) Containing fat and cellular tissue.

adipocere (ăd′ĭ-pō-sēr″) [L. *adeps,* fat, + *cera,* wax] A brown, waxlike substance composed of fatty acids and calcium soaps. It is formed in animal tissues postmortem.

adipocyte (ăd′ĭ-pō-sīt″) Fat cell.

adipocytokine, adipokine (ăd″ĭ-pō-sī′tō-kīn″) [″ + ″] A molecule secreted by fat cells that affects the physiology of cells in other parts of the body. Some of these molecules influence appetite, the storage of fat in the body, and systemic inflammation.

adipofibroma (ăd″ĭ-pō-fī-brō′mă) [″ + *fibra,* fiber, + Gr. *oma,* tumor] A fibroma and adipoma.

adipogenous, adipogenic (ăd″ĭ-pŏj′ĕnŭs, -pō-jĕn′ĭk) [″ + Gr. *gennan,* to produce] Inducing the formation of fat.

adipoid (ăd′ĭ-poyd) [L. *adeps,* fat, + Gr. *eidos,* form, shape] Fatlike; lipoid.

adipokinesis (ăd″ĭ-pō-kĭ-nē′sĭs) [″ + Gr. *kinesis,* movement] **1.** Metabolism of fat with production of free fatty acids. **2.** Mobilization and metabolism of body fat.

adiponecrosis (ăd″ĭ-pō-nĕ-krō′sĭs) [″ + Gr. *nekrosis,* state of death] Necrosis affecting fatty tissue.

adipose (ăd′ĭ-pōs″) [L. *adiposus,* fatty] Fatty; pert. to fat.

adiposis (ăd″ĭ-pō′sĭs) [L. *adeps,* fat, + Gr. *osis,* condition] Abnormal accumulation of fat in the body. SYN: *corpulence; liposis; obesity*.

adipositis (ăd″ĭ-pō-sī′tĭs) [L. *adiposus,* fatty, + Gr. *itis,* inflammation] Infiltration of an inflammatory nature in and beneath subcutaneous adipose tissue.

adiposity (ăd″ĭ-pŏs′ĭ-tē) Excessive fat in the body. SYN: *adiposis; corpulence; obesity*.

adiposogenital syndrome (ăd″ĭ-pō″sō-jĕn′ĭ-tăl sĭn′drōm″) Fröhlich's syndrome.

adipsia, adipsy (ă-dĭp′sē-ă, -sē) [Gr. *a-,* not, + *dipsa,* thirst] Absence of thirst. SYN: *aposia*.

adjunct (ăd′jŭnkt) An addition to the principal procedure or course of therapy.

adjust **1.** To adapt to a different environment; to cope with new conditions or stressors. **2.** To change or modify something, esp. to improve its function or condition. **3.** To manipulate a part of the body, e.g., with physical force.

adjustable gastric banding A bariatric surgical treatment for obesity in which a Silastic belt encircles the proximal portion of the stomach, restricting the flow of food. The rest of the gastrointestinal tract is left unmodified. The belt initially permits the proximal stomach to hold just an ounce of food. The restriction gives patients a feeling of premature fullness after a small meal, which keeps them from overeating. It can be loosened after significant weight loss has occurred to permit slightly increased food intake. Weight loss with gastric banding, which results purely from limitations on food intake, tends to be less than what can be achieved with surgery, e.g., Roux-en-Y gastric bypass, which also causes the body to fail to absorb nutrients. Relatively common complications of the banding procedure include nausea and vomiting, erosion of the band into the stomach, and wound infections. Some patients fail to lose weight by learning how to eat slowly but continuously, thus mitigating the effect of the banded restriction.

adjuster A device for holding together the ends of the wire forming a suture.

adjustment [L. *adjuxtare,* to bring together] **1.** Adaptation to a different environment; a person's relation to his or her environment and self. **2.** A change made to improve function or condition. **3.** A modification made to a tooth or a dental prosthesis to enhance fit, function, or patient acceptance.

occlusal a. SEE: *equilibration*.

chiropractic a. Manipulation of a body part with applied force to bring the whole body into better or healthier alignment. Adjustments may be performed by hand or with mechanical aids.

cost of living a. ABBR: COLA. In determining Social Security payments and other financial benefits, a change in compensation based on the rate of inflation, as demonstrated by the U.S. Consumer Price Index.

adjustment, impaired Inability to modify lifestyle/behavior in a manner consistent with a change in health status. SEE: *Nursing Diagnoses Appendix.*

adjustment disorder A maladaptive reaction to an identifiable psychological or social stress that occurs within 3 months of the onset of the stressful situation. The reaction is characterized by impaired function or symptoms in excess of what would be considered normal for that stress. The symptoms are expected to remit when the stress ceases.

adjustment sleep disorder Any transient sleep disorder (e.g., insomnia, hypersomnia) that occurs during periods of psychosocial upheaval or emotional stress.

adjuvant (ăd′jū-vănt) [L. *adjuvans,* aiding] **1.** That which assists, esp. a drug added to a prescription to hasten or increase the action of a principal ingredient. **2.** In immunology, chemicals such as aluminum hydroxide and aluminum phosphate that are added to an antigen

to increase the body's immunologic response. The adjuvants increase the size of the antigen, making it easier for B lymphocytes and phagocytes to recognize it, promote chemotaxis, and stimulate the release of cytokines. Adjuvants are not effective with all antigens and do not stimulate T cell activity.

Freund's complete a. A water-in-oil emulsion in which an antigen solution is emulsified in mineral oil with killed mycobacteria to enhance antigenicity. The intense inflammatory response produced by this emulsion makes it unsuitable for use in humans.

Freund's incomplete a. A water-in-oil emulsion in which an antigen solution without mycobacteria is emulsified in mineral oil. On injection, this mixture induces a strong persistent antibody formation.

adjuvant therapy The use of additional therapy in addition to the primary therapy. In cancer care, for example, surgery to remove a tumor may be the primary treatment, and radiation therapy to destroy neighboring cells and tissues an adjuvant therapy.

ADL *activities of daily living*.

Adler, Alfred (ăd′lĕr) Austrian psychiatrist (1870–1937) who founded the school of individual psychology. SEE: *psychology, individual*.

ad lib (ăd lĭb) [L. *ad libitum*] Prescription abbreviation meaning *as desired*.

ad libitum (ăd lĭb′ĭ-tŭm) [NL] SEE: *ad lib*.

administration **1.** The dispensing or application of a therapeutic agent. **2.** The managers and management of a health care institution.

Administration on Aging ABBR: AOA. An agency of the U.S. Department of Health and Human Services that conducts research in the field of aging and assists federal, state, and local agencies in planning and developing programs for the aged. It is responsible for implementing the Older Americans Act of 1965.

administrative order A ruling published by the executive or judicial branch of government that compels the taking of an action either to prevent the spread of disease, or to reduce an imminent public health hazard.

admission of fact Written requests to accept or deny mutually agreed upon deeds, statements, or assertions of a lawsuit.

admix (ăd-mĭks′) [L. admixtus, mixed] To blend or combine.

ad nauseam (ăd naw′sē-ăm) [L.] Of such degree or extent as to produce nausea.

adnexa (ăd-nĕk′să) [L.] **1.** Accessory parts of a structure. **2.** The accessory structures to the uterus, namely, the ovaries and uterine (fallopian) tubes.

adnexal, *adj.*

dental a. Tissues surrounding the tooth (i.e., periodontal ligament and alveolar bone proper).

a. oculi Lacrimal gland.

adnexal (ăd-nĕk′săl) Adjacent or appending.

adnexitis (ăd″nĕk-sī′tĭs) [L. *adnexa,* appendages, + Gr. *itis,* inflammation] Inflammation of the adnexa uteri.

-adol A suffix used to designate an *opiate receptor agonist/antagonist*.

adolescence (ăd″ō-lĕs′ĕns) [L. *adolescens*] The period from the beginning of puberty until maturity. Because the onset of puberty and maturity is a gradual process and varies among individuals, it is not practical to set exact age or chronological limits in defining the adolescent period.

adolescent (ăd″ō-lĕs′ĕnt) **1.** Pert. to adolescence. **2.** A young man or woman not fully grown.

adolescent turmoil In psychoanalytic theory, the belief that adolescence is invariably accompanied by behavioral or psychological upheaval. This is no longer thought to be inevitable or even the usual case.

adoption (ă-dŏp′shŭn) [L. *ad,* to, + *optare,* to choose] Assumption of responsibility for the care of a child by a person or persons who are not the biological parents. This usually requires a legal procedure.

ADP *adenosine diphosphate*.

ADR *adverse drug reaction; alternative dispute resolution*.

adren- SEE: *adrenalo-*.

adrenal (ăd-rē′năl) [L. *ad,* to, + *ren,* kidney] Originally used to indicate nearness to the kidney; now used in reference to the adrenal gland or its secretions.

adrenal- SEE: *adrenalo-*.

adrenalectomy (ăd-rē″năl-ĕk′tō-mē) [″ + ″] Excision of one or both adrenal glands.

PATIENT CARE: Vital signs, central venous pressure, and urine output must be monitored frequently. Signs and symptoms of hypocorticism must be assessed hourly for the first 24 hr; significant changes must be reported to the surgeon immediately. Additional IV glucocorticoids are given as prescribed. The patient must be monitored for early indications of shock or infection and for alterations in blood glucose and electrolyte levels. To counteract shock, IV fluids and vasopressors must be administered as prescribed, and the patient's response evaluated every 3 to 5 min. Increased steroids to meet metabolic demands are needed if additional stress, e.g., infection, occurs. Other medications, including analgesics, are given as

prescribed, and the patient's response is evaluated. The room must be kept cool and the patient's clothing and bedding changed often if he perspires profusely (a side effect of surgery on the adrenal gland). The abdomen must be assessed for distention and return of bowel sounds. Physical and psychological stresses must be kept to a minimum. Steroid medications may not be needed or may be discontinued in a few months to a year after unilateral adrenalectomy, but lifelong replacement therapy will be needed after bilateral adrenalectomy. The patient must learn to recognize the signs of adrenal insufficiency, that sudden withdrawal of steroids can precipitate adrenal crisis, and that continued medical follow-up will be needed so that steroid dosage can be adjusted during stress or illness. Patients should take steroids in a two-thirds A.M. and one-third P.M. dosing pattern to mimic diurnal adrenal activity, with meals or antacids to minimize gastric irritation. Adverse reactions to steroids, e.g., weight gain, acne, headaches, diabetes, and osteoporosis, must be explained. SEE: *Nursing Diagnoses Appendix.*

cortical-sparing a. An operation on the adrenal gland(s) in which the cortex of the gland is left in place and only the diseased portion of the gland is removed. This subtotal adrenal surgery leaves the corticosteroid producing portion of the gland in place, increasing the probability that the patient will be able to produce his own steroids after the surgery.

adrenal hyperplasia, congenital ABBR: CAH. A group of rare, autosomal recessive disorders characterized by deficiencies of one or more enzymes essential for the synthesis of hormones made from cholesterol (cortisol, aldosterone, progesterone, and/or dihydrotestosterone). These enzyme deficiencies produce a variety of clinical syndromes resulting from the excessive concentration of precursor hormones. The most common of these is 21-hydroxylase deficiency.

adrenaline (ă-drĕn′ă-lēn) Epinephrine.

adrenalinemia (ă-drĕn″ă-lĭn-ē′mē-ă) [L. *ad,* to, + *ren,* kidney, + Gr. *haima,* blood] Epinephrine in the blood.

adrenalinuria (ă-drĕn″ă-lĭn-ū′rē-ă) [″ + ″ + Gr. *ouron,* urine] Epinephrine in the urine.

adrenalitis, adrenitis (ăd-rē″năl-ī′tĭs ăd″rē-nī′tĭs) [″ + ″] Inflammation of the adrenal glands.

adrenalo-, adrenal-, adreno-, adren- [L. *ad,* toward + ren, kidney] Combining forms meaning adrenal glands.

adrenarche (ăd″rĕn-ăr′kē) [″ + ″ + Gr. *arche,* beginning] Changes that occur at puberty as a result of increased secretion of adrenocortical hormones. SEE: *menarche; pubarche*.

adrenergic (ăd-rĕn-ĕr′jĭk) [″ + ″ + Gr. *ergon,* work] Relating to nerve fibers that release norepinephrine or epinephrine at synapses. SEE: *sympathomimetic*.

adrenergic neuron-blocking agents Substances that inhibit transmission of sympathetic nerve stimuli regardless of whether alpha- or beta-adrenergic receptors are involved. SEE: *receptor, alpha-adrenergic; beta-adrenergic receptor*.

adreno- SEE: *adrenalo-*.

adrenoceptive (ă-drē″nō-sĕp′tĭv) [″ + ″ + *recipere,* to receive] Concerning the sites in organs or tissues that are acted on by adrenergic transmitters.

adrenochrome (ăd″rē′nō-krōm) [″ + ″ + Gr. *chroma,* color] $C_9H_9NO_3$; a red pigment obtained by oxidation of epinephrine.

adrenocortical (ăd-rē″nō-kor′tĭ-kăl) Pert. to the adrenal cortex.

adrenocortical hormone SEE: under *hormone*.

adrenocortical insufficiency, acute Sudden deficiency of adrenocortical hormone brought on by sepsis, surgical stress, or acute hemorrhagic destruction of both adrenal glands (i.e., Waterhouse-Friderichsen syndrome). A frequent cause is sudden withdrawal of adrenal corticosteroids from patients with adrenal atrophy secondary to chronic steroid administration. SYN: *addisonian crisis; adrenal crisis*.

adrenocorticosteroid (ăd-rē″nō-kŏr″tĭ-kō-stēr′oyd″) A hormone produced by the adrenal cortex; any synthetic derivative of such a hormone.

adrenocorticotropic (ăd-rē″nō-kor″tĭ-kō-trŏp′ĭk) [L. *ad,* to, + *ren,* kidney, + *cortex,* bark, + Gr. *tropikos,* turning] Having a stimulating effect on the adrenal cortex.

adrenocorticotropin (ăd-rē″nō-kor″tĭ-kō-trŏp′ĭn) Adrenocorticotropic hormone.

adrenogenital (ăd-rē-nō-jĕn′ĭ-tăl) [L. *ad,* to, + *ren,* kidney, + *genitalis,* genital] Pert. to the adrenal glands and the genitalia.

adrenogenital syndrome A syndrome marked by abnormally early puberty in children, overmasculinization in adults, virilism, and hirsutism, caused by the excessive production of adrenocortical hormones. SEE: *Cushing's syndrome*.

adrenogenous (ăd″rĕn-ŏj′ĕ-nŭs) [L. *ad,* to, + *ren,* kidney, + Gr. *gennan,* to produce] Originating in or produced by the adrenal gland.

adrenoleukodystrophy (ă-drē″nō-loo″kō-dĭs′trō-fē) [″ + ″ + Gr. *leukos,* white, + *dys,* bad, + *trephein,* to nourish] An X-linked recessive disease in which inability to metabolize very long chain fatty acids results in inflammatory demyelination of nerves and adrenal failure (Addison's disease). Treatments in-

clude replacement of adrenal hormones, administration of Lorenzo's oil, or bone marrow transplantation.

adrenolytic (ă″drēn-ă-lĭt′ĭk) [L. *ad,* to, + *ren,* kidney, + Gr. *lysis,* dissolution] Sympatholytic.

adrenomedullin (ă-drē″nō-mĕ-dŭl′ĭn) [″ + *medullin,* a renal prostaglandin] ABBR: AM. A 52–amino acid regulatory peptide that influences a wide variety of body functions, including blood vessel dilation (it lowers blood pressure), cellular growth, circulation, electrolyte balance, kidney function, and neurotransmission. The level of adrenomedullin in the blood is elevated above normal in patients with congestive heart failure, kidney failure, and diabetes mellitus when it is complicated by vascular disease.

adrenomegaly (ăd-rēn″ō-mĕg′ă-lē) [″ + ″ + Gr. *megas,* large] Enlarged adrenal gland(s).

adrenomimetic (ă-drē″nō-mĭ-mĕt′ĭk) [″ + ″ + Gr. *mimetikos,* imitating] Sympathomimetic.

adrenomyeloneuropathy (ă-drē″nō-mī″ĕ-lō-nūr-ŏp′ă-thē) [″ + ″ + ″] ABBR: AMN. A noninflammatory form of adrenoleukodystrophy in which the long tracts of the spinal cord are diseased, with limited involvement of peripheral nerves and, in most instances, no evidence of cerebral disease. It is a disease of adults, who gradually become weaker as their nerves accumulate excessive quantities of very long-chain fatty acids.

adrenopathy (ăd″rĕn-ŏp′ă-thē) [″ + ″ + Gr. *pathos,* disease, suffering] Any disease of the adrenal glands.

adrenosterone (ăd″rĕ-nŏs′tĕ-rōn) An androgenic hormone secreted by the adrenal cortex.

adrenotoxin (ăd-rē″nō-tŏk′sĭn) [″ + ″ + *Gr. toxikon,* poison] A substance toxic to the adrenal glands.

adrenotropic (ăd-rē″nō-trŏp′ĭk) [″ + ″ + Gr. *tropikos,* turning] Nourishing or stimulating to the adrenal glands, with reference esp. to hormones that stimulate adrenal gland function.

Adson's maneuver (ăd′sŏnz) [Alfred W. Adson, U.S. neurosurgeon, 1887–1951] A test for thoracic outlet syndrome. The patient's arm is moved back into extension and external rotation with the elbow extended and forearm supinated. The radial pulse is palpated while the patient is asked to tuck the chin, side bend the head toward the opposite side, and rotate the chin toward the side of the extended arm. The patient is then asked to inhale. A positive sign of numbness or tingling in the hand or diminished pulse indicates the brachial plexus or blood vessels are compromised at the site of the scalene muscle.

adsorb (ăd-sŏrb′, zŏrb′) Attachment of a substance to the surface of another material. SEE: *absorb; absorption*.

adsorbate (ăd-sor′bāt) Anything that is adsorbed.

adsorbent (ăd-sor′bĕnt) **1.** Pert. to adsorption. **2.** A substance (e.g., activated charcoal) that readily draws other substances out of the body or out of solution.

adsorption (ăd-sorp′shŭn) [L. *ad,* to, + *sorbere,* to suck in] **1.** Adhesion by a gas or liquid to the surface of a solid. **2.** Viral entry into a host cell.

ADT *Admission, discharge, and transfer.*

adtorsion (ăd-tor′shŭn) [″ + *torsio,* twisted] Convergent squint; inward rotation of both eyes.

adult (ă-dŭlt′) [L. *adultus,* grown up] The fully grown and mature organism.

adulteration (ă-dŭl″tĕr-ā′shŭn) [L. *adulterare,* to pollute] **1.** The addition or substitution of an impure, weaker, cheaper, or possibly toxic substance in a formulation or product. **2.** An impurity.

adult polyglucosan body disease (pŏl″ē-gloo′kŏ-săn) A rare neurological syndrome that results in peripheral nerve injury, upper motor neuron signs, bowel and bladder dysfunction, and sometimes, familial early-onset dementia. It is caused by the deposition of polyglucosan bodies in skin, central nervous system tissues, peripheral nerves, or sweat glands.

adult respiratory distress syndrome SEE: *acute respiratory distress syndrome*.

advance (ăd-văns′) [Fr. *avancer,* to set forth] To carry out the surgical procedure of advancement.

advanced (ăd-vănst′) [ME.] **1.** Placed or being ahead. **2.** In a late or critical stage of development (*advanced* disease). **3.** Far along in time or age; old or elderly (of *advanced* age).

advanced cardiac life support ABBR: ACLS. SEE: under *life support*.

advance directive A written document in the form of a living will or durable power of attorney prepared by a competent individual that specifies what, if any, extraordinary procedures, surgeries, medications, or treatments the patient desires in the future, when he or she can no longer make such decisions about medical treatment. SEE: *living will; power of attorney, durable, for health care*.

Advanced Medical Life Support ABBR: AMLS. A course offered by the National Association of Emergency Medical Technicians that teaches health care providers how to recognize and respond effectively to common medical complaints and crises.

Advanced Research Projects Agency Network ABBR: ARPANET. Designed in 1969 as a network to link certain U.S. Department of Defense computers with university computers on

campuses performing defense-related research. The ARPANET network became the basis for the Internet.

advanced sleep–phase syndrome Sleep-phase syndrome.

advancement (ăd-văns′mĕnt) [Fr. *avancer,* to set forth] Surgical detachment of a segment of tissue (e.g., skin, muscle, tendon) with reattachment to a position beyond the initial site. An example would be an operation to remedy strabismus in which an extrinsic ocular muscle is severed and reattached farther from its origin.

capsular a. Attachment of the capsule of Tenon in front of its normal position.

adventitia (ăd″vĕn-tĭsh′ē-ă) [L. *adventicius,* coming from abroad] The outermost part or layer of a structure or organ, such as the tunica adventitia or outer layer of an artery.

adventitious (ăd″vĕn-tĭsh′ŭs) **1.** Acquired; accidental. **2.** Arising sporadically. **3.** Pert. to adventitia.

adventitious breath sounds Abnormal lung sounds heard when listening to the chest as the person breathes. These may be wheezes, crackles (rales), or stridor. They do not include sounds produced by muscular activity in the chest wall or friction of the stethoscope on the chest.

adverse drug reaction ABBR: ADE. An unwanted response to a therapeutic drug. Health professionals are encouraged to report all adverse events related to drugs or medical devices to the manufacturer and the Food and Drug Administration (FDA) to aid in monitoring the safety of marketed medical products. SEE: *drug reaction; MedWatch; surveillance, post-marketing*.

ADEs are both expensive and hazardous, accounting for more than 2 million injuries and 100,000 deaths related to prescription drugs annually.

PATIENT CARE: Documentation of adverse drug reactions should include:

1. patient information: date of birth, sex, race, weight, pre-existing or coexisting medical conditions, other medications taken, tobacco or alcohol use, allergies, relevant diagnostic and laboratory study results;
2. date and time of the event;
3. specific patient outcomes attributed to the ADE (e.g., extended hospital stay);
4. clear, factual, objective, and chronological description of the problem or event, including assessment findings and interventions, all persons notified and their responses, dates and times of these notifications, actions taken by those informed, and patient's response to such interventions;
5. name of the drug, its manufacturer, lot number, and expiration date on the packaging (if available), dosage, frequency, duration, route, and times of administration (any packaging or containers should be retained or returned to the pharmacy as evidence, depending on the facility's policy);
6. name, title, and credentials of person making the report;
7. others who received the report (e.g., FDA MedWatch, pharmaceutical distributor, manufacturer).

The FDA requires MedWatch reports for serious ADEs that cause death, are life-threatening, or cause initial or prolonged hospitalization, disability, congenital anomaly or birth defect, or medical or surgical intervention to prevent permanent impairment or damage.

adverse reaction In pharmacology and therapeutics, an undesired side effect or toxicity caused by a treatment. Adverse reactions may occur as a result of drug therapies, physical therapy, radiation, or surgery. The onset of the unwanted effect may be immediate or may take days or months to develop. One common type of adverse reaction is an adverse drug reaction (ADR). ADRs are reportable to the federal Food and Drug Administration. SEE: *drug interaction; drug reaction*.

advisory (ăd-vī′zĕ-rē) A report issued by a drug manufacturer or governmental agency about a medical product that may cause serious injury or death to patients.

advocacy (ăd′vō-kă-sē) In health care, pleading or representation for a desired goal or interest group, such as patients, staff, providers, biomedical researchers, or others.

adynamia (ăd″ĭ-nā′mē-ă) [Gr. *a-,* not, + *dynamis,* strength] Weakness or loss of strength, esp. due to muscular or cerebellar disease. SYN: *asthenia; debility*. **adynamic** (ā-dī-năm′ĭk), *adj.*

AE *above elbow;* term refers to the site of amputation of an upper extremity proximal to the elbow.

Aeby's plane (ā′bēz) [Christopher T. Aeby, Swiss anatomist, 1835–1885] A plane perpendicular to the median plane of the cranium through the basion and nasion.

AED *automated external defibrillator*.

Aedes (ă-ē′dēs) [Gr. *aedes,* unpleasant] A genus of mosquitoes belonging to the family Culicidae. Many species are troublesome pests and some transmit disease.

A. aegypti A species of *Aedes* that transmits yellow fever and dengue among many other diseases.

A. triseriatus A species that transmits Jamestown Canyon virus, La Crosse virus, and other California encephalitis viruses.

AEL erythroleukemia.

aer- SEE: *aero-*.

aerated (ĕr′ā″tĕd) Containing air or gas.

aeration (ĕr″ā′shŭn) **1.** Act of airing. **2.** Process in which carbon dioxide and oxygen are exchanged between the pulmonary blood and the air in the lungs. **3.** Saturating or charging a fluid with gases.

aero-, aer- [Gr. *aer,* air] Combining forms meaning *air* or *gas*.

aeroallergen (ĕr″ō-ăl′ĕr-jĕn) A particle of dust, pollen, or powder that stimulates an immune response in a sensitive person. An airborne allergen.

aerobe (ĕr′ōb) *pl.* **aerobes** [″ + *bios,* life] A microbe that is able to live and reproduce in the presence of oxygen.

facultative a. A microorganism that prefers an environment devoid of oxygen but has adapted so that it can live and reproduce in the presence of oxygen.

obligate a. A microorganism that can live and reproduce only in the presence of oxygen.

aerobic (ĕr-ō′bĭk) **1.** Taking place in the presence of oxygen. **2.** Concerning an organism that lives and reproduces in the presence of oxygen.

aerobiosis (ĕr″ō-bī-ō′sĭs) [Gr. *aer,* air, + *biosis,* mode of living] Living in an atmosphere containing oxygen.

aerocele (ĕr′ō-sēl) [″ + *kele,* tumor, swelling] Distention of a cavity with gas.

aerocoly (ĕr″ŏk′ō-lē) [″ + *kolon,* colon] Distention of the colon with gas.

aerocystoscopy (ĕr″ō-sĭs-tŏs′kō-pē) [″ + *kystis,* bladder, + *skopein,* to examine] Examination with a cystoscope of the bladder distended by air.

aerodontalgia (ĕr″ō-dŏnt-ăl′jē-ă) [″ + *odous,* tooth, + *algos,* pain] Pain in the teeth resulting from a change in atmospheric pressure.

aerodontia (ĕr″ō-dŏn′shē-ă) Branch of dentistry concerned with the effect of changes in atmospheric pressure on the teeth.

aerodynamics (ĕr″ō-dī-năm′ĭks) [Gr. *aer,* air, + *dynamis,* force] The science of air or gases in motion.

aeroembolism (ĕr″ō-ĕm′bō-lĭzm) [″ + *embolos,* plug, + *-ismos,* condition] A condition in which nitrogen bubbles form in body fluids and tissues due to an excessively rapid decrease in atmospheric pressure, occurring either during ascent to high altitudes or in resurfacing from deep-sea diving or in hyperbaric oxygen therapy.

SYMPTOMS: Symptoms include boring, gnawing pain in the joints, itching of skin and eyelids, unconsciousness, convulsions, and paralysis. Symptoms are relieved by recompression (i.e., return to lower altitudes or placement of the patient in a hyperbaric pressure chamber). Even though oxygen by masks may be available, ascents above 25,000 ft should be avoided except in aircraft with pressurized cabins. SEE: *hyperbaric chamber*.

aerogenesis (ĕr″ō-jĕn′ĕ-sĭs) [″ + *genesis,* generation, birth] Formation of gas. **aerogenic, aerogenous** (ĕr″ō-jĕn′ĭk, -ŏj′ĕn-ŭs), *adj.*

aerometer (ĕr-ŏm′ĕ-tĕr) [Gr. *aer,* air, + *metron,* measure] A device for measuring gas density.

Aeromonas (ĕr″ō-mō′năs) A genus of gram-negative, facultatively anaerobic, non–spore-forming, motile bacilli found in water and soil. They may cause wound infections or gastroenteritis in humans.

A. hydrophilia A species that is pathogenic for humans; it is sensitive to chloramphenicol, trimethoprim-sulfamethoxazole, and some quinolones.

aero-otitis Aerotitis.

aeroparotitis (ĕr″ō-pă″rō-tī′tĭs) Swelling of one or both parotid glands due to introduction of air into the glands. This may occur in those who play wind instruments; it also occurs in nose blowing and Valsalva's maneuver if done too vigorously.

aeroperitoneum, aeroperitonia (ĕr″ō-pĕr″ĭ-tō-nē′ūm, -tō′nē-ă) [″ + *peritonaion,* peritoneum] Distention of the peritoneal cavity caused by gas.

aerophagia, aerophagy (ĕr″ō-fā′jē-ă, ĕr″ŏf′ă-jē) [″ + *phagein,* to eat] Swallowing of air.

aerophilic, aerophilous (ĕr″ō-fĭl′ĭk, -of′ĭ-lŭs) [″ + *philein,* to love] Requiring oxygen for growth and reproduction. SYN: *aerobic*.

aerophobia (ĕr-ō-fō′bē-ă) [″ + *phobos,* fear] Morbid fear of a draft or of fresh air.

aerosinusitis (ĕr″ō-sī″nŭs-ī′tĭs) [″ + L. *sinus,* a hollow, + Gr. *itis,* inflammation] Chronic inflammation of nasal sinuses due to changes in atmospheric pressure.

aerosol (ĕr′ō-sŏl) [″ + L. *solutio,* solution] **1.** A solution dispensed as a mist. **2.** Any suspension of particles in air or gas.

aerosolization (ĕr″ō-sŏl″ĭ-zā′shŭn) Production of an aerosol.

aerosol therapy The use of medicated mists, such as bronchodilators, antivirals, corticosteroids, or mucolytic agents, to treat lung or bronchial diseases. SEE: *inhalation therapy*.

aerotherapy (ĕr″ō-thĕr′ă-pē) [″ + *therapeia,* treatment] The use of air to treat diseases. SEE: *hyperbaric oxygen*.

aerothermotherapy (ĕr″ō-thĕr″mō-thĕr′ă-pē) [″ + *thermos,* heat, + *therapeia,* treatment] Therapeutic use of hot air.

aerotitis (ĕr-ō-tī′tĭs) [″ + *ot-,* ear, + *itis,* inflammation] Inflammation of the ear, esp. the middle ear, due to failure of the eustachian tube to remain open during sudden changes in barometric

pressure, as may occur during flying, diving, or working in a pressure chamber. SYN: *aero-otitis; barotitis*.

aerotropism (ĕr-ŏt′rō-pĭzm) [″ + *trope,* a turn, + *-ismos,* condition] The tendency of organisms, esp. bacteria and protozoa, to move toward air (positive aerotropism) or away from it (negative aerotropism).

aerourethroscope (ĕr-ō-ū″rē′thrō-skōp″) [″ + *ourethra,* urethra, + *skopein,* to examine] An apparatus for visual examination of the urethra after dilatation by air.

aerourethroscopy (ĕr″ō-ū″rē-thrŏs′kō-pē) Visual examination of the urethra when distended with air.

Aesculapius (ĕs″kū-lā′pē-ŭs) The Roman name for the god of medicine; son of Apollo and the nymph Coronis.

staff of A. A rod or crude stick with a snake wound around it, used to signify the art of healing and adopted as the emblem of some medical organizations (e.g., American Medical Association). Snakes were sacred to Aesculapius because they were believed to have the power to renew their youth by shedding their old skin and growing a new one. SEE: *caduceus*.

Aesculus hippocastanum (ē′skŭ-lŭs, ĕ′, ī′ hĭp″ō-kăs′tă-nŭm) [NL, lit. "horse chestnut oak"] Horse chestnut.

aesthetics (ĕs-thĕt′ĭks) [Gr. *aisthesis,* sensation] The philosophy or the theory of beauty and the fine arts. These concepts are esp. important in dental restorations and in plastic and cosmetic surgery. Also spelled *esthetics.*

dental a. The application of aesthetics to natural or artificial teeth or restorations, usually with regard to form and color.

afebrile (ă-fēb′rĭl) [Gr. *a-,* not, + L. *febris,* fever] Without fever.

affect (ăf′fĕkt) [L. *affectus,* exerting influence on] In psychology, the emotional reaction associated with an experience. SEE: *mood*.

blunted a. Greatly diminished emotional response to a situation or condition.

flat a. Virtual absence of emotional response to a situation or condition.

affection (ă-fĕk′shŭn) **1.** Love, feeling. **2.** Physical or mental disease.

affective (ă-fĕk′tĭv) Pert. to an emotion or mental state.

affective disorder A group of disorders marked by a disturbance of mood accompanied by a full or partial manic or depressive syndrome that is not caused by any other physical or mental disorder. SEE: *Nursing Diagnoses Appendix.*

afferent (ăf′ĕr-ĕnt) [L. *ad,* to, + *ferre,* to bear] Transporting toward a center, such as a sensory nerve that carries impulses toward the central nervous system; opposite of efferent. Certain blood vessels and lymphatic vessels are also said to be afferent.

afferent loop syndrome A group of gastrointestinal symptoms that occur in some patients who have had partial gastric resection with gastrojejunostomy. The condition is caused by partial obstruction of an incompletely draining segment of bowel. In some cases there is bacterial overgrowth in the afferent loop. Symptoms include abdominal bloating, nausea, vomiting, and pain after eating.

affidavit (ăf″ĭ-dā′vĭt) A voluntary written or printed statement of facts that is confirmed by the person's oath or affirmation.

affiliated clinical site An academic, for-profit or not-for-profit institution that contracts with a university to provide educational opportunities for its students.

affiliation (ă-fĭl-ē-ā′shŭn) [L. *affiliare,* to take to oneself as a son] **1.** Membership in a larger organization. **2.** Association. In nursing or medical education, the administrative merger of two hospitals or schools of nursing. This enables students to obtain specialized training and experience that might not otherwise be available to them.

affinity (ă-fĭn′ĭ-tē) [L. *affinis,* neighboring] Attraction.

chemical a. Force causing certain atoms to combine with others to form molecules. SEE: *chemoreceptor*.

A fiber A heavily myelinated, fast-conducting nerve fiber.

afibrinogenemia (ă-fī″brĭn-ō-jĕ-nē′mē-ă) [Gr. *a-,* not, + L. *fibra,* fiber, + Gr. *gennan,* to produce, + *haima,* blood] Absence or deficiency of fibrinogen in the bloodstream.

aflatoxicosis (ăf″lă-tŏk″sĭ-kō′sĭs) Poisoning caused by ingestion of peanuts or peanut products contaminated with *Aspergillus flavus* or other *Aspergillus* strains that produce aflatoxin. Farm animals and humans are susceptible to this toxicosis. SYN: *x-disease*.

aflatoxin (ăf″lă-tŏk′sĭn) A toxin produced by some strains of *Aspergillus flavus* and *A. parasiticus* that causes cancer in laboratory animals. It may be present in peanuts and other seeds contaminated with *Aspergillus* molds.

AFO *ankle-foot orthosis.*

AFP *alpha-fetoprotein.*

Africa, sub-Saharan The large region of Africa that lies just south of the Sahara desert. Common infections in this region include malaria, meningitis, tuberculosis, and HIV.

African tick bite fever An infectious illness transmitted to humans by ticks of the genus *Amblyomma* infected with *Rickettsia africae*. The disease is found in sub-Saharan Africa and the French West Indies and is characterized by fe-

vers, headache, scabs that form at the site of tick inoculation, and localized lymph node swelling.

AFRRI *Armed Forces Radiobiological Research Institute*.

afteraction (ăf″ tĕr-ak′shŭn) Continued reaction for some time after the stimulus ceases, esp. in nerve centers. In the sensory centers this action gives rise to aftersensations.

afterbirth The placenta and membranes expelled from the uterus after the birth of a child.

aftercare **1.** Care of a convalescent after conclusion of treatment in a hospital or mental institution. **2.** A continuing program of rehabilitation designed to reinforce the effects of therapy and to help patients adjust to their environment.

aftercataract **1.** Secondary cataract. **2.** An opacity of the lens capsule that develops after cataract removal.

aftercurrent The ionic flows across a membrane after an action potential has passed along the membrane.

afterdamp A gaseous mixture formed by the explosion of methane and air in a mine; contains a large percentage of carbon dioxide, nitrogen, and carbon monoxide.

afterdepolarization (ăf″tĕr-dē-pō″lăr-ĭ-zā′shŭn) Abnormal electrical activity that occurs during repolarization of the pacemaker cells of the heart. This activity may prolong the action potential and trigger abnormal atrial or ventricular rhythms.

afterdischarge The discharge of impulses from a reflex center after stimulation of the receptor has ceased. It results in prolongation of the response.

aftereffect A response occurring some time after the original stimulus or condition has produced its primary effect.

afterhearing Perception of sound after the stimulus producing it has ceased to act.

afterimage Image that persists subjectively after cessation of the stimulus. If colors are the same as those of the object, it is called positive; it is called negative if complementary colors are seen. In the former case, the image is seen in its natural bright colors without any alteration; in the latter, the bright parts become dark, while dark parts are light.

negative a. Afterimage in which the colors and light intensity are reversed.

positive a. Afterimage in which the colors and light intensity are unchanged.

afterimpression Aftersensation.

afterload In cardiac physiology, the forces that impede the flow of blood out of the heart. The heart contracts against a resistance primarily composed of the pressure in the peripheral vasculature, the compliance of the aorta, and the mass and viscosity of blood. SEE: *preload*.

afterloading In brachytherapy, the insertion of the radioactive source after the placement of the applicator has been confirmed.

aftermovement Persistent and spontaneous contraction of a muscle after a strong contraction against resistance has ceased. This is easily seen when a person forcibly pushes an arm against a wall while standing with the frontal plane perpendicular to the wall. When this is stopped and the person moves away from the wall, the arm abducts involuntarily and is elevated by the deltoid muscle. SYN: *Kohnstamm's phenomenon*.

afterpains Uterine cramps caused by contraction of the uterus and commonly seen in multiparas during the first few days after childbirth. The pains, which are more severe during breastfeeding, rarely last longer than 48 hr postpartum.

PATIENT CARE: Emptying the bladder can relieve pain. Analgesics provide relief, but aspirin should not be given if there is a bleeding tendency. The sooner an analgesic is given, the less is needed.

afterperception Perception of a sensation after cessation of the stimulus.

afterpressure A feeling of pressure that remains for a few seconds after removal of a weight or other pressure.

aftersensation A sensation that persists after the stimulus causing it has ceased.

aftertaste Persistence of gustatory sensations after cessation of the stimulus.

aftertreatment Secondary treatment or that which follows the primary treatment regimen. SEE: *aftercare*.

aftervision Afterimage.

Ag [L. *argentum*] Symbol for the element silver.

AGA *appropriate for gestational age.*

against medical advice ABBR: AMA. A patient's refusal of medically recommended treatments, esp. in the hospital. Dropping out of care or leaving a hospital AMA typically occurs when patients are dissatisfied with the pace or course of their care, carry substance abuse diagnoses, or have a history of multiple hospitalizations. The action may result in an increase in both morbidity and rehospitalization.

PATIENT CARE: The patient is asked to sign a release form indicating that the health care facility and those responsible for medical care are not liable for any adverse outcome that may result from the termination of care.

agamic (ă-găm′ĭk) [Gr. *a-,* not, + *gamos,* marriage] **1.** Reproducing asexually. **2.** Asexual.

agammaglobulinemia (ă-găm″ă-glŏb″ū-lĭn-ē′mē-ă) [″ + *gamma globulin* + Gr. *haima,* blood] A broad term pert. to

disorders marked by an almost complete lack of immunoglobulins or antibodies. The cause is abnormal B lymphocyte function. Agammaglobulinemias cause severe immunodeficiencies, with recurrent infections. Treatments include immunoglobulins, antibiotics, and bone marrow transplantation.

agamogenesis (ăg″ă-mō-jĕn′ĕ-sĭs) [″ + *gamos,* marriage, + *genesis,* generation, birth] **1.** Asexual reproduction. **2.** Parthenogenesis.

agape (ă-gă′pā, ă′gă-pā″) [Gr. *agape,* love] Unselfish love for another, without sexual or romantic feelings.

agar (ā′găr, ăg′ăr) [Malay, gelatin] **1.** A dried mucilaginous product obtained from certain species of algae, esp. of the genus *Gelidium.* Because it is unaffected by bacterial enzymes, it is widely used as a solidifying agent for bacterial culture media. It is used as a laxative because of its great increase in bulk on absorption of water. It is also used by vegetarians when recipes call for gelatin. **2.** A culture medium containing agar. **3.** A constituent of dental hydrocolloid impression materials.

agar-agar Agar.

agaric (ă-găr′ĭk) [Gr. *agarikon,* a sort of fungus] A toxic or hallucinogenic mushroom, esp. species of the genus *Agaricus.*

agastria (ă-găs′trē-ă) [Gr. *a-,* not, + *gaster,* stomach] Absence of the stomach. **agastric** (ă-găst′rĭk), *adj.*

AGC *atypical glandular cells.*

AgCl Symbol for silver chloride.

age [Fr. *age,* L. *aetas*] **1.** The time from birth to the present for a living individual measured in minutes, hours, days, months, or years. **2.** A particular period of life (e.g., middle age or old age). **3.** To grow old. **4.** In psychology, the degree of development of an individual expressed in terms of the age of an average individual of comparable development or accomplishment.

achievement a. ABBR: A.A. The age of a person with regard to level of acquired learning; determined by a proficiency test and expressed in terms of the chronological age of the average person showing the same level of attainment.

advanced maternal a. ABBR: AMA. A term used to describe the age of women for whom pregnancy presents increased risks either to the fetus or to the mother. In the medical literature this age is variably stated as being over 30, 35, or 40.

anatomical a. An estimate of age as judged by the stage of development or deterioration of the body or tissue as compared with persons or tissues of known age.

biological a. One's present position in regard to the probability of survival. Determination of biological age requires assessment and measurement of the functional capacities of the life-limiting organ system (e.g., the cardiovascular system).

bone a. An estimate of biological age based on radiological studies of the developmental stage of ossification centers of the long bones of the extremities. SEE: *epiphysis.*

chronological a. ABBR: C.A. Age as determined by years since birth.

conceptional a. The estimated gestational age as referenced from the actual time of conception. It is usually considered to be at least 14 days after the first day of the last menstrual period. SYN: *ovulation age.*

a. of consent The age at which a minor may legally engage in voluntary sexual intercourse or no longer requires parental consent for marriage. It varies among states but is usually between ages 13 and 18.

developmental a. An index of maturation expressed in months or years, which represents a value obtained by comparing performance with scaled norms for a particular age group. SEE: *age, achievement.*

emotional a. Judgment of age with respect to the stage of emotional development.

functional a. Age defined in terms of physical or functional capacity; frequently applied to older adults.

gestational a. The age of an embryo or fetus as timed from the date of onset of the last menstrual period.

menarcheal a. Elapsed time expressed in years from menarche.

mental a. ABBR: M.A. The age of a person with regard to mental ability, determined by a series of mental tests devised by Binet and expressed in terms of the chronological age of the average person showing the same level of attainment.

middle a. An imprecise term that refers to the period of life that begins roughly at age 40 and ends at about age 64. During middle age in Western societies, many medical problems begin to increase in frequency, including degenerative arthritis, cancer, diabetes mellitus, high blood pressure, myocardial ischemia and infarction, obesity, and visual accommodative disorders.

ovulation a. Conceptional a.

physiological a. The relative age of a person, esp. when comparing that individual's physical status with those of other persons of the same chronological age.

age-associated memory impairment ABBR: AAMI. Mild cognitive impairment.

aged (ājd′, ā′jĕd) **1.** To have grown older

or more mature. **2.** Persons who have grown old. SEE: *aging*.

Age Discrimination Act Also known as Age Discrimination in Employment Act, 29 U.S.C. subsection 621 (1967), a law that prohibits unfair and discriminatory treatment in hiring, promotion, compensation, discharge, terms, conditions, or privileges of employment by an employer against anyone 40 years old or older. In health care, this act has been used to challenge the termination of mature employees. Enforced by the Equal Employment Opportunity Commission (EEOC).

ageism (āj′ĭzm) [Robert Butler, U.S. physician, who coined the term in 1968] Discrimination against aged persons.

Agency for Healthcare Research and Quality ABBR: AHRQ. An office of the U.S. Department of Health and Human Services dedicated to supporting, conducting, and disseminating research; promoting improvements in clinical practice; and enhancing the quality, organization, financing, and delivery of health care services.

agenesia, agenesis (ă″jĕn-ē′sē-ă, ă-jĕn′ĕ-sis) [Gr. *a-,* not, + *genesis,* generation, birth] **1.** Failure of an organ or part to develop or grow. **2.** Lack of potency.

agenitalism (ă-jĕn′ĭ-tăl-ĭzm) [″ + L. *genitalis,* genital, + Gr. *-ismos,* condition] Absence of genitals.

agent (ā′jĕnt) [L. *agere,* to do] Something that causes an effect; thus, bacteria that cause disease are said to be agents of the specific diseases they cause. A medicine is considered a therapeutic agent.

alkylating a. A substance that introduces an alkyl radical into a compound in place of a hydrogen atom. Alkylating agents are used to treat cancer because they interfere with cell metabolism and growth.

anti-anxiety a. Anxiolytic.

antiulcer a. A drug used to prevent or treat ulcers of the stomach or small intestine.

beta-adrenergic a. SEE: *beta-adrenergic agent*.

beta-adrenergic blocking a. Any drug that inhibits the activity of the sympathetic nervous system and of adrenergic hormones.

Members of this class of drugs are used to treat hypertension, angina pectoris, myocardial infarction, aortic dissection, arrhythmias, glaucoma, and other conditions. Commonly prescribed beta blockers include atenolol, carvedilol, metoprolol, nadolol, propranolol, and pindolol. Side effects of these medications include worsening of asthma, blunting of the cardiovascular symptoms of hypoglycemia, bradycardia, and heart block. Rapid withdrawal from a beta-blocking drug in a patient who has become accustomed to its use may produce tachycardia or other arrhythmias, rebound hypertension, or myocardial ischemia or infarction. SYN: *beta blocker*.

buffering a. Buffer.

ceruminolytic a. (sĕ-roo″mĭ-nō-lĭt′ĭk) An agent that dissolves cerumen in the external ear canal. Obstruction of the ear canal with cerumen can cause itching, pain, and temporary conductive hearing loss. The first approach to treatment should be removal of the obstruction manually with a blunt curette or loop or by irrigation. Cerumen solvents are not always recommended because they often do not eliminate the problem and frequently cause maceration of skin of the canal and allergic reactions.

cervical ripening a. Any drug that promotes dilation of the cervix in anticipation of childbirth.

chelating a. A drug, such as calcium disodium edetate, that is used to chelate substances, esp. toxic chemicals in the body.

fixing a. SEE: *clearing agent*.

immunobiological a. Immunobiological.

immunosuppressive a. SEE: *immunosupressant*.

nasal drying a. Any anticholinergic, antihistaminic, or drug of a related class that decreases watery discharge from the nose, e.g., in rhinitis.

ocular hypotensive a. A drug that reduces intraocular pressure, e.g., in glaucoma.

oral hypoglycemic a. ABBR: OHA. A drug taken by mouth to help control hyperglycemia in type 2 diabetes mellitus.

radioprotective a. Any substance that shields the body from damage by radioactivity.

riot control a. SEE: *riot control agent*.

sclerosing a. A substance used to cause sclerosis, esp. of the lining of a vein. SEE: *varicose vein*.

surface-active a. Surfactant.

thermal a. Heat or cold used to promote healing. SEE: *physical agent modality*.

thrombolytic a. Any drug that degrades blood clots. Examples include streptokinase, tenecteplase, tissue plasminogen activator, and urokinase. Such drugs are used to treat the abnormal blood clotting that occurs in heart attacks, some strokes, and pulmonary emboli.

Thrombolytic drugs should not be given to patients with active bleeding, a history of surgery or major trauma within the preceding two weeks, a brain tumor, or other known risks for intracerebral hemorrhage.

wetting a. In radiographic wet film processing, a solution used after washing to reduce surface tension and accelerate water flow from the film to speed drying.

Agent Orange A defoliant that U.S. military forces used extensively in the Vietnam War. It contained the toxic chemical dioxin as an unwanted and undesired contaminant. SEE: *dioxin*.

agent study, agent prevention study In cancer research, any investigation designed to determine whether a particular intervention or drug can be used to prevent cancer from developing.

agerasia (ā-jĕr-ā′sē-ă) [Gr. *a-,* not, + *geras,* old age] Healthy, vigorous old age; youthful appearance of an old person.

age retardation Life extension.

age-specific Pert. to data, esp. in vital statistics and epidemiology, that are related to age.

ageusia, ageustia (ă-gū′sē-ă, ă-goos′tē-ă) [Gr. *a-,* not + *geusis,* taste] Absence, partial loss, or impairment of the sense of taste. SEE: *dysgeusia; hypergeusesthesia; hypogeusia*.

ETIOLOGY: Ageusia may be caused by disease of the chorda tympani or of the gustatory fibers, excessive use of condiments, the effect of certain drugs, aging, or lesions involving sensory pathways or taste centers in the brain.

central a. Ageusia due to a cerebral lesion.

conduction a. Ageusia due to a lesion involving sensory nerves of taste.

peripheral a. Ageusia due to a disorder of taste buds of the mucous membrane of tongue.

agglomerate (ă-glŏm′ĕ-rāt) [L. *ad,* to, + *glomerare,* to wind into a ball] To congregate; to form a mass.

agglutin-, agglutino- Combining forms meaning *clumping or gluing*.

agglutinable (ă-gloot′ĭn-ă-bl) [L. *agglutinans,* gluing] Capable of agglutination.

agglutinant (ă-gloot′ĭn-ănt) **1.** Substance causing adhesion. **2.** Causing union by adhesion, as in the healing of a wound. **3.** Agglutinin.

agglutination (ă-gloot″ĭn-ā′shŭn) **1.** A type of antigen-antibody reaction in which a solid cell or particle coated with antigens drops out of solution when it is exposed to a previously soluble antibody. The particles involved commonly include red blood cells, bacteria, and inert carriers such as latex. Agglutination also refers to laboratory tests used to detect specific antigens or antibodies in disease states. When agglutination involves red blood cells, it is called hemagglutination. **2.** Adhesion of surfaces of a wound.

direct a. The formation of an insoluble network of antigens and their antibodies, when the antigen is mixed with specific antiserum. Direct agglutination reactions are used, for example, in typing blood or in assessing the presence of antibodies against microorganisms.

passive a. A test for the presence of a specific antibody in which inert particles or cells with no foreign antigenic markers are coated with a known soluble antigen and mixed with serum. If clumping occurs, the patient's blood contains antibodies specific to the antigen. In the past, red blood cells were used as the carriers after they were washed to remove any known antibodies; currently, latex, bentonite, and charcoal also are used.

platelet a. Clumping of platelets in response to immunological reactions.

agglutination test A widely used test in which adding an antiserum containing antibodies to cells or bacteria causes them to agglutinate. SEE: *agglutination*.

agglutinative (ă-gloot′ĭn-ā″tĭv, -ă-tĭv) Causing or capable of causing agglutination.

agglutinin (ă-gloot′ĭn-ĭn) [L. *agglutinans,* gluing] An antibody present in the blood that attaches to an antigen present on cells or solid particles, causing them to agglutinate or clump together; used primarily in reference to laboratory tests of agglutination. Agglutinins cause transfusion reactions when blood from a different group is given. These antibodies are present at birth and require no exposure to an antigen to be created, since they are genetically determined.

anti-Rh a. An antibody produced by persons with Rh-negative blood who are exposed to blood containing the Rh antigen. This antibody develops in Rh-negative individuals who receive Rh-positive blood and in Rh-negative women carrying an Rh-positive fetus. The antibody may cause lysis of fetal red blood cells (hemolytic disease of the newborn) in subsequent Rh-positive pregnancies.

cold a. An antibody in the serum of patients with certain diseases that causes the agglutination of erythrocytes (usually from sheep) at low temperatures by the serum of these patients.

warm a. An agglutinin effective only at body temperature, 98.6°F (37°C).

agglutinogen (ă-gloot-ĭn′ă-jĕn) [L. *agglutinans,* gluing, + Gr. *gennan,* to produce] An antigen that stimulates the production of an agglutinin. Agglutinogens are used primarily in laboratory testing for antibodies against specific blood types. SEE: *blood group*. **agglutinogenic, agglutogenic** (ă-gloot″ĭn-ă-jen′ĭk, ă-gloot″ă-jĕn′ĭk), *adj.*

A and B a. SEE: *blood group; ABO incompatibility*.

M and N a. Antigenic substances

found on the membranes of human red blood cells. Anti-M and anti-N agglutinins are rarely found in normal serum. The red blood cells may contain M or N, or both M and N agglutinogens, resulting in blood types M, N, or MN, respectively. SEE: *blood group*.

Rh a. Rh factor.

agglutinophilic (ă-gloo″tĭn-ō-fĭl′ĭk) [″ + Gr. *philos,* fond] Readily agglutinating.

aggrecan (ăg-grē′căn) A large glycoprotein (a form of proteoglycan) that provides stiffness and structural strength to many tissues including joint cartilage, tendons, and the aorta.

aggregate (ăg′rĕ-gāt) [L. *aggregatus,* collect] **1.** Total substances making up a mass. **2.** To cluster or come together.

aggregation (ăg″rĕ-gā′shŭn) A clump, cluster, collection, or group of things.

cellular a. Clumping together of blood cells, esp. platelets or red cells.

familial a. Multiple instances of a disease in a group of related individuals, due to shared genetic susceptibility, shared environmental exposure, or chance.

aggregometry (ăg″rĭ-gŏm′ĭ-trē) [″ + ″] The measurement of the degree to which objects, e.g., platelets, stick together.

aggression (ă-grĕsh′ŭn) [L. *aggredi,* to approach with hostility] **1.** A forceful physical, verbal, or symbolic action. It may be appropriate and self-protective, indicating healthy self-assertiveness, or it may be inappropriate. The behavior may be directed outward toward the environment or inward toward the self. **2.** Activity performed in a forceful manner.

aggressive (ă-grĕs′ĭv) [″] In medicine, rapidly developing or growing (e.g., a cancer).

aging (āj′ĭng) **1.** Growing older. Most authorities confine the term to the maturation and physiological changes in organ systems that occur after the 30th year of life.

The physiological changes occurring with age (diminished neurotransmitters, circulatory capacity, sensory acuity, and perception) affect the brain. These changes do not indicate a loss of cognitive function. There is evidence of slower reaction time and information processing, but most functioning and intelligence remain intact and sufficient.

Emotional trauma and multiple losses occurring in older age often lead to a diminished investment in life, causing professionals to misdiagnose cognitive dysfunction. The stress of demanding situations often contributes to what appears to be an organic disorder. Validation by a team of specialists is important in the diagnosis and treatment of any disorder affecting older persons. SEE: *Alzheimer's disease; dementia*.

2. Maturing. **3.** Any physiological, cellular, or biochemical change that occurs over time rather than from injury or disease.

primary aging Universal changes in structure and function that occur naturally during normal processes of growing older, independent of disease or excessive environmental stress.

secondary aging Changes in structure and function due to diseases prevalent in aging rather than to universal aging processes.

successful a. **1.** Aging in which emotional, intellectual, physical, social, or spiritual interests are optimally maintained or developed. **2.** Health or wellness in aging.

aging in place Any services provided to elderly patients that allow them to continue to live independently rather than relocating them to care facilities.

agitation (ăj″ĭ-tā′shŭn) [L. *agitare,* to drive] **1.** Excessive restlessness, increased mental and physical activity, esp. the latter.

PATIENT CARE: Agitation may complicate many medical and psychiatric conditions and make patient management difficult, frustrating, and occasionally dangerous. Agitation is esp. common in the elderly, in patients with dementia, and in persons with organic brain syndromes. The agitated patient should always be addressed with respect; several attempts should be made to calm the patient with supportive listening, a composed affect, and genuine reassurance. The presence of a calm and respected family member may be helpful. Reorientation of the patient to his or her surroundings and the reason for hospitalization should be provided. Medical therapies, including antipsychotic drugs, sometimes in combination with benzodiazepines or other sedatives, are variably effective.

Health care professionals who work with agitated patients carry a significant risk of being injured at work. Institutional programs to limit staff injury may decrease this hazard. Protocols for defusing violent situations and de-escalating interpersonal tensions may also decrease the risk.

2. Tremor. **3.** Severe motor restlessness, usually nonpurposeful, associated with anxiety. **4.** Shaking of a container so that the contents are rapidly moved and mixed.

agitographia (ăj″ĭ-tō-grăf′ē-ă) [″ + Gr. *graphein,* to write] Writing with excessive rapidity, with unconscious omission of words and syllables.

agitophasia (ăj″ĭ-tō-fā′zē-ă) [″ + Gr. *phasis,* speech] Excessive rapidity of

speech, with slurring, omission, and distortion of sounds.

aglaucopsia, aglaukopsia (ă″glaw-kŏp′sē-ă) [Gr. *a-,* not, + *glaukos,* green, + *opsis,* vision] Green blindness; color blindness in which there is a defect in the perception of green. SEE: *color blindness*.

aglossia (ă-glŏs′ē-ă) [″ + *glossa,* tongue] Congenital absence of the tongue.

aglossostomia (ă″glōs-ō-stō′mē-ă) [″ + ″ + *stoma,* mouth] Congenital absence of the tongue and mouth.

aglutition (ă-gloo-tĭsh′ŭn) [″ + L. *glutire,* to swallow] Difficulty in swallowing or inability to swallow.

aglycemia (ă″glī-sē′mē-ă) [″ + *glykys,* sweet, + *haima,* blood] Lack of sugar in the blood.

aglycon, aglycone (ă-glī′kŏn) The substance attached to the chemical structure of digitalis glycosides. It is responsible for the cardiotonic activity of those agents.

aglycosuric (ă-glī″kō-sū′rĭk) [″ + ″ + *ouron,* urine] Free from glycosuria.

agnathia (ăg-nā′thē-ă) [Gr. *a-,* not, + *gnathos,* jaw] Absence of the mandible.

agnea (ăg′nē-ă) [″ + *gnosis,* knowledge] Inability to recognize objects.

$AgNO_3$ Symbol for silver nitrate.

agnogenic (ăg-nō-jĕn′ĭk) [″ + *gnosis,* knowledge, + *gennan,* to produce] Of unknown origin or etiology.

agnosia (ăg-nō′zhă, shă) [″ + *gnosis,* knowledge] Inability to recognize or comprehend sights, sounds, words, or other sensory information.

auditory a. Word deafness.

color a. Inability to recognize or name specific colors.

finger a. Inability to identify the fingers of one's own hands or of others.

optic a. Inability to interpret seen images.

tactile a. Inability to distinguish objects by touch. SYN: *stereoagnosis.*

time a. Unawareness of the sequence and duration of events.

unilateral spatial a. SEE: *inattention, unilateral*.

visual object a. SEE: *visual object agnosia*.

agnostic (ăg-nŏs′tĭk) [G. *agnostos,* unknown, not capable of being known] Uncertain of the ability to prove a proposition, and, therefore, not interested in the beliefs, ideas, or suggestions based upon it.

-agogue [Gr. *agogos,* leading, inducing] Suffix meaning *producer, secretor, or promoter of the excretion of a specific substance*.

agonad, agonadal (ă-gō′năd, ă-gōn′ă-dăl) [Gr. *a-,* not, + *gone,* seed] Lacking gonads.

agonal (ăg′ō-năl) [Gr. *agon,* a contest] Rel. to death or dying.

agonist (ăg′ŏn-ĭst) **1.** The muscle that directly produces a specific action. In bending the elbow, the biceps brachii is the agonist and the triceps the antagonist. SYN: *agonist muscle*. **2.** In pharmacology, a drug that binds to the receptor and stimulates the receptor's function. Drugs that mimic the body's own regulatory function are called agonists.

adrenergic a. Any one of a group of therapeutic agents that mimic or stimulate the sympathetic nervous system.

beta a. A drug that stimulates adrenergic receptors in the lungs, heart, uterus, and other organs. Beta agonists are used to treat asthma and chronic obstructive lung diseases and to manage pregnancy.

beta-2 a. A medication that stimulates bronchodilation. Examples include albuterol, salmeterol, terbutaline, and many others. SEE: *bronchodilator*.

PATIENT CARE: Beta-2 agonists are used to treat patients with asthma or any pulmonary disease associated with bronchospasm. Patients given such medications need to be monitored for side effects such as tremor, tachycardia, and nausea.

agonistic antibody (ăg-ŏn-ĭs′tĭk) An antibody that stimulates or activates an organ. For example, agonistic antibodies against the thyrotropin receptor in Grave's disease stimulate the thyroid gland to release thyroid hormones that produce hyperthyroidism.

agony (ăg′ō-nē) **1.** Extreme mental or physical suffering. **2.** Death struggle.

agoraphobia (ăg″ō-ră-fō′bē-ă) [Gr. *agora,* marketplace, + *phobos,* fear] A form of social phobia in which one feels overwhelming symptoms of anxiety on leaving home. The symptoms may occur in a variety of everyday situations (e.g., standing in line, eating in public, in crowds of people, in tunnels, and while driving) in which a person may be unable to escape or get help and may be embarrassed. Symptoms often include rapid heartbeat, chest pain, difficulty breathing, gastrointestinal distress, faintness, dizziness, weakness, sweating, fear of losing control, fear of dying, or impending doom. People with these symptoms often avoid phobic situations by rarely, if ever, leaving home.

-agra [Gr. *agra,* a seizure] Suffix indicating sudden severe pain.

agrammatism (ā″grăm′ă-tĭzm) A language disturbance marked by the misuse of grammar, esp. the inability to make subjects and verbs agree or to use conjunctions, pronouns, verb tenses, or word endings appropriately.

agranulocyte (ă-grăn′ū-lō-sīt″) [″ + ″] A nongranular white blood cell (e.g., lymphocyte or a monocyte).

agranulocytosis (ă-grăn″ū-lō-sī-tō′sĭs) [″ + ″ + ″] An acute disease marked by a deficit or absolute lack of granulocytic white blood cells (neutrophils, basophils, and eosinophils). It may occur in some leukemias or after exposure to certain drugs (e.g., clozapine) or radiation. SYN: *granulocytopenia*. **agranulocytic** (-sĭt′ĭk), *adj.*

agranuloplastic (ă-grăn″ū-lō-plăs′tĭk) [″ + L. *granulum,* granule, + Gr. *plastikos,* formative] Unable to form granular cells.

agranulosis (ă-grăn″ū-lō′sĭs) Agranulocytosis.

agraphesthesia (ă-grăf″ĕs-thē′zē-ă) Inability to recognize letters or numbers drawn by the examiner on skin. SEE: *graphesthesia*.

agraphia (ă-grăf′ē-ă) [Gr. *a-,* not, + *graphein,* to write] Loss of the ability to write. SYN: *logagraphia*. SEE: *aphasia, motor*.

absolute a. Complete inability to write.

acoustic a. Inability to write words that are heard.

amnemonic a. Inability to write sentences, although letters or words can be written.

cerebral a. Inability to express thoughts in writing.

motor a. Inability to write due to muscular incoordination.

optic a. Inability to copy words.

verbal a. Inability to write words, although letters can be written.

A/G ratio Albumin-globulin ratio.

Agrobacterium radiobacter (ăg″rō-băk-tēr′ē-ŭm rā″dē-ō-băk′tĕr) [Fm. Gr. *agros,* tilled field + ″; + ″] The former name of the bacterium now called *Rhizobium radiobacter*.

agrypnocoma (ă-grĭp″nō-kō′mă) [Gr. *agrypnos,* sleepless, + *koma,* a deep sleep] Coma in which the individual is partially awake as if in an extreme lethargic state. It may be associated with delirium and lack of sleep.

agrypnotic (ă″grĭp-nŏt′ĭk) **1.** Afflicted with insomnia. **2.** Causing wakefulness.

AGS *American Geriatrics Society*.

AGUS *atypical glandular cells of undetermined significance*. SEE: *atypical glandular cells*.

agyria (ă-jī′rē-ă) [Gr. *a-,* not, + *gyros,* circle] Incompletely developed convolutions of the cerebral cortex. **agyric** (-rĭk), *adj.*

ah *hypermetropic astigmatism*.

AHA *American Heart Association; American Hospital Association*.

AHF *antihemophilic factor,* coagulation factor VIII. SEE: *coagulation factor*.

AHG *antihemophilic globulin,* coagulation factor VIII. SEE: *coagulation factor*.

AHIMA *American Health Information Management Association*.

Ahlfeld's sign (äl′fĕlts) [Friedrich Ahlfeld, Ger. obstetrician, 1843–1929] Irregular uterine contractions after the third month of pregnancy. It is a presumptive sign of pregnancy.

AHRQ *Agency for Healthcare Research and Quality*.

Ah shi point (ah-shee, -shĭr) [Chinese Mandarin, literature, "ah, yes!" (referring to the point of pain)] A tender point on the body; a trigger point.

AI *aortic insufficiency; artificial insemination; artificial intelligence; axioincisal*.

Aicardi syndrome (ī-kär′dē) [J. F. M. Aicardi, Fr. neurologist, b. 1926] A rare cause of childhood seizures, resulting from the congenital absence of the corpus callosum. The disease is only found in children with two X chromosomes or in those with Klinefelter's syndrome.

aichmophobia (āk″mō-fō′bē-ă) [Gr. *aichme,* point, + *phobos,* fear] Morbid fear of being touched by pointed objects or fingers.

AID *Agency for International Development; artificial insemination by donor* (heterologous insemination).

aid (ād) Assistance provided to a person, esp. one who is sick, injured, or troubled. SEE: *first aid*.

button a. An adaptive device permitting button closure by persons with the functional use of only one extremity.

hearing a. A sound-amplifying apparatus used by those with impaired hearing. The modern electronic hearing aid may simply amplify sound or may be designed to attenuate certain portions of the sound signal and amplify others. The cost may vary from several hundred dollars to more than a thousand dollars. As a variety of hearing aids are available, it is important that patients buy the type most suitable for their needs and comfort. Patients should have a trial period prior to making the final decision to purchase the device.

robotic a. A mechanical device guided remotely by a person with a disability to assist with or enable daily living tasks.

travel a. A device that makes it easier for people with sensory impairments to move freely in busy or unfamiliar environments.

aide (ād) **1.** Assistant. **2.** A nurse's aide or nursing assistant.

certified medication a. ABBR: CMA. An unlicensed health care worker who can administer oral and topical medications in long-term or chronic care facilities after successfully completing a state-approved medication administration course. SYN: *certified medication technician*.

physical therapy a. A person who is trained by a physical therapist or physical therapist assistant to provide sup-

port services, such as tasks that do not require clinical decision making or problem solving, in physical therapy. Physical therapy aides should function with continuous on-site supervision.

AIDS *Acquired immunodeficiency syndrome,* a late stage of infection with the human immunodeficiency virus (HIV). Criteria for the diagnosis include HIV infection with 1) a CD4+ helper T-cell count of less than 200 cells/mm^3, plus 2) infection with an opportunistic pathogen, and/or 3) the presence of an AIDS-defining malignancy. Although AIDS was unrecognized before 1981, it is now the most common cause of death in Africa and the fourth most common cause of death worldwide. The majority of people with AIDS are between 15 and 44, poor, and heterosexual; have limited access to optimal care; and live in developing nations in Africa and Asia. SEE: *Nursing Diagnoses Appendix.*

Nearly one and a quarter million people with AIDS have been reported in the U.S.; about 500,000 of these have died. About 40,000 new AIDS infections occur each year in the U.S. Worldwide in 2006 more than 39 million people were infected with AIDS, and more than 25 million died. In sub-Saharan Africa 28,500,000 people live with AIDS. The primary risk groups for current HIV infection and AIDS are people who have unprotected sexual intercourse; injection drug users; men who have sex with men; women and men with multiple sexual partners; and children of infected mothers. In the era before the blood supply was carefully screened, transfusion-associated HIV infection was also common. SEE: *human immunodeficiency virus; opportunistic infection.*

ETIOLOGY: Two human immunodeficiency viruses, HIV-1 and HIV-2, have been identified. Both cause AIDS, but infection with HIV-2 has been primarily limited to West Africa. Infection occurs when a viral envelope glycoprotein (gp120) binds to CD4 receptors and co-receptors (called CXCR4 and CCR5) on lymphocytes, macrophages, and other immune system cells, causing viral uptake and eventual cellular destruction. HIV is a retrovirus that uses the enzyme reverse transcriptase to convert its viral RNA to viral DNA. The viral DNA then becomes incorporated into the host cell DNA. New viral proteins are created and assembled into virions by the viral enzyme protease. About 100 billion virions, many with minor but protective mutations, are created during each reproductive cycle of HIV. Most newborn viruses quickly infect circulating immune cells or take up residence in body reservoirs relatively inaccessible to drug therapy. HIV's ability to change and evade treatment has made drug management of the disease complicated and has hindered vaccine development. Nonetheless, immediate treatment with combinations of drugs decreases both the severity of infection and the development of drug-resistant mutant clones, while prolonging disease-free survival.

In the U.S., common opportunistic infections that infect AIDS patients include *Pneumocystis carinii* pneumonia, *Mycobacterium avium intracellulare* (MAI), cytomegalovirus, *Toxoplasma gondii, Candida albicans, Cryptosporidium,* and *Histoplasma capsulatum*. AIDS patients also are subject to nonopportunistic infections (e.g., tuberculosis, syphilis, herpesviruses, papillomaviruses, and streptococcal pneumonia) at rates and with a virulence far exceeding those in the general population.

SYMPTOMS: The opportunistic infections that accompany AIDS cause fatigue, fevers, chills, sweats, breathlessness, oral ulceration, swallowing difficulties, pneumonia, diarrhea, skin rashes, anorexia, weight loss, confusion, dementia, strokelike symptoms, and many other illnesses. Initial infection with HIV-1 sometimes causes a mononucleosis-like syndrome, with fevers, sore throat, swollen glands, and muscle and joint aches. Many people are so incapacitated by AIDS that they are unable to carry out normal activities of daily living; others have very few limitations but suffer periodic life-threatening illnesses. SEE: table.

DIAGNOSIS: The presence of antibodies to HIV in the blood is a marker of HIV infection; when these are detected in a patient with low helper T cell counts and related illnesses, AIDS is diagnosed. Enzyme-linked immunosorbent assays (ELISA) are the primary tests used in screening for HIV antibodies. If these antibodies are detected, the Western blot test is used for confirmation. Tests for HIV have been developed that provide results in 20 minutes. If positive, the results are confirmed by ELISA or Western Blot. The polymerase chain reaction can also be used to detect the presence of HIV nucleic acid in the blood. Measurement of the absolute levels of helper T cells and the level of HIV viremia (the "viral load") are the principal tests used to monitor the course of established infection and the effectiveness of administered therapies. Some health care agencies recommend routine screening for HIV/AIDS in broad segments of the population, to identify and diagnose the disease early in asymptomatic patients.

NATURAL HISTORY: Research in the late 1990s showed that 60% to 80% of

Clinical Conditions and Opportunistic Infections Indicating AIDS

Candida infections (candidiasis) of the trachea, bronchi, or lungs
Candidiasis of the esophagus
Cervical cancer, invasive
Coccidioides immitis: Extrapulmonary infections or disseminated
Cryptococcus neoformans: Infections outside the lung
Cryptosporidium: Chronic infections of the gastrointestinal tract*
Cytomegalovirus: Infections other than those in liver, spleen, or lymph nodes
Cytomegalovirus retinitis with loss of vision
Herpes simplex: Chronic oral ulcers, bronchitis, pneumonitis, or esophagitis
Histoplasma capsulatum: Infections outside the lung or disseminated
HIV-related encephalopathy
Isosporiasis, chronic intestinal
Kaposi's sarcoma
Lymphoma, Burkitt's
Lymphoma, immunoblastic
Lymphoma, primary brain
Mycobacterium avium complex or *M. kansasii:* Extrapulmonary infections or disseminated
Mycobacterium tuberculosis: Pulmonary or extrapulmonary infections
Mycobacterium, other species: Extrapulmonary infections or disseminated
Pneumocystis carinii: Pneumonia
Pneumonia, recurrent
Progressive multifocal leukoencephalopathy
Salmonella: Septicemia, recurrent
Toxoplasma: Brain infections
Wasting syndrome of HIV

* Chronic—more than 1 month's duration
SOURCE: CDC:MMWR 41 (RR-17):2-3, 15, 1992.

HIV-infected patients developed AIDS within 10 years of seroconversion.

PREVENTION: The public should be educated about HIV infection and its modes of transmission. HIV infection is spread by direct contact with the blood or bodily secretions of those infected, usually through a break in the skin or across mucous membranes. In most instances, it has been transmitted from person to person by one of three modes: sexually, by injection or transfusion of blood products, or from mother to fetus or infant. Those who engage in unsafe sex or inject drugs with contaminated needles are at the greatest risk for contracting the disease. Teenagers and young adults especially should be encouraged to use condoms and follow other safe sexual practices. Abstinence from risky behavior prevents the spread of the disease.

Transfusion-associated HIV infection is now extremely rare as a result of careful screening of the blood supply. All pregnant women should be counseled about testing for the presence of HIV antibodies because the use of antiretroviral therapies during and immediately after pregnancy reduces the incidence of HIV infection in infants to less than 2%.

TREATMENT: The use of highly active antiretroviral therapies (HAART), typically including one drug that inhibits HIV-1 protease and two drugs that block viral reverse transcriptase, has revolutionized the treatment of AIDS. Combination drug cocktails can decrease viral loads to undetectable levels and restore a level of immunological function to AIDS patients that, although imperfect, defends against most opportunistic infections. The point in the disease at which HAART should be started to have the greatest effect is not yet clear. The promise of these therapies is realized only when patients strictly comply with their prescription regimens and avoid risky behavior. Even while taking highly active therapies, patients can infect others with HIV.

Treatments for AIDS patients are also directed against the opportunistic infections of AIDS. These include drugs such as trimethoprim/sulfamethoxazole or pentamidine for *Pneumocystis carinii,* clarithromycin and other agents for MAI, ganciclovir for cytomegalovirus, and amphotericin B for *Histoplasmosis*.

Treatment for AIDS-related malignancies includes interferon-α for Kaposi's sarcoma and combination chemotherapies for non-Hodgkin's lymphoma.

PATIENT CARE: Health care providers are not at an increased risk for AIDS or HIV infection as long as they follow standard precautions. Occupational exposure to body fluids from AIDS patients is common in health care, but the transmission of disease is rare. The risk of HIV infection after a puncture wound from a contaminated needle is 0.3%; the risk of seroconversion after mucous membranes are splashed with contaminated blood is 0.09%. The virus does not proliferate or survive outside the body (i.e., on counters or other surfaces).

Health care professionals should contribute actively to the education of patients about prevention of the spread of HIV. Affected patients are encouraged

to adhere to the complicated drug regimens: failure to do so may result in the evolution of drug-resistant viruses. Between the need for multiple antiretroviral agents and for drugs used to manage opportunistic infections, AIDS wasting syndrome, pain, depression, and other complications, the patient will need to take many pills per day, which complicates disease management. Health care providers should anticipate and assess the adverse effects and drug interactions and encourage patients to report concerns to help prevent them from skipping doses, turning to inappropriate alternative therapies, or abandoning treatment. The cost of drug therapy and other services may be a large factor in compliance. Health care providers should be aware of appropriate local and governmental agencies to refer patients for help in receiving social service support; information about the disease; funds for housing, food, and medication; and inpatient, outpatient, and hospice care when appropriate. Health care providers should also be familiar with support groups for patients and offer assistance in reconnecting with family or other support people in cases of familial estrangement. In addition, health care providers should encourage patients to engage in as much physical activity as is tolerable, with time for exercise and rest; provide supportive care for fatigue, anorexia, and fever; provide meticulous skin and oral care, esp. for debilitated patients; record caloric intake; and assess the need for small, frequent meals, nutritional supplements, or parenteral nutrition. Mothers with HIV or AIDS are often discouraged from breastfeeding to avoid vertical transmission of the virus, but the practice of avoiding breastfeeding may in many instances result in other problems for the newborn infant and an increased risk of mortality.

immunologic A. Severe immunosuppression in HIV infection evidenced only by a very low CD4 helper cell count (less than 200 cells/mm^3). Patients have not yet had an opportunistic infection but are highly likely to contract one.

perinatal A. Infection with the human immunodeficiency virus (HIV) as a result of vertical transmission of the virus from an infected mother. Worldwide, in 2002, 1500 children were infected every day by maternal to child transmission of the disease; the overwhelming majority of these children live in developing nations. In the U.S. between 1992 and 1997, testing pregnant women to identify HIV infection and treating affected people with zidovudine decreased the risk of perinatal AIDS by about 70%.

TRANSMISSION: Transmission of HIV to infants occurs in utero, during labor and delivery, and through breastfeeding. Approx. 50% to 70% of infants are infected during childbirth (esp. during preterm birth with prolonged rupture of membranes); 30% to 50% are infected in utero; 20% of HIV-positive mothers can transmit the infection through breastfeeding.

DIAGNOSIS: The diagnosis is made through two positive blood test results for the presence of HIV or the growth of HIV in culture. Transmission is unlikely to occur in women whose viral load of HIV RNA has been reduced by effective antiretroviral therapy. The Centers for Disease Control and Prevention (CDC) recommends that all adults, ages 13-64 years, should be offered routine HIV testing (with the choice to opt out), rather than testing only those patients with known risk factors for the disease.

SYMPTOMS: Infants may be asymptomatic even when infected with HIV. Infection is monitored by measuring the absolute CD4+ T-cell count, measuring the amount of virus in the blood (viral load), and assessing for the presence of opportunistic infections in infancy or early childhood. Over time, the infected infant may present with *Pneumocystis carinii* pneumonia, chronic diarrhea, recurrent bacterial infections, failure to thrive, developmental delays, and recurrent *Candida* and herpes simplex infections. The majority of perinatally infected children develop an AIDS-defining illness by the age of 4. Anemia and neutropenia may occur as side effects of drug therapy.

TREATMENT: Zidovudine (AZT) is given for 6 weeks to all infants born of HIV-positive mothers. Prophylaxis for *P. carinii* pneumonia with trimethoprim-sulfamethoxazole begins at 6 weeks and continues for 6 months in children whose HIV test results are negative and for 1 year in infected infants. The use of highly active HAART is being studied. Breastfeeding is contraindicated for all HIV-infected mothers to minimize the risk of transmission of the virus.

PATIENT CARE: Women in their childbearing years who engage in high-risk behavior and women whose husbands or primary sexual partner may engage in high risk behavior should be counseled to be tested for HIV before becoming pregnant or as soon as they know they are pregnant to reduce the baby's risk of infection. Women who are HIV-positive should begin antiretroviral therapy immediately. Standard precautions are used with babies born of HIV-positive mothers until diagnostic tests indicate that they are not infected. Mothers and other care providers must

be instructed in the use of these precautions and to watch for and quickly report respiratory infections.

AIDS-dementia complex ABBR: ADC. Encephalopathy caused by direct infection of brain tissue by the human immunodeficiency virus (HIV). This condition affects patients with severe immunosuppresion more often than those whose immune function is stronger. Central nervous system HIV infection affects as many as 15% of AIDS patients, but in 1997 its incidence decreased to approx. 30% of its previous occurrence because of the effectiveness of highly active antiretroviral therapy (HAART). Central nervous system HIV infections in children tend to be more pronounced than those in adults.

ETIOLOGY: The exact cause of AIDS dementia is unknown, but current theories suggest that it results from HIV infection of macrophages in the brain (microglia) and the destructive release of cytokines that disrupt neurotransmitter function.

SYMPTOMS: AIDS dementia is characterized by slow, progressive memory loss, decreased ability to concentrate, a general slowing of cognitive processes, and mood disorders. Motor dysfunction may also be present, including ataxia, bowel and bladder incontinence, and seizures. Higher levels of HIV RNA in the cerebrospinal fluid (CSF viral load) are correlated with increased problems.

TREATMENT: Treatment options may include highly active antiretroviral therapies. Since their introduction the incidence of AIDS-dementia complex has decreased.

PATIENT CARE: The patient's mental status and level of consciousness must be assessed and documented. Clear documentation is essential to track a patient's changes over time. Orientation to person, place, and time; thought processes (cognition); verbal communication skills; and memory losses can be determined through simple conversations that reveal the patient's ability to recall normal details of the day and previous teaching. Particular attention is paid to patients' abilities to comply with their complex medication regimen; inability to do so requires another person to assume responsibility for this task. The patient's affect and mood; the presence of agitated, restless, or lethargic behavior; and the extent to which clothing is clean and appropriate for the weather may reveal progressing dementia when compared with previously documented mental status assessments.

Interventions are based on clear communication. As patients develop dementia, they may become frightened, and a consistently gentle approach with positive feedback is essential. Clocks, calendars, and memory aids help the patient become reoriented. Step-by-step written instructions should be given to augment verbal instructions. Caregivers need to learn how to reorient the patient, how to recognize and treat hallucinations, how to create a safe environment, how to ensure that basic hygiene needs are met, and how to document medication schedules and intake because patients may forget to eat or drink adequately.

AIDS-related complex ABBR: ARC. The symptomatic stage of infection with human immunodeficiency virus (HIV) before the onset of AIDS. Its clinical signs include fatigue, intermittent fevers, weight loss greater than 10%, chronic or persistent intermittent diarrhea, night sweats, diminished delayed hypersensitivity (skin test) response to common allergens, presence of HIV antibodies in blood, and decreased CD4+ T-lymphocyte count. The term is not used extensively. SEE: *AIDS*.

AIDS wasting syndrome Malnutrition in the HIV-infected patient, including both starvation (weight loss from lack of food) and cachexia (loss of lean body mass). SEE: *cachexia; cytokine; Food Guide Pyramid; starvation*.

PATHOPHYSIOLOGY: The mechanisms by which HIV causes malnutrition include decreased nutritional intake, metabolic abnormalities, and the combination of diarrhea and malabsorption. Decreased oral intake may be related to loss of appetite, oral or esophageal ulcers (esp. from *Candida* or herpes simplex virus), difficulty chewing, fatigue, changes in mental status, or inadequate finances. Metabolic abnormalities include elevated serum cortisol, decreased anabolism, micronutrient deficiencies (vitamin B_{12}, pyridoxine, vitamin A, zinc, and selenium), and decreased antioxidants. Malabsorption and diarrhea affect 60% to 100% of patients with AIDS. Primary gastrointestinal pathogens that contribute to malnutrition include *Cryptosporidia, Microsporidia,* and *Mycobacterium avium intracellulare*. Concerns about diarrhea and fecal incontinence may underlie a patient's decreased oral intake.

PATIENT CARE: Assessment and education of patients must begin as soon as they are diagnosed as having HIV infection. Obtaining a careful history of the patient's normal nutritional intake and activity level provides the baseline for nutritional instruction. Patients are encouraged to maintain the recommended daily allowance (RDA) for all foods by following the MyPyramid; protein intake of 1 to 2 g/kg of ideal body weight and vitamin and mineral intake three to four times the RDA are also encouraged. Small frequent feedings, good oral hygiene, limited fluids with meals,

and the use of preferred foods are helpful strategies in countering anorexia. A written schedule may help the patient adhere to the recommended plan for intake. Any increase in exercise or activity must be accompanied by an increase in food intake. As opportunistic infections develop, the health care team must work together with the patient to limit the problems that inhibit good nutritional intake.

AIH *artificial insemination by husband* (homologous insemination).

ailment A mild illness.

ailurophobia (ă-lū″rō-fō′bē-ă) [Gr. *ailouros,* cat, + *phobos,* fear] Morbid fear of cats.

ainhum (ān′hŭm) [East African, to saw] Spontaneous loss of fingers or toes — typically occurring in Africa — due to the formation of a fissured, constricting band forming around the digit. SYN: *spontaneous dactylolysis*.

air (ār) [Gr. *aer,* air] The invisible, tasteless, odorless mixture of gases surrounding the Earth. Air at sea level consists of approx. 78% nitrogen and 21% oxygen by volume. The remaining constituents are water vapor, carbon dioxide, and traces of ammonia, argon, helium, neon, krypton, xenon, rare gases, and some pollutants.

alveolar a. Air in the alveoli; that involved in the pulmonary exchange of gases between air and the blood. Its content is determined by sampling the last portion of a maximal expiration.

dead space a. The volume of air that fills the respiratory passageways but not the alveoli. It is not available for exchange of gases with the blood.

liquid a. Air liquefied by great pressure and/or low temperature. It produces intense cold on evaporation.

mechanical dead space a. Dead space air provided by artificial means, as with mechanical ventilation or the addition of plastic tubing to a ventilator circuit.

minimal a. The small volume of air trapped in the alveoli when lungs collapse.

reserve a. Expiratory reserve volume.

room a. Unmodified, ambient air. The typical oxygen concentration is 21%.

air evacuation SEE: under *evacuation*.

air gap principle A procedure used to decrease the amount of scattered radiation reaching the radiographic film by increasing the object-image receptor distance.

air leak Any injury to the lung in which air escapes the tracheobronchial tree. Pneumothorax, pneumomediastinum, pneumopericardium, pulmonary interstitial edema, and subcutaneous emphysema are examples.

air medical transportation The use of helicopters or fixed-wing aircraft to transport patients from the scene of an incident or local hospital to a regional trauma or specialty care center.

airsickness A form of motion sickness marked by dizziness, nausea, vomiting, headache, or drowsiness that occurs during travel in aircraft. SEE: *motion sickness; seasickness*.

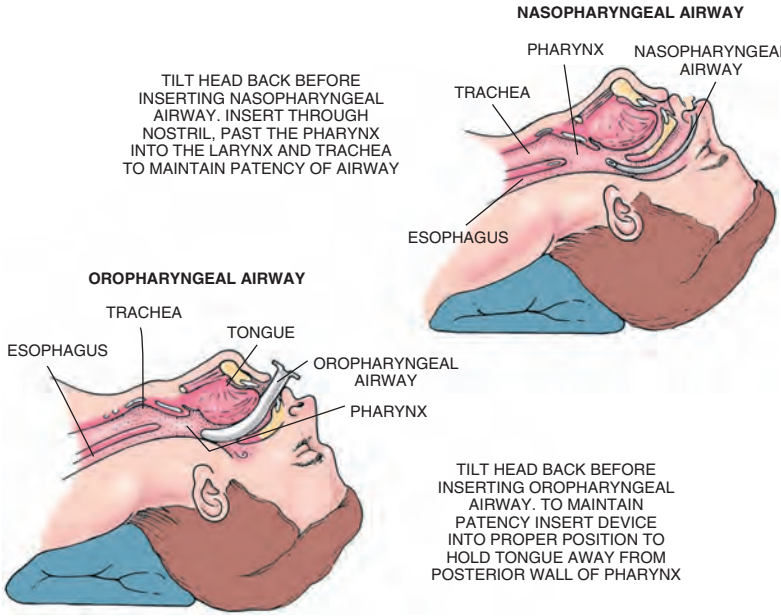
airway **1.** A natural passageway for air to enter and exit the lungs. **2.** A device used to prevent or correct an obstructed respiratory passage, esp. one inserted into the trachea and used during anesthesia or cardiopulmonary resuscitation. An open airway is essential to oxygenation and ventilation and therefore to the life of the patient. Methods for opening the airway are described in the entries for cardiopulmonary resuscitation; chin-lift airway technique, head tilt; jaw thrust; and tracheostomy. The following subentries highlight commonly used airways used in advanced cardiac life support. None of them have been proven to enhance the survival of patients who suffer sudden death in the field. SEE: illus.; *jaw thrust*.

If a patient has a mechanism of injury involving potential trauma to the clavicles or above, the airway should be opened only with the jaw thrust maneuver.

Combitube a. A trademarked name for a dual-lumen airway consisting of a tracheal tube linked to an esophageal tube. It may be inserted blindly into the oropharynx as an airway control device when an endotracheal tube is not available or when tracheal intubation with direct visualization of the vocal cords is challenging.

laryngeal mask a. ABBR: LMA. A temporary airway management device used to resuscitate patients who require endotracheal intubation but in whom intubation has failed or is unlikely to be successful. Untrained personnel find the device easier to use than standard intubation equipment because direct visualization of laryngeal anatomy is unnecessary. The LMA can be used in the field as well as in critical care settings or in the operating room. Its ease of use must be balanced against its risks: the device provides a less secure airway than endotracheal intubation, and its use has occasionally been associated with injuries to the mouth, pharynx, or vocal cords.

nasopharyngeal a. ABBR: NPA. A soft, flexible uncuffed tube placed through the nasal passages so that the distal tip rests in the nasopharynx. It is used to maintain the free passage of air to and from the lungs in patients with



NASOPHARYNGEAL/OROPHARYNGEAL AIRWAY

facial trauma or lockjaw or in nearly comatose patients who are breathing spontaneously. Before the tube is inserted, the proper length is determined by comparing it to the distance from the tip of the patient's nose to the earlobe. The diameter should match that of the patient's smallest finger. SEE: *Standard Precautions Appendix.*

⚠ Bleeding from the nasopharynx may occur during emergency placement of this airway.

oropharyngeal a. ABBR: OPA. A curved plastic device used to establish an airway in a patient by displacing the tongue from the posterior wall of the oropharynx. The device should be equal in length to the distance either from the corner of the mouth to the earlobe or from the center of the mouth to the angle of the jaw. It has a flange on the end that remains outside the mouth to keep it from being swallowed or aspirated. This device is used only in unconscious patients who do not have a gag reflex. SEE: *cardiopulmonary resuscitation; Standard Precautions Appendix.*

⚠ The head of an unconscious patient should be stabilized before the airway is inserted to reduce the likelihood of cervical spinal cord injury and paralysis.

airway clearance, ineffective The inability to clear secretions or obstructions from the upper respiratory tract, and thus, to maintain an open, effective airway. SEE: *Nursing Diagnoses Appendix.*

airway opening pressure The pressure at the access point to a patient's airway, (nose, mouth, or for a mechanically ventilated patient, trachea). When this pressure exceeds the pressure in the alveoli, gases tend to move into the lower airways and open the alveoli. When this pressure is less than alveolar pressure, gases tend to move out of the lungs and into the atmosphere.

Ajellomyces capsulatus (ă″jĕ-lō-mī′sēs kăp-sū-lāt′ŭs, yĕ-) The sexual, perfect, form of the yeast *Histoplasma capsulatum* in its asexual form.

Ajellomyces dermatiditis (dĕr-mă-tīt′ĭ-dĭs) The sexual form of the pathogenic yeast *Blastomycosis dermatidis.*

AK *above the knee.* The term is used to refer to the site of an amputation of a lower extremity.

akaryocyte (ă-kăr′ē-ŏ-sīt″) [Gr. *a-,* not, + *karyon,* kernel, + *kytos,* cell] A cell without a nucleus (e.g., an erythrocyte). SYN: *akaryote*.

akaryote (ă-kăr′ē-ōt) [″ + ″] Akaryocyte.

akathisia, acathisia (ăk″ă-thĭ′zē-ă) [″ + *kathisis,* sitting] Motor restlessness; intolerance of inactivity. This symptom may appear as a side effect of antipsy-

chotic drug therapy (e.g., treatment with phenothiazines).

SYMPTOMS: Affected persons cannot sit still, are jumpy, and may appear distracted.

TREATMENT: The urge to move resolves when the offending drug is withdrawn. Propranolol is also used to reduce motor restlessness.

akee, ackee (ăk′ē, ă-kē′) [Liberian] The tropical tree *Blighia sapida,* of the soapberry family. Ingestion of its unripe fruit can cause severe hypoglycemia.

akinesia (ă″kĭ-nē′zē-ă) [Gr. *a-,* not, + *kinesis,* movement] Complete or partial loss of muscle movement; also spelled *acinesia.* **akinetic** (-nĕt′ĭk), *adj.*

a. algera Akinesia with intense pain caused by voluntary movement.

Al Symbol for the element aluminum (British: aluminium).

-al [L.] **1.** Suffix meaning *relating to,* as in abdominal, intestinal. **2.** In chemistry, suffix indicating an aldehyde.

ala (ā′lă) *pl.* **alae** [L., wing] An expanded or winglike structure or appendage.

a. nasi Wing of the nose; broad portion forming the lateral wall of each nostril.

a. of sacrum Broad projection on each side of the base (the superior end) of the sacrum. The alae of the sacrum join the main plates (alae) of the ilium bones along the sacroiliac joints.

alacrima (ā-lăk′rĭ-mă) [Gr. *a-,* not, + L. *lacrima,* tear] Deficiency of or absence of tears. SYN: *dry eye*. SEE: *Sjögren's syndrome*.

Alagille syndrome [Daniel Alagille, Fr. physician, b. 1925] A rare congenital syndrome in which arteriohepatic dysplasia is associated with developmental anomalies of the face, heart, kidneys, muscle, and nervous system.

alalia (ă-lā′lē-ă) [″ + *lalein,* to talk] Inability to speak due to a defect in or a paralysis of the vocal organs; aphasia. An organic brain disease is usually responsible.

alanine (ăl′ă-nēn) A naturally occurring amino acid, $C_3H_7NO_2$, considered nonessential in human nutrition.

alanine aminotransferase ABBR: ALT. An intracellular enzyme involved in amino acid and carbohydrate metabolism. It is present in high concentrations in muscle, liver, and brain. An increased level of this enzyme in the blood indicates necrosis or disease in these tissues. Its measurement is most commonly used as part of the differential diagnosis of liver disease (e.g., hepatitis) and in the tracking of the course of the disease process. This enzyme was formerly called serum glutamic pyruvic transaminase (SGPT) or glutamic-pyruvic transaminase.

Al-Anon A nonprofit organization that provides group support for the family and close friends of alcoholics. SEE: *Alcoholics Anonymous*.

alar (ā′lăr) [L. *ala,* wing] **1.** Pert. to or like a wing. **2.** Axillary.

ALARA *as low as reasonably achievable.*

alarm reaction The first stage in the general adaptation syndrome, which includes changes occurring in the body when subjected to stressful stimuli. Physiological changes that occur are direct results of damage, shock, or both, or reactions of the body to defend itself against shock.

alastrim (ă-lăs′trim) Variola minor.

Alateen A nonprofit organization that provides support for children of alcoholics. SEE: *Alcoholics Anonymous*.

alb- [L. *albus,* white] Prefix meaning *white*.

alba (ălʹbă) [L. *albus,* white] **1.** White. **2.** White matter of the brain.

albedo (ăl-bēʹdō) [L.] Whiteness. Reflection of light from a surface.

a. unguium White semilunar area near the nail root. SYN: *lunula*.

Albers-Schönberg disease (ălʹbĕrs-shönʹbĕrg) [Heinrich Ernst Albers-Schönberg, Ger. radiologist, 1865–1921] SEE: *osteopetrosis*.

Albert's disease (ălʹbĕrtz) [Eduard Albert, Austrian surgeon, 1841–1900] Achillobursitis.

albicans (ălʹbĕ-kănz″) [L.] White; whitish.

albinism (ălʹbĭn-ĭzm) [L. *albus,* white, + Gr. *-ismos,* condition] An inherited partial or total absence of pigment in skin, hair, and eyes. It is often accompanied by astigmatism, photophobia, and nystagmus because the choroid is not sufficiently protected from light. It is usually transmitted as an autosomal recessive trait.

albino (ăl-bīʹnō) A person with albinism.

albinuria (ăl″bĭ-nūʹrē-ă) [L. *albus,* white, + Gr. *ouron,* urine] Passing of white or colorless urine of low specific gravity. SYN: *achromaturia*.

Albright's disease (ălʹbrītz) McCune-Albright syndrome.

albuginea (ăl-bū-jĭnʹē-ă) [L. from *albus,* white] A layer of firm white fibrous tissue forming the sheath of an organ or part, as of the eye, testicle, ovary, or spleen. SYN: *tunica albuginea*.

a. corporum cavernosorum A strong, elastic, white fibrous sheath of both corpora cavernosa of the penis.

a. oculi The sclera, or fibrous connective tissue outer layer of the eyeball.

a. ovarii The layer of dense connective tissue lying beneath the epithelial ovarian covering.

a. testis The thick, unyielding layer of white fibrous tissue lying under the tunica vaginalis.

albumin (ăl-bū′mĭn) [L. *albumen,* white of egg] One of a group of simple proteins widely distributed in plant and animal tissues; it is found in the blood as serum albumin, in milk as lactalbumin, and in the white of egg as ovalbumin. In the blood albumin acts as a carrier molecule and helps to maintain blood volume and blood pressure. In humans the principal function of albumin is to provide colloid osmotic pressure, preventing plasma loss from the capillaries. Albumin, like all the plasma proteins, can act as a source for rapid replacement of tissue proteins. In the stomach coagulated albumins are made soluble by peptidases, which break them down to smaller polypeptides and amino acids. In general, albumins from animal sources are of higher nutritional quality than those from vegetable sources because animal proteins contain greater quantities of essential amino acids. SEE: *amino acid; peptone*.

blood a. Serum a.

circulating a. Albumin present in body fluids.

egg a. Ovalbumin.

human a. A sterile solution of serum albumin obtained from healthy blood donors. It is administered intravenously to restore blood volume.

serum a. The main protein found in the blood. SYN: *blood albumin*. SEE: *blood; simple protein*.

urinary a. Albumin in urine, a finding in glomerular diseases.

vegetable a. Albumin in, or derived from, plant tissue.

albuminate (ăl-bū′mĭ-nāt) The compound formed when albumin combines with an acid or alkali (base).

albumin-globulin ratio ABBR: A/G r. The ratio of albumin to globulin in blood plasma or serum. Normally this value is 1.3:1 to 3.0:1.

albuminolysis (ăl-bū″mĭn-ŏl′ĭ-sĭs) [″ + Gr. *lysis,* dissolution] Proteolysis; decomposition of protein.

albuminoreaction (ăl-bū″mĭ-nō-rē-ăk′shŭn) [″ + *re,* again, + *agere,* to act] The presence (positive reaction) or absence (negative reaction) of albumin in the sputum. A positive reaction was formerly used to indicate inflammation of the lungs.

albuminose (ăl-bū′mĭn-ōs) Albuminous.

albuminosis (ăl-bū″mĭ-nō′sĭs) [″ + Gr. *osis,* condition] An abnormal increase of albumin in blood plasma.

albuminous (ăl-bū′mĭ-nŭs) Pert. to, resembling, or containing albumin.

albumin test Any chemical test for the presence of albumin, usually with electrophoresis, chromatography, spectrophotometry, spectrometry, or immunoassay, and sometimes by simple chemical reactions on dipsticks.

albuminuretic (ăl-bū′mĭn-ū-rĕt″ĭk) [L. *albumen,* white of egg, + Gr. *ouretikos,* causing urine to flow] Pert. to or causing albuminuria.

albuminuria (ăl-bū-mĭ-nū′rē-ă) [″ + Gr. *ouron,* urine] The presence of easily detectable amounts of serum albumin in the urine. Albuminuria is a common sign of renal impairment (nephrotic syndrome and other kidney disorders); it also occurs in fever, malignant hypertension, and in healthy people after vigorous exercise (among other conditions). SEE: *nephritis; nephrosis*. **albuminuric** (-nū′rĭk), *adj.*

cyclic a. Presence of small amounts of albumin in the urine at regular diurnal intervals, esp. in childhood and adolescence.

digestive a. Albuminuria following ingestion of certain foods.

extrarenal a. Albuminuria due to contamination of urine with pus, chyle, or blood.

functional a. Intermittent or temporary albuminuria not associated with a pathological condition.

intrinsic a. Albuminuria resulting from renal disease.

orthostatic a. Postural a.

postural a. Transient albuminuria in normal individuals who have been erect for a long period. SYN: *orthostatic albuminuria*.

albuterol (ăl-bū′tĕr-ŏl″) Bronchodilator administered by inhalation or tablet.

Alcaligenes (ăl″kă-lĭj′ĭ-nēz) [NL] A genus of gram-negative, aerobic bacilli normally found in the human intestinal tract, in dairy products, and in soil.

A. faecalis A species normally found in the human intestine. It has been associated with hospital-acquired septicemia and urinary tract infections.

A. xylosoxidans A species that does not ferment glucose. It has been implicated rarely in lung infections in patients with cystic fibrosis and in other health-care associated infections in patients with immunosuppressing or malignant illnesses.

Alcock's canal (ăl′kŏks) [Benjamin Alcock, Irish anatomist, b. 1801] Pudendal canal.

alcohol (ăl′kō-hŏl) [Arabic *al-koh'l,* something subtle] **1.** A class of organic compounds that are hydroxyl derivatives of hydrocarbons. **2.** Ethyl alcohol (C_2H_5OH), a colorless, volatile, flammable liquid. Its molecular weight is 46.07; its boiling point is 78.5°C. It is present in fermented or distilled liquors and is obtained, in its pure form, from grain by fermentation and fractionation distillation. SYN: *ethanol; grain a.*

ACTION/USES: Taken in excessive amounts, alcohol acts as a depressant to

the nervous system. Because it arrests the growth of bacteria, it is useful in preserving biological specimens and in some patent medicines. It is also used in preparing essences, tinctures, and extracts; in the manufacture of ether, ethylene, and other industrial products; as a rubbing compound; and as an antiseptic in 70% solution. SEE: *alcoholism; fetal alcohol syndrome*.

absolute a. A solution that contains 99% alcohol and not more than 1% by weight of water.

cetyl a. A white insoluble solid substance, $C_{16}H_{34}O$, used in the manufacture of ointments.

dehydrated a. Alcohol containing not less than 99.2% by weight of ethyl alcohol. This corresponds to 99.5% by volume of ethyl alcohol.

denatured a. Alcohol rendered unfit for use as a beverage or medicine by the addition of toxic ingredients; used commercially as a solvent.

diluted a. Alcohol containing not less than 41% and not more than 42% by weight of ethyl alcohol; used as a solvent. Also called diluted ethanol.

ethyl a. C_2H_5OH; grain alcohol. SYN: *ethanol*. SEE: *alcohol* (2); *Poisons and Poisoning Appendix*.

grain a. Ethyl alcohol. SEE: *alcohol* (2).

isopropyl a. C_3H_7OH; a clear flammable liquid similar to ethyl alcohol. It is used in medical preparations for external use, antifreeze, cosmetics, and solvents. SYN: *isopropanol*. SEE: *Poisons and Poisoning Appendix*.

Isopropyl alcohol is toxic when taken internally.

methyl a. CH_3OH; a colorless, volatile, flammable liquid obtained from distillation of wood. Even though its physical properties are similar to those of ethyl alcohol, it is not fit for human consumption. Ingestion of methyl alcohol can lead to blindness and death. It is used as a solvent, for fuel, as an additive for denaturing ethyl alcohol, as an antifreeze agent, and in the preparation of formaldehyde. SYN: *methanol; wood alcohol*. SEE: *Poisons and Poisoning Appendix*.

polyvinyl a. (pŏl″ē-vī′nĭl) A water-soluble synthetic resin used in preparing medicines, esp. ophthalmic solutions.

rubbing a. A preparation containing not less than 68.5% and not more than 71.5% dehydrated alcohol by volume. The remainder consists of water and denaturants and may or may not contain color additives and perfume oils. It is used as a rubefacient. Rubbing alcohol is packaged, labeled, and sold in accordance with the regulations issued by the U.S. Treasury Department, Bureau of Alcohol, Tobacco and Firearms.

Because of the added denaturant, rubbing alcohol is poisonous if taken internally.

wood a. Methyl alcohol.

Alcohol, Drug Abuse, and Mental Health Administration ABBR: ADAMHA. A U.S. government agency that is part of the National Institutes of Health within the Department of Health and Human Services. The agency administers grant programs supporting research, training, and service programs in alcoholism, drug abuse, and mental health.

alcohol-dependent sleep disorder Inability to sleep without consuming alcohol. The alcohol is used as a sedative/hypnotic drug.

alcoholic (ăl-kō-hŏl′ĭk) [L. *alcoholicus*] **1.** Pert. to alcohol. **2.** One afflicted with alcoholism.

Alcoholics Anonymous ABBR: AA. An organization consisting of alcoholics and recovering alcoholics who are trying to help themselves and others abstain from alcohol by offering encouragement and discussing experiences, problems, feelings, and techniques. The organization has groups in most U.S. cities; local chapters are listed in the telephone directory. SEE: *Al-Anon; Alateen*.

alcoholism (ăl′kō-hŏl-ĭzm) [Arabic *al-koh'l,* something subtle, + Gr. *-ismos,* condition] A chronic, frequently progressive and sometimes fatal disease marked by impaired control over alcohol use despite adverse effects from its consumption. Dependence on alcohol, tolerance of its effects, and remissions and relapses are common. Psychological features include preoccupation with alcohol use and denial of addiction, even when evidence to the contrary exists.

Alcohol abuse is one of the major threats to health in the U.S. The prevalence of alcoholism in the U.S. has been estimated to fall between 2 and 9% of the population. Each year 10% of all deaths are related to alcohol use. Chronic alcoholism and alcohol-related disorders can be physically, psychologically, and economically devastating to patients and their families. SEE: *abuse, substance; fetal alcohol syndrome;* table.

ETIOLOGY: Psychological, physiological, genetic, familial, and cultural factors play a part in alcoholism. Family members of alcoholics and males are most likely to be predisposed to the disease. Underage drinkers are more likely to become alcohol-dependent than are those who do not use alcohol before age 21, with youths who start drinking be-

Levels of Alcohol Consumption: A Guide to Contemporary Usages

Type of drinking	Definition	Comment
Non-problematic drinking	< 1 standard drink daily (see definition of "standard drink" below)	Some evidence suggests that this level of alcohol consumption is healthful
Moderate drinking	≤ 2 drinks a day for males under age 65. ≤ 1 drink daily for women and people > 65	
At-risk drinking	Males: > 4 drinks in any day or 14 drinks a week. Females: > 3 drinks in a day or 7 drinks a week	Also referred to as "hazardous" drinking or "problematic alcohol use" by some agencies.
Binge drinking	≥ 5 drinks on any single occasion	Binge drinking carries an increased risk of adverse consequences, including motor vehicle accidents, assaults or aggressive behaviors, and alterations in consciousness.
Harmful drinking	*Any quantity* of drinking that produces physical or psychological injury. Any drinking during pregnancy, for example.	See "problem drinking" below.
Heavy drinking	Males: > 2 drinks a day on average Females: > 1 drink a day on average	Note that "heavy drinking" begins at the upper limit of "moderate drinking" and overlaps with "at-risk drinking."
Problem drinking	Drinking that causes life problems for the drinker, e.g. health-related, legal, relationship, or occupational difficulties.	"Problem drinking" is also known as "alcohol abuse," or "alcoholism" when it persists for ≥ 12 months.
Underage drinking	Drinking before reaching age 21	May vary from one legal jurisdiction to another.
Driving while intoxicated (DWI)	A legal term, defined by the states, for the crime defined as operating a motor vehicle while influenced by alcohol (or other drugs).	Most states rely on both a standard that includes observable impairment in motor function, speech, and balance, and a blood alcohol level (adults) of 0.8. Also known as "driving under the influence," among other terms.

Standard drink: ½ oz alcohol, i.e., 12 oz beer, or 5 oz wine, or 1.5 oz distilled spirits. Many habitual users of alcohol drink larger quantities of alcohol (e.g., 8 oz of wine or 16 oz beer), mistakenly believing these to represent a single drink.

fore age 15 having the highest risk of alcohol addiction.

SYMPTOMS: Pathological effects of alcoholism can be found in almost any organ of the body but are most commonly identified in the nervous system, bone marrow, liver, pancreas, stomach, and the other organs of the gastrointestinal tract. Symptoms arise both from organ-specific damage and from the psychological effects of the drug. Alcoholics are more likely than nonalcoholics to suffer falls, fractures, automotive accidents, job loss, imprisonment, and other

legal difficulties. In addition, they have hypertension, gastritis, pancreatitis, hepatitis, cirrhosis, portal hypertension, memory disturbances,and oropharyngeal and pancreatic cancers at rates that exceed those in the general population. In severe alcoholism, abstinence results in withdrawal symptoms and, occasionally, hallucinosis, delirium tremens, or withdrawal seizures. The life expectancy of alcoholics is shorter than that of nonalcoholics. SEE: *alcohol withdrawal syndrome; cirrhosis; delirium tremens*.

DIAGNOSIS: Alcoholism is diagnosed clinically. Although some alcoholics have many abnormal laboratory findings, none of these is definitively diagnostic of the disease. In severe hepatic disease, BUN is elevated and serum glucose levels are decreased. Elevated liver function studies may indicate liver damage, and elevated serum amylase levels acute pancreatitis. Anemia, thrombocytopenia, leukopenia, increased prothrombin time, and increased partial thromboplastin time may be noted from hematologic studies.

Screening for alcoholism is best undertaken with questionnaires, like the Michigan Alcohol Screening Test (MAST) and the Alcohol Use Disorders Identification Test (AUDIT). CAGE, a widely used screening questionnaire, asks the questions: Do you feel the need to *c*ut down on drinking? Are you *a*nnoyed by people who complain about your drinking? Do you feel *g*uilty about your drinking? Do you need an *e*ye-opener when you wake up? These tests are designed to determine when alcohol use has become physically, behaviorally, or emotionally problematic for patients. Denial is a major concern, and patients may give false information in their health histories and deny physical problems associated with alcoholism. The usefulness of the assessment instrument depends upon the patient's honesty and his or her trust in the clinicians. The assessor should be aware, however, that indirect information obtained from the history and physical examination often reveals more than does direct questioning.

TREATMENT: Abstinence from alcohol remains the cornerstone of treatment for alcoholism. Support groups for alcoholics, such as Alcoholics Anonymous (AA), have reported the highest rates of treatment success. SEE: *Alcoholics Anonymous*.

PATIENT CARE: During acute intoxication or withdrawal, the patient is carefully monitored. Assessments should include mental status, temperature, heart rate, breath sounds, and blood pressure. Medications prescribed for symptom relief are administered, and desired and undesired effects are evaluated. Evaluation for signs of inadequate nutrition and dehydration is also necessary. The patient requires orientation to reality because he or she may have hallucinations or may try to harm self or others. A calm environment with minimal noise and shadows reduces the incidence of delusions and hallucinations. Seizure precautions are instituted, with mechanical restraint avoided. Health care professionals should approach the patient in a nonthreatening way, and explain all procedures. Even if the patient is verbally abusive, apathetic, or uninterested, care providers should listen attentively and reply with empathy. The patient also is monitored for signs of depression or impending suicide.

In long-term care of alcoholism, the patient is assisted to accept his or her drinking problem and the need for abstinence. The patient should be confronted about alcohol-related behaviors and urged to examine actions. If the patient is taking disulfiram (or has taken it within the last 2 weeks), he or she is warned of the effects of alcohol ingestion, which may last from 30 minutes to 3 hours or longer. Even a small amount of alcohol will induce adverse reactions (e.g., nausea, vomiting, facial flushing, headache, shortness of breath, red eyes, blurred vision, sweating, tachycardia, hypotension, and fainting). The longer the patient takes the drug, the greater his or her sensitivity will be. Therefore, the patient must be warned to avoid medicinal or hygienic sources of alcohol (e.g., cough syrups, cold remedies, liquid vitamins, and mouthwashes).

The entire family is assisted to develop a long-term plan for follow-up and relapse prevention, including referral to organizations such as AA, Al-Anon, and Alateen. Family involvement in rehabilitation helps reduce family stressors and tensions. If the alcoholic patient has lost contact with family and friends and has a long history of unemployment, trouble with the law, or financial difficulties, social services or other appropriate agencies may assist with rehabilitation efforts. These may involve job training, sheltered workshops, halfway houses, and other supervised facilities.

acute a. Intoxication (2).

chronic a. Alcoholism.

alcoholuria (ăl″kō-hŏl-ū′rē-ă) [″ + Gr. *ouron,* urine] The presence of alcohol in the urine.

alcohol use disorders identification test ABBR: AUDIT. A survey of ten questions to diagnose those people whose alcohol consumption has become harmful to their health. The AUDIT questionnaire includes three questions about a person's possible dependence on alcohol,

three that determine the amount and frequency of alcohol consumption, and four that delve into any problems that may have been caused by a person's alcohol consumption in the past.

alcohol withdrawal syndrome The neurological, psychiatric, and cardiovascular signs and symptoms that result when a person accustomed to consuming large quantities of alcohol suddenly becomes abstinent. Alcohol withdrawal usually follows a predictable pattern. In the first hours of abstinence, patients are often irritable, anxious, tremulous, and easily startled. Their blood pressure and pulse rise, but they remain alert and oriented. If they do not consume alcohol (or receive drug treatment) in the first 12 to 48 hours, they may suffer an alcohol withdrawal seizure. Abstinence for 72 to 96 hours may result in severe agitation, hallucinations, and marked fluctuations in blood pressure and pulse. This stage of withdrawal is known as delirium tremens, or alcoholic delirium; it may prove fatal in as many as 15% of patients. SEE: *alcoholism, chronic; delirium tremens*.

TREATMENT: Benzodiazepines (e.g., chlordiazepoxide) remain the preferred agents for the management of alcohol withdrawal, although other agents, such as carbamazepine, may be useful in treating mild cases.

aldehyde (ăl′dĕ-hīd) [*al*cohol *dehyd*rogenatum] **1.** Oxidation product of a primary alcohol; it has the characteristic group —CHO. **2.** Acetaldehyde, CH_3CHO; an intermediate in yeast fermentation and alcohol metabolism.

Alder-Reilly anomaly (ăl′dĕr-rī′lē) [Albert von Alder, Swiss hematologist, 1888–1951; William Anthony Reilly, U.S. pediatrician, b. 1901] Large dark leukocyte granules that stain lilac. They consist of mucopolysaccharide deposits and are indicative of mucopolysaccharidosis.

aldolase (ăl′dō-lās) An enzyme present in skeletal and heart muscle and the liver; important in converting glycogen into lactic acid. Its serum level is increased in certain muscle diseases and in hepatitis.

aldopentose (ăl″dō-pĕn′tōs) A five-carbon sugar with the aldehyde group, —CHO, at the end. Arabinose is an aldopentose.

aldose (ăl′dōs) A carbohydrate of the aldehyde group (—CHO).

aldose reductase An enzyme that makes up part of the metabolic pathway that converts glucose to fructose and sorbitol, two chemicals that may damage nerves, the retina, and the lens of the eye when they accumulate excessively, e.g., in poorly controlled diabetes mellitus.

aldosterone (ăl-dŏs′tĕr-ōn, ăl″dō-stĕr′ōn) The most biologically active mineralocorticoid hormone secreted by the adrenal cortex. Aldosterone increases sodium reabsorption by the kidneys, thereby indirectly regulating blood levels of potassium, chloride, and bicarbonate, as well as pH, blood volume, and blood pressure. SEE: *adrenal gland*.

aldosteronism (ăl″dŏ-stĕr′ōn-ĭzm″) An uncommon cause of hypertension in which the blood contains abnormally high levels of aldosterone, a mineralocorticoid usually produced by the adrenal glands. The syndrome results from sodium retention and excretion of potassium by the kidneys. Although it is frequently asymptomatic, occasionally patients may have frequent urination, nocturia, or headache. If potassium losses are severe, muscular weakness, cramps, tetany, or cardiac arrhythmias may occur. SYN: *hyperaldosteronism*.

primary a. Aldosteronism due to excess secretion of mineralocorticoid by the adrenal gland. An aldosterone-secreting adenoma frequently is responsible. Removal of the adenoma will cure hypertension in some affected patients. SYN: *Conn's syndrome*. SEE: *Nursing Diagnoses Appendix.*

secondary a. Aldosteronism due to extra-adrenal disorders.

aldrin (ăl′drĭn) A derivative of chlorinated naphthalene used as an insecticide. SEE: *Poisons and Poisoning Appendix.*

alemmal (ă-lĕm′ăl) [Gr. *a-,* not, + *lemma,* husk] Without a neurilemma, as in a nerve fiber.

alendronate (ă-lĕn′drō-nāt) A biphosphonate that stops osteoclasts from absorbing bone. It increases the density of bone and is used to treat and prevent osteoporosis and the fractures it causes.

Alendronate is administered as a pill, which should be given to patients with a large glass of water to prevent it from lodging in the upper gastrointestinal tract and causing esophagitis. Patients should also maintain an upright posture for at least a half hour after taking the medicine.

Aleppo boil (ă-lĕp'ō) Cutaneous leishmaniasis, caused by infection with the parasite *Leishmania tropica* and marked by one or multiple ulcerations of the skin. SYN: *Delhi boil; Oriental sore*.

aleukemia (ă-loo-kē′mē-ă) [″ + *leukos,* white, + *haima,* blood] A deficiency of white blood cells in the circulating blood.

aleurone (ăl-oo′rōn) [Gr. *aleuron,* flour] The protein granules present in the outer layer of the endosperm of cereal grain.

Aleve Naproxen.

Alexander-Adams operation (ăl″ĕks-ăn′dĕr-ăd″ămz) [William Alexander, Brit. surgeon, 1844–1919; James A. Adams, Scot. gynecologist, 1857–1930] Surgery in which the round ligaments of the uterus are shortened and their ends sutured to the exterior abdominal ring; used in treating uterine displacement.

Alexander disease (ăl-ĕks-ăn′dĕr) A rare neurodegenerative disorder characterized by early onset dementia or encephalopathy and muscular spasticity. It usually results from a mutation in the gene that codes for glial fibrillary acidic protein (GFAP). Brain specimens from affected patients show the accumulation of abnormal inclusion bodies within astrocytes.

Alexander technique (ăl-ĕks-ăn′dĕr) [Frederick Matthias Alexander, Australian actor, 1869–1955] A form of body work that promotes postural health, particularly of the spine, head, and neck.

alexia (ă-lĕk′sē-ă) [Gr. *a-,* not + *lexis,* word] Word blindness.

motor a. Inability to read aloud while remaining able to understand what is written or printed.

musical a. Inability to read music. It may be sensory, optic, or visual, but not motor.

optic a. (ă-lĕk′sē-ă) Inability to understand what is written or printed.

alexithymia (ă-lĕk″sē-thī′mē-ă) The inability to identify and articulate feelings, including those brought on by unpleasant mental or physical experiences. It is often found in patients with a history of child abuse, post-traumatic stress disorder (PTSD), drug abuse, and some somatoform disorders.

ALG *antilymphocyte globulin.* SEE: *globulin, antilymphocyte*.

algae (ăl′jē) [L. *alga,* seaweed] Photosynthetic organisms of several phyla in the kingdom Protista. They are nonparasitic and lack roots, stems, or leaves; they contain chlorophyll and vary in size from microscopic forms to massive seaweeds. They live in fresh or salt water and in moist places. Some serve as a source of food or as nutritional supplements. Examples are kelp and Irish moss.

blue-green a. Cyanobacteria; photosynthetic organisms in the kingdom Monera. Blooms may impart a disagreeable taste to freshwater and may cause the death of fish.

algesia (ăl-jē′zē-ă) [Gr. *algesis,* sense of pain] Supersensitivity to pain; a form of hyperesthesia. SYN: *algesthesia*. **algesic, algetic** (ăl-jēz′ĭk, ăl-jĕt′ĭk), *adj.*

algesthesia (ăl″jĕs-thē′zē-ă) [Gr. *algos,* pain, + *aisthesis,* sensation] **1.** Perception of pain. **2.** Algesia.

-algia, -algesia [Gr. *algos,* pain] Suffixes meaning *pain.* SEE: *-dynia*.

algicide (ăl′jĭ-sīd) [L. *alga,* seaweed, + *caedere,* to kill] A substance that kills algae.

algid (ăl′jĭd) [L. *algidus,* cold] Cold; chilly.

alginate (ăl′jĭ-nāt) Any salt of alginic acid. It is derived from kelp, a type of seaweed, and is used as a thickener in foods and as a pharmaceutical aid. In dentistry, this irreversible hydrocolloid is used as a material for taking impressions.

alginate slime A polysaccharide film that coats the bacterial surface of colonies of *Pseudomonas aeruginosa.*. It prevents phagocytic cells from ingesting the bacteria.

algiomotor (ăl″jē-ŏ-mō′tor) [Gr. *algos,* pain, + L. *motor,* a mover] Causing painful contraction of muscles, particularly pain during peristalsis. SYN: *algiomuscular*.

algiomuscular (ăl″jē-ŏ-mŭs′kū-lăr) [″ + L. *musculus,* muscle] Algiomotor.

alglucerase (ăl″gloo′sē- rās) A drug prepared from human placental tissue. It is used in treating type 1 Gaucher's disease.

algolagnia (ăl″gō-lăg′nē-ă) [Gr. *algos,* pain, + *lagneia,* lust] Sexual satisfaction derived by experiencing pain or by inflicting pain on others.

active a. Sadism.

passive a. Masochism.

algometer (ăl″gŏm′ĕ-tĕr) [″ + *metron,* measure] An instrument for measuring the degree of sensitivity to pain.

algophobia (ăl″gō-fō′bē-ă) [Gr. *algos,* pain, + *phobos,* fear] Morbid fear of pain.

algorithm (ăl′gŏ-rĭthm) A formula or set of rules for solving a particular problem. In health care, a set of steps used in diagnosing and treating a disease. Appropriate use of algorithms in medicine may lead to more efficient and accurate patient care as well as reduced costs.

algor mortis (ăl′gŏr mŏr′tĭs) [L. "coldness of death"] The lowering of body temperature that follows death.

aliasing A jagged distortion in a digitally generated visual image, such as an image produced during image reconstruction in magnetic resonance imaging or Doppler ultrasonography. An example of aliasing is the wrap-around artifact seen on magnetic resonance images when a portion of the body extends beyond the imaged field of view.

Alice in Wonderland syndrome [Alice, from Lewis Carroll's *Alice in Wonderland*] Perceptual distortions of the size and/or shape of objects. It is often characterized by the hallucination that things are smaller than they really are and is sometimes experienced by patients suffering from migraine, infec-

tious mononucleosis, or an overdose of hallucinogenic drugs.

alicyclic (ăl-ĭ-sī′klĭk) Having properties of both aliphatic (open-chain) and cyclic (closed-chain) compounds.

alienate (āl′yĕn-āt) To isolate, estrange, or dissociate.

alienation (āl″yĕn-ā′shŭn) [L. *alienare,* to make strange] Isolation, estrangement, or dissociation, esp. from society.

occupational a. The sense of isolation or estrangement a person may experience when employed in a job that is not personally meaningful or fulfilling.

alien limb phenomena A rare disorder of movement and sensation in which sudden unexpected movements of a hand or foot occur and are felt by the patient experiencing them to be either involuntary or initiated by others.

aliform (ăl′ĭ-form) [L. *ala,* wing, + *forma,* shape] Wing-shaped.

alignment (ă-līn′mĕnt) [Fr. *aligner,* to put in a straight line] **1.** The act of arranging in a straight line. **2.** The state of being arranged in a straight line. **3.** In orthopedics, the placing of portions of a fractured bone into correct anatomical position. **4.** The anatomical presentation of one structure to another, such as opposing joint surfaces. **5.** In dentistry, bringing teeth into correct position. **6.** In radiography, the positioning of the body part in correct relation to the radiographic film and x-ray tube to enable proper visualization.

aliment (ăl′ĭ-mĕnt) [L. *alimentum,* nourishment] Nutriment; food.

alimentary (ăl″ĭ-mĕn′tăr-ē) [L. *alimentum,* nourishment] Pert. to food, nutrition, or the digestive tract.

alimentary system Digestive system.

alimentation (ăl″ĭ-mĕn-tā′shŭn) The process of nourishing the body, including mastication, swallowing, digestion, absorption, and assimilation. SEE: *hyperalimentation; total parenteral nutrition*.

artificial a. Provision of nutrition, usually intravenously or via a tube passed into the gastrointestinal tract of a patient unable to take or utilize normal nourishment. SEE: *total parenteral nutrition*.

forced a. **1.** Feeding of a patient unwilling to eat. **2.** Forcing of a person to eat a greater quantity than desired.

rectal a. Feeding by means of nutrient enemas.

alimentotherapy (ăl″ĭ-mĕn″tō-thĕr′ă-pē) [L. *alimentum,* nourishment, + Gr. *therapeia,* treatment] Treatment of disease by dietary regulation. SYN: *dietotherapy*. SEE: *dietetics*.

alinement (ă-līn′mĕnt) [Fr. *aligner,* to put in a straight line] Alignment.

aliphatic (ăl″ĭ-făt′ĭk) [Gr. *aleiphar, aleiphatos,* fat, oil] Belonging to that series of organic chemical compounds characterized by open chains of carbon atoms rather than by rings.

aliquot (ăl′ĭ-kwŏt) [L. *alius,* other, + *quot,* how many] A portion that represents a known quantitative relationship to the whole or to other portions.

alizarin (ă-lĭz′ă-rĭn) [Arabic *ala sara,* extract] A red dye obtained from coal tar or madder.

alkalemia (ăl″kă-lē′mē-ă) [Arabic *al-qaliy,* ashes of salt wort, + Gr. *haima,* blood] An increase in the arterial blood pH above 7.45 due to a decrease in the hydrogen ion concentration or an increase in hydroxyl ions. The blood is normally slightly alkaline (pH 7.35 to 7.45).

alkali (ăl′kă-lī) *pl.* **alkalis, alkalies** [Arabic *al-qaliy,* ashes of salt wort] A strong base, esp. the metallic hydroxides. Alkalies combine with acids to form salts, combine with fatty acids to form soap, neutralize acids, and turn litmus paper blue. SEE: *acid; base; pH;* words beginning with *alkal-*.

corrosive a. A strongly basic metallic hydroxide, most commonly of sodium, ammonium, and potassium, as well as carbonates. Because of their great combining power with water and their action on the fatty tissues, they cause rapid and deep tissue destruction. They have a tendency to gelatinize tissue, turning it a somewhat grayish color and forming a soapy, slippery surface, accompanied by pain and burning. SEE: *corrosion; corrosive poisoning*.

alkali denaturation test A quantitative test for hemoglobin F (fetal hemoglobin, HbF). The test uses the spectrophotometric absorbance of a mixture of saline-diluted and alkali-diluted blood.

alkalimetry (ăl″kă-lĭm′ĕ-trē) Measurement of the alkalinity of a mixture.

alkaline (ăl′kă-līn) Pert. to or having the reactions of an alkali.

alkalinity (ăl″kă-lĭn′ĭ-tē) The state of being alkaline. SEE: *hydrogen ion*.

alkalinize (ăl′kă-lĭn-īz″) To make alkaline. SYN: *alkalize*.

alkalinuria (ăl″kă-līn-ū′rē-ă) [*alkali* + Gr. *ouron,* urine] Alkaline urine.

alkalization (ă″kă-lĭ-zā′shŭn) The process of making something alkaline.

alkalize (ăl′kă-līz) To make alkaline. SYN: *alkalinize*.

alkaloid (ăl′kă-loyd) [*alkali* + Gr. *eidos,* form, shape] One of a group of organic alkaline substances (such as morphine or nicotine) obtained from plants. Alkaloids react with acids to form salts that are used for medical purposes.

vinca a. A drug made from vinca plants and used in cancer therapy.

alkalosis (ăl″kă-lō′sĭs) [″ + Gr. *osis,* condition] An actual or relative increase in blood alkalinity due to an accumulation of alkalies or reduction of

acids. SEE: *acid-base balance*. **alkalotic** (-lŏt′ĭk), *adj.*

altitude a. Alkalosis resulting from the increased respiratory rate associated with exposure to the decreased oxygen content of air at high altitudes. This causes respiratory alkalosis. SEE: *respiratory alkalosis*.

compensated a. Alkalosis in which the pH of body fluids has been returned to normal. Compensatory mechanisms maintain the normal ratio of bicarbonate to carbonic acid (approx. 20:1) even though the bicarbonate level is increased.

hypochloremic a. Metabolic alkalosis due to loss of chloride and produced by severe vomiting, gastric tube drainage, or massive diuresis.

hypokalemic a. Metabolic alkalosis associated with an excessive loss of potassium. It may be caused by diuretic therapy.

metabolic a. Any process in which plasma bicarbonate is increased. This is usually the result of increased loss of acid from the stomach or kidney, potassium depletion accompanying diuretic therapy, excessive alkali intake, or severe adrenal gland hyperactivity. SEE: *acid-base balance*.

SYMPTOMS: There are no specific signs or symptoms, but if the alkalosis is severe, there may be apathy, confusion, stupor, and tetany as evidenced by a positive Chvostek's sign.

TREATMENT: Therapy for the primary disorder is essential. Saline solution should be administered intravenously and, in patients with hypokalemia due to diuretic therapy, potassium is administered. Only rarely is it necessary to administer acidifying agents intravenously.

PATIENT CARE: Arterial blood gas values, serum potassium level, and fluid balance are monitored. The patient is assessed for anorexia, nausea and vomiting, tremors, muscle hypertonicity, muscle cramps, tetany, Chvostek's sign, seizures, mental confusion progressing to stupor and coma, cardiac dysrhythmias due to hypokalemia, and compensatory hypoventilation with resulting hypoxia. Prescribed oxygen, oral or IV fluids, sodium chloride or ammonium chloride, and potassium chloride if hypokalemia is a factor, along with therapy prescribed to correct the cause, are administered. Seizure precautions are observed; a safe environment and reorientation as needed are provided for the patient with altered thought processes. The patient's response to therapy is evaluated, and the patient is taught about the dangers of excess sodium bicarbonate intake if that is a factor. The ulcer patient is taught to recognize signs of metabolic alkalosis, including anorexia, weakness, lethargy, and a distaste for milk. If potassium-wasting diuretics or potassium chloride supplements are prescribed, the patient's understanding of the regimen's purpose, dosage, and possible adverse effects is ascertained.

respiratory a. Alkalosis with an acute reduction of carbon dioxide followed by a proportionate reduction in plasma bicarbonate.

ETIOLOGY: Hyperventilation (whether it is caused by hypoxia, anxiety, panic attacks, fever, salicylate intoxication, exercise, or excessive mechanical ventilation) is the primary cause of respiratory alkalosis.

SYMPTOMS: Patients may develop paresthesias; air hunger; dry oral mucosa; numbness or tingling of the nose, circumoral area, or extremities; muscle twitching; tetany and hyperreflexia; lightheadedness; inability to concentrate; mental confusion and agitation; lethargy; or coma.

TREATMENT: Therapy is given for the underlying cause. In acute hyperventilation produced by panic or anxiety, treatment includes coaching a patient to breathe in a slow, controlled, and relaxed fashion by providing reassurance and support.

PATIENT CARE: Preventive measures are taken, such as having the hyperventilating patient breathe in a slow controlled fashion, using cues provided by caregivers. The respiratory therapist prevents or corrects respiratory alkalosis in patients receiving mechanical ventilation by increasing dead space or decreasing volume. Arterial blood gas values, vital signs, and neurological status are monitored. In severe cases, serum potassium level is monitored for hypokalemia and cardiac status for dysrhythmias. Prescribed therapy is administered to treat the cause. The patient is reassured, and a calm, quiet environment is maintained during periods of extreme stress and anxiety. The patient is helped to identify stressors and to learn coping mechanisms and anxiety-reducing techniques, such as guided imagery, controlled breathing, or meditation.

alkalotherapy (ăl″kă-lō-thĕr′ă-pē) [*alkali* + Gr. *therapeia,* treatment] Therapeutic use of alkalies.

alkapton(e) (ăl-kăp′tōn) [″ + Gr. *hapto,* to bind to] $C_8H_8O_4$; homogentisic acid; a yellowish-red substance sometimes occurring in urine as the result of the incomplete oxidation of tyrosine and phenylalanine.

alkaptonuria (ăl″kăp-tō-nū′rē-ă) [*alkapton* + Gr. *ouron,* urine] A rare inherited disorder marked by the excretion of large amounts of homogentisic acid in the urine, a result of incomplete metab-

olism of the amino acids tyrosine and phenylalanine. Presence of the acid is indicated by the darkening of urine on standing or when alkalinated and the dark staining of diapers or other linen. SEE: *ochronosis*.

alkene (ăl′kēn) A bivalent aliphatic hydrocarbon containing one double bond.

alkyl (ăl′kĭl) Any hydrocarbon radical with the general formula C_nH_{2n+1}. The resulting substances are called alkyl groups or alkyl radicals.

alkylate (ăl′kĭ-lāt) To provide therapy involving the use of an alkylating agent.

alkylation (ăl″kĭ-lā′shŭn) A chemical process in which an alkyl radical replaces a hydrogen atom.

ALL *acute lymphocytic leukemia.*

all- [Gr. *allos,* other] SEE: *allo-*.

allachesthesia (ăl″ă-kĕs-thē′zē-ă) [Gr. *allache,* elsewhere, + *aisthesis,* sensation] Perception of tactile sensation as being remote from the actual point of stimulation.

allantochorion (ă-lăn″tō-kō′rē-ŏn) Fusion of the allantois and chorion into one structure.

allantoic (ăl″ăn-tō′ĭk) Pert. to the allantois.

allantoid (ă-lăn′toid) [Gr. *allantos,* sausage, + ″] **1.** Sausage-shaped. **2.** Pert. to the allantois.

allantoin (ă-lăn′tō-ĭn) $C_4H_6N_4O_3$; a white crystalline substance in allantoic and amniotic fluids and the end product of purine metabolism in mammals other than primates. It is produced synthetically by the oxidation of uric acid. It is used in some cosmetics, mouthwashes, and pharmaceuticals.

allantoinuria (ă-lăn″tō-ĭn-ū′rē-ă) [*allantoin* + Gr. *ouron,* urine] Allantoin in the urine.

allantois (ă-lăn′tō-ĭs) [Gr. *allantos,* sausage, + *eidos,* form, shape] A transient embryonic structure that is the tubular outpouching from the bottom of the caudal end of the 3-week-old human embryo. Later, the allantois, its adjacent connecting stalk, and the yolk stalk merge to form the umbilical cord. The walls of the allantois give rise to the umbilical vein and arteries, and part of the cavity of the allantois remains as a tube, the urachus, that connects the developing bladder with the umbilical cord.

allayed (ă-lād′) Mitigated.

Allegra Fexofenadine.

allele (ă-lēl′, ă-lĕl′) [Gr. *allelon,* of one another] One of two or more different genes containing specific inheritable characteristics that occupy corresponding positions (loci) on paired chromosomes. A pair of alleles is usually indicated by a capital letter for the dominant and a lowercase letter for the recessive. An individual with a pair of identical alleles, either dominant or recessive, is said to be homozygous for this gene. The union of a dominant gene and its recessive allele produces a heterozygous individual for that characteristic. Some traits may have multiple alleles (i.e., more than two possibilities), but an individual has only two of those alleles (e.g., the genes for blood type, A, B, and O, are at the same position on the chromosome pair, but an individual has only two of these genes, which may be the same or different). SYN: *allelic gene; allelomorph*. **allelic** (ă-lĕl′ĭk), *adj.*

histocompatibility a. Any of many different forms of the histocompatibility gene. Each allele creates specific antigenic markers on the surface of cells. SEE: *histocompatibility locus antigen*.

prothrombin 20210A a. A guanine-to-adenine substitution at nucleotide 20210 in the prothrombin gene that increases the risk for venous clotting. The gene is usually found in people of European ancestry.

allelic gene (ă-lĕl′ĭk jēn) Allele.

allelomorph (ă-lē′lō-morf, ă-lĕl′ō-morf) [″ + *morphe,* form] Allele.

allelozyme (ă-lēl′ă-zīm″) An enzyme that has multiple genetic variants (i.e., one that has small substitutions in its genetic coding and protein structure). Also known as allozyme.

Allen Cognitive Level Screen (ăl′ĭn kŏg′nĭ-tĭv lĕ′vĭl skrēn) A standardized method of assessing information processing based on a theory that postulates six levels of cognitive function. It is used widely by occupational therapists.

Allen test (ăl′ĕn) **1.** A bedside test used to evaluate the patency of the arteries of the hand before arterial puncture. The patient elevates the hand and repeatedly makes a fist while the examiner places digital occlusive pressure over the radial and ulnar arteries at the wrist. The hand will lose its normal pink color. Digital pressure is released from one artery (usually the ulnar), while the other (i.e., the radial) remains compressed. If there is normal blood flow through the unobstructed artery, color should return to the hand within 10 sec. The return of color indicates that the hand has a good collateral supply of blood and that arterial puncture of the compressed artery can be safely performed. **2.** A procedure to identify the presence of thoracic outlet compression syndrome caused by tightness of the pectoralis minor muscle. With the patient seated, the examiner abducts the involved shoulder to 90° and flexes the elbow to 90°. While palpating the radial pulse, the examiner externally rotates the humerus while the patient actively rotates the head to the opposite side. A diminished or absent radial pulse is indicative of the pectoralis minor muscle's compressing the neurovascular bundle.

This procedure often produces false-positive results. SEE: *thoracic outlet compression syndrome.*

allergen (ăl′ĕr-jĕn) [Gr. *allos,* other, + *ergon,* work, + *gennan,* to produce] Any substance that causes a hypersensitivity reaction or abnormal immune response. Allergens do not stimulate an immune response in all people, only in those sensitized to them. An allergen may or may not be a protein. Among common allergens are inhalants (e.g., dusts, pollens, fungi, smoke, perfumes, odors of plastics), foods (e.g., wheat, eggs, milk, chocolate, strawberries), drugs (e.g., aspirin, antibiotics, serum), infectious agents (e.g., bacteria, viruses, fungi, animal parasites), contactants (e.g., chemicals, animals, plants, metals), and physical agents (e.g., heat, cold, light, pressure, radiation). SEE: *allergy; antigen; irritation; sensitization;* table.

polymerized a. A chemically altered allergen made into a macromolecule, used in immunotherapy to stimulate a blocking antibody response stronger than the allergen's normal allergic response.

allergenic (ăl″ĕr-jĕn′ĭk) Producing allergy.

allergic (ă-lĕr′jĭk) Pert. to, sensitive to, or caused by an allergen.

allergic reaction A reaction resulting from hypersensitivity to an antigen. SEE: *allergy* for illus.; *hypersensitivity.*

allergist (ăl′ĕr-jĭst) A physician who specializes in diagnosing and treating allergies.

allergoid (ăl′ĕr-goid) A chemically altered allergen used in immunotherapy to induce tolerance to an antigen. Allergoids differ from the allergens they derive from in that they produce an IgG antibody response stronger than an IgE (hypersensitivity) response.

allergy (ăl′ĕr-jē) [″ + Gr. *ergon,* work] An immune response to a foreign antigen that results in inflammation and organ dysfunction. Allergies range from life-threatening to annoying and include systemic anaphylaxis, laryngeal edema, transfusion reactions, bronchospasm, vasculitis, angioedema, urticaria, eczematous dermatitis, hay fever, rhinitis, and conjunctivitis. They affect about 20% of the American public and can be triggered by inhalation (e.g., pollens, dust mites), direct contact (e.g., poison ivy, poison oak), ingestion (e.g., drugs, foods), or injection (e.g., stinging insects, drugs). Allergic responses may be initiated and sustained by occupational exposures to allergens, and by foods, animals, fungal spores, metals, rubber products, and other agents. The most severe cases are often associated with Hymenoptera stings, penicillin products, radiological contrast media, and latex. SYN: *hypersensitivity reaction.* SEE: *allergen; atopy.*

ETIOLOGY: The immune system has two main functions: first, to identify germs and parasites that may cause damage to the body; and second, to repel attacks by these organisms with toxic defenses. Allergic reactions can occur when immune functions are turned on by any agent—infectious or not—that is richly endowed with alien antigens. Once the immune system has been sensitized, subsequent exposures result in the binding of specific immunoglobulins (esp. IgE) or the activation of immunologically active cells (including mast cells, basophils, or T cells). These can release inflammatory chemicals (e.g., histamines, kinins, leukotrienes, and interleukins) that, acting locally or systemically, create allergic symptoms.

SYMPTOMS: Nasal inflammation, mucus production, watery eyes, itching, rashes, tissue swelling, bronchospasm, stridor, and shock are all potential symptoms of allergy.

DIAGNOSIS: A history of exposure and reaction is crucial to the diagnosis of allergy. Tests for specific allergies include skin prick tests, intradermal injections, bronchial provocation tests, or blood tests (e.g., measurements of antigen-specific immunoglobulins).

TREATMENT: Avoiding allergens is the first step in treatment. Effective drugs for allergic symptoms include antihistamines, cromolyn, corticosteroids, and epinephrine. Which of these is given depends on the severity of the reaction. Antigen desensitization (immunotherapy) may be used by experienced professionals; however, this technique may occasionally trigger severe systemic reactions.

PATIENT CARE: Before any drug is given, the health care provider should determine if the patient has any history of allergy. Patients receiving any injected drugs or blood products are closely observed for rash, itch, wheezing, stridor, or hypotension. If an allergic reaction begins, medications prescribed for immediate management are given to the patient. Patients are taught how to identify and avoid common allergens and how to identify an allergic reaction. The use of drugs for the chronic management of allergies is explained, and the patient is advised about potential adverse effects. If a patient needs injectable epinephrine for emergency outpatient treatment of anaphylaxis, both the patient and family are instructed in its use.

atopic a. Atopy.

contact a. A type IV hypersensitivity reaction following direct contact with an allergen, most frequently involving the skin. SEE: *contact dermatitis.*

Common Allergies and Allergens

Common Name	Scientific Name(s)	Allergen Designation	Allergen Class	Representative Illnesses
Aspirin	Acetylsalicylic acid; other nonsteroidal anti-inflammatory drugs	Asa	Drug allergen	asthma, rhinitis, anaphylaxis
Birch	*Betula*	Bet	Aeroallergen (inhaled, or "outdoor" allergen)	hay fever
Cat	*Felis domesticus*	Fel	Pet-associated (indoor)	asthma, atopy, hives
Cockroach	*Blatella germanica*	Bla g	Pest-associated allergen (indoor)	asthma, atopy, hives
Dog	*Canis familiaris*	Can	Pet-associated (indoor)	asthma, atopy, hives
Dust mite	*Blomia tropicalis; Dermatophagoides farinae; Euroglyphus*	Blo t; Der f; Eur	Indoor	allergic rhinitis; contact dermatitis; asthma
Egg	Apovitellin; ovalbumin; ovomucoid	Gad d Gal	Food allergen	
Imported fire ant	*Solenopsis invicta*	Sol i	Insect venom	anaphylaxis
Iodine	Radiologic contrast	Io	Drug allergen	anaphylaxis
Latex (rubber)	*Hevea brasilensis*	Hev b	Occupational exposures	asthma, contact dermatitis, rhinitis
Molds	*Alternaria alternata; Aspergillus fumigatus; Cladosporium herbarum; Penicillium notatum*	Alt a; Asp f; Cla h; Pen n	Indoor and outdoor	allergic rhinitis, asthma
Mugwort	*Artemisia vulgaris*	Art v	Outdoor allergen	hay fever
Olive	*Olea europaea*	Ole e	Food allergen	anaphylaxis
Peanut	*Arachis hypogaea*	Ara h	Food allergen	anaphylaxis
Penicillin	Beta-lactam	Pcn	Drug allergen	anaphylaxis; rashes
Ragweed	*Ambrosia artemisiifolia* and others	Amb	Outdoor allergen	hay fever
Timothy grass	*Phleum pratense*	Phl p	Outdoor allergen	hay fever
Yellow jacket venom	*Vespula vulgaris* and others	Ves v	Insect venom	anaphylaxis
Wheat	*Gliadins glutens*	Tri a	Food allergy	anaphylaxis, "Baker's asthma," rhinitis

drug a. A type I hypersensitivity reaction to a drug.

food a. An immunologic reaction to a food to which a patient has become sensitized. It requires a first exposure (sensitization), which stimulates the production of IgE antibodies; subsequent exposures produce symptoms. Sensitivity to almost any food may develop, but it develops most frequently to milk, eggs, wheat, shellfish, and chocolate. Because food allergies are type I reactions, symptoms can appear within minutes. Mild symptoms (e.g., urticaria, eczema, abdominal cramps, and gastrointestinal upset) are most common, but food allergies also can cause life-threatening systemic anaphylaxis.

Food allergies are identified by eliminating any foods suspected of causing symptoms and reintroducing them one at a time. Blood tests for IgE are useful in separating food allergies from abnormal metabolic or digestive responses to food. Desensitization to food allergies is not possible, and use of antihistamines, epinephrine, and corticosteroids (the most common treatments for symptoms) cannot be used for prophylaxis. Many adverse reactions to foods are not allergic in nature but may be caused by toxic, metabolic, or pharmacological reactions. SEE: illus.; *anaphylaxis; desensitization*.

SWELLING OF LIPS CAUSED BY ALLERGY

latex a. An immune reaction resulting from contact with products derived from the rubber tree, *Hevea brasiliensis,* or the chemicals added to latex during the manufacturing process. Latex antigens can be absorbed through the skin or inhaled. The allergic reaction may be relatively mild (marked by rashes or reddened skin) or more severe (rhinitis, hives, bronchospasm, or anaphylaxis). In health care workplaces, where standard precautions against contact with blood and body fluids have made the wearing of protective latex gloves common, nonlatex products have been substituted for latex barriers to reduce exposure. A nonallergic contact dermatitis caused by the irritation of powders used in the gloves may be mistaken for a true latex allergy and is much more common.

peanut a. An IgE-mediated immediate hypersensitivity reaction to the consumption of peanuts (the seeds of *Arachis hypogaea*). Peanut allergens are designated *Ara* by the World Health Organization. Peanut allergy is the single most important food allergy in the U.S., affecting more than a million people. Reactions to peanuts may range from mild (rashes) to life-threatening (closure of the airway, cardiac dysrhythmias, coma). About 50 people die of peanut allergy in the U.S. each year.

PATIENT CARE: People with known allergies to peanuts should scrupulously avoid eating raw or processed peanuts. Those affected by peanut allergy should learn to watch for the signs of anaphylaxis (e.g., hives, pruritus, rashes in the skin creases, swelling of the lip or tongue, shortness of breath, a sense of tightness in the neck or chest, palpitations, choking, wheezing, stridor, or loss of consciousness). People with known anaphylaxis to peanuts should carry epinephrine injectors and use them at the onset of a hypersensitivity reaction. (Repeated use may be necessary in persistent reactions.) Cross-reactivity to other nuts and other legumes (e.g., peas, soy products) may affect some people and therefore pose important health risks. Affected people should wear medical alert bracelets or necklaces identifying their condition. Densensitization can be accomplished with modified peanut allergens.

allergy response, latex An allergic response to natural latex rubber products. SEE: *Nursing Diagnoses Appendix.*

allergy response, risk for latex At risk for allergic response to natural latex rubber products. SEE: *Nursing Diagnoses Appendix.*

allesthesia (ăl″ĕs-thē′zhă, zhē-ă) [″ + *aisthesis,* sensation] Perception of stimulus in the limb opposite the one stimulated. SYN: *allochesthesia; allochiria*.

alleviate To lessen the effect of.

allicin (ăl′ĭ-sĭn) [Fm. L. *allium,* garlic] A yellow oil released from garlic when it is bruised, crushed, or chewed. The oil is antibacterial and antifungal and lowers serum cholesterol levels.

allied health professional An individual who has received special training in an allied health field, such as clinical laboratory science, radiology, emergency medical services, physical therapy, respiratory therapy, medical assisting, athletic training, dental hygiene, or occupational therapy.

alliesthesia (ăl″ē-ĕs-thē′zhă, -zhē-ă) [Gr. *allios,* changed, + *aisthesis,* sensation] The perception of an external stimulus as pleasant or unpleasant, de-

pending upon internal stimuli. A particular stimulus may be perceived as pleasant at one time and unpleasant at another.

Allis' sign (ăl′ēz) [O. H. Allis, American surgeon, 1836–1921] A clinical finding in patients with a fractured or dislocated femoral head, in which a finger can be inserted into the fascia lata femoris between the greater trochanter and the iliac crest

alliteration (ă-lĭt″ĕr-ā′shŭn) [L. *ad,* to, + *litera,* letter] A speech disorder in which words beginning with the same consonant sound are used to excess.

Allium sativum (ăl′ē-ŭm să-tē′vŭm, tī′) [L., planted garlic] The scientific name for garlic.

allo-, all- [Gr. *allos,* other] Combining forms indicating *divergence, difference from,* or *opposition to the normal.*

alloantigen (ăl″lō-ăn′tĭ-jĕn) [″ + *anti,* against, + *gennan,* to produce] An antigen in the blood or tissue of a donor that is not present in the recipient, which can therefore trigger an immune response.

allocation (ăl″ō-kā′-shŭn) The assignment or distribution of assets or duties.

allocative efficiency (ăl′ŏ-kāt″ĭv) [″] In economics and sociology, the extent to which a product or a service, e.g., hemodialysis, is provided to an entire community, rather than just to a subgroup of that community.

allochesthesia (ăl″ō-kĕs-thē′zē-ă) [Gr. *allache,* elsewhere, + *aisthesis,* sensation] Allesthesia.

allochiria, allocheiria (ăl″ō-kī′rē-ă) [″ + *cheir,* hand] Allesthesia.

allochroism (ăl-ōk′rō-ĭzm, ăl″ō-krō′ĭzm) [″ + *chroa,* color, + *-ismos,* condition] A change in color.

allochromasia (ăl″ō-krō-māz′ē-ă, -māzh′) A change in the color of hair or skin.

allocinesia (ăl″ă-sĭn-ē′zē-ă, -ē′zhă) [Gr. *allos,* other, + *kinesis,* movement] An obsolete spelling for allokinesia. SEE: *allokinesis*.

allodiploidy (ăl″ō-dĭp′loy-dē) [″ + *diploe,* fold, + *eidos,* form, shape] Possession of two sets of chromosomes, each from a different species. A hybrid is allodiploid.

allodynia (ăl″ō-dĭn′ē-ă) The condition in which an ordinarily painless stimulus, once perceived, is experienced as being painful.

alloeroticism, alloerotism (ăl″ō-ē-rŏt′ĭ-sĭzm, -ĕr′ō-tĭzm) [″ + *Eros,* god of love] Sexual urges stimulated by and directed toward another person. Opposite of autoerotism.

alloesthesia Allesthesia.

allogeneic, allogenic (ăl″ō-jĕ-nē′ĭk, ăl″ō-jĕn′ĭk) Having a different genetic constitution but belonging to the same species. SEE: *isogeneic*.

allograft (ăl′ō-grăft) [″ + L. *graphium,* grafting knife] Transplant tissue obtained from a member of one's species. Commonly transplanted organs include cornea, bone, artery, cartilage, kidney, liver, lung, heart, and pancreas. Recipients of allografts take immunosuppressive drugs to prevent tissue rejection. SYN: *homograft*. SEE: *autograft; heterograft; transplantation*.

alloimmune (ăl″ō-ĭ-mūn′) [″ + L. ″] Immune response to antigens on blood or tissue cells received from a donor of the same species.

alloiococcus otitis (ăl-oy″ŏ-kŏk′ŭs) A species of aerobic gram-positive bacteria often found in patients with otitis media with effusion.

allokinesis (ăl″ō-kĭ-nē′sĭs) [″ + *kinesis,* movement] Passive or reflex movement; involuntary movement. **allokinetic** (-kĭ-nĕt′ĭk), *adj.*

allolalia (ăl″ō-lā′lē-ă) [″ + *lalia,* talk] A speech defect or impairment, esp. due to a brain lesion, in which words are spoken unintentionally or inappropriate words are substituted for appropriate ones.

allomerism (ă-lŏm′ĕr-ĭzm) [″ + *meros,* part, + *-ismos,* condition] A change in chemical constitution without a change in form. SEE: *allomorphism*.

allomorphism (ăl″ō-mor′fĭzm) [″ + *morphe,* form, + *-ismos,* condition] A change in form without a change in chemical constitution. SEE: *allomerism*.

allopath (ăl′ō-păth) One who practices allopathy.

allopathy (ăl″ŏp′ă-thē) [Gr. *allos,* other, + *pathos,* disease, suffering] **1.** A system of treating disease by inducing a pathological reaction that is antagonistic to the disease being treated. **2.** A term erroneously used for the regular practice of medicine to differentiate it from homeopathy.

allophasis (ăl-ŏf′ă-sĭs) [Gr. *allos,* other, + *phasis,* speech] Incoherent speech.

alloplasia (ăl″ō-plā′zē-ă) [″ + *plasis,* a molding] The development of tissue at a location where that type of tissue would not normally occur. SYN: *heteroplasia*.

alloplasty (ăl′ă-plăs″tē) [″ + *plasis,* a molding] **1.** Plastic surgery using inert materials or those obtained from a tissue bank (e.g., cornea, bone). **2.** In psychiatry, adaptation by altering the external environment rather than changing oneself. SEE: *autoplasty*.

alloploidy (ăl″ō-ploy′dē) [″ + *ploos,* fold, + *eidos,* form, shape] The state of having two or more sets of chromosomes derived from different ancestral species.

allopolyploidy (ăl″ō-pŏl′ē-ploy-dē) [″ + *polys,* many, + *ploos,* fold, + *eidos,* form, shape] The state of having more than two sets of chromosomes derived from different ancestral species.

allopsychic (ăl-ō-sī′kĭk) [″ + *psyche,* mind] Pert. to mental processes in relation to the external environment.

allopurinol (ăl″ō-pū′rĭn-ŏl) A drug that inhibits the enzyme xanthine oxidase. Because its action causes a reduction in both serum and urine levels of uric acid, allopurinol is used in the treatment of gout and of renal calculi caused by uric acid.

A rare but important side effect of allopurinol is a potentially fatal rash.

allostasis (ăl-ŏs′-tă-sĭs) [″ + ″] Physiological adaptation to stress.

allostery (ăl-ŏ′stĕr-ē) [Gr. *allos,* other + *stereos,* shape] **1.** In bacteria, alteration of a regulatory site on a protein that changes its shape and activity. This change is important in altering the way the organism responds to its molecular environment. **2.** In enzymology, the ability of a factor to bind to a site on an enzyme other than its substrate-binding site and cause a change in the conformation of the enzyme and its ability to catalyze a chemical reaction.

allotransplantation (ăl″ō-trănsˮplăn-tā′shŭn) [″ + L. *trans,* through, + *plantare,* to plant] Grafting or transplantation of tissue from one individual into another of the same species. SYN: *homeotransplantation*.

allotriogeustia (ă-lŏt″rē-ŏ-jŭst′ē-ă, -gū′stē-ă) [Gr. *allotrios,* strange, + *geusis,* taste] Perverted appetite or sense of taste. SEE: *parageusia*.

allotriophagy (ă-lŏt″rē-ŏf′ă-jē) [″ + *phagein,* to eat] A perversion of appetite with ingestion of material not suitable as food, such as starch, clay, ashes, or plaster. SYN: *pica*.

allotriosmia (ăl″ō-trē-ŏs′mē-ă) Heterosmia.

allotropic (ăl″ō-trŏp′ĭk) [Gr. *allos,* other, + *tropos,* direction] **1.** Pert. to the existence of an element in two or more distinct forms with different physical properties. **2.** Altered by digestion so as to be changed in its nutritive value. **3.** Indicating one who is concerned with the welfare and interests of others (i.e., not self-centered).

allotropism, allotropy (ă-lŏt′rō-pĭzm, -pē) [″ + *trope,* a turn, + *-ismos,* condition] The existence of an element in two or more distinct forms with different physical properties.

allotype (ăl′ō-tīp″) Any one of the genetic variants of protein that occur in a single species. The serum from a person with one form of allotype could be antigenic to another person.

alloxan (ăl-ŏk′săn) [*all*antoin + *ox*alic] $C_2H_2N_2O_4$; an oxidation product of uric acid. In laboratory animals, it causes diabetes by destroying the islet cells of the pancreas.

alloy (ăl′oy) [Fr. *aloyer,* to combine] **1.** A metallic substance (e.g., brass) resulting from the fusion or mixture of two or more metals. **2.** A metallic substance (e.g., steel) formed from the fusion or mixture of a metal and a nonmetal. In dentistry, several alloys are commonly used to restore teeth. Alloys used to construct cast restorations are often gold- and copper-based alloys. Common "silver fillings" are alloys of silver, copper, tin, and mercury. The silver-tin-mercury alloys are called amalgams.

base metal a. An alloy that does not contain noble metals such as gold or silver. Stainless steel is the most common base metal alloy used in dentistry.

Base metal alloys should not be cleaned with sodium hypochlorite solutions.

dental casting gold a. A hard or extra-hard alloy used to manufacture crowns, inlays, and onlays.

noble-metal a. An alloy of two or more metals, one of which is a noble metal (gold, silver, platinum, or palladium). Noble-metal alloys are generally nonreactive and corrosion-resistant.

allyl (ăl′ĭl) [L. *allium,* garlic, + Gr. *hyle,* matter] C_3H_5; a univalent unsaturated radical found in garlic and mustard.

Alma-Ata Declaration (ăl′mă ă-tah′) A declaration made in 1978 at the Conference on Primary Health Care in Alma-Ata, Russia. It stated that primary health care is the key to attaining health for all by the year 2000. Defined as essential to this were eight elements: education, food supply, safe water, maternal and child health, including family planning, immunization, prevention and control of endemic diseases, appropriate treatment of common diseases and injuries, and provision of essential drugs.

ALOC *altered level of consciousness.*

alochia (ă-lō′kē-ă) [Gr. *a-,* not, + *lokhos,* pert. to childbirth] Absence of lochia, the vaginal discharge following childbirth.

aloe (ăl′ō) The dried juice of one of several species of plants of the genus *Aloe,* used to heal skin conditions.

alogia (ă-lŏ′jē-ă) **1.** Complete speechlessness. **2.** Poverty of speech.

aloin (ăl′ō-ĭn) A yellow crystalline substance obtained from aloe.

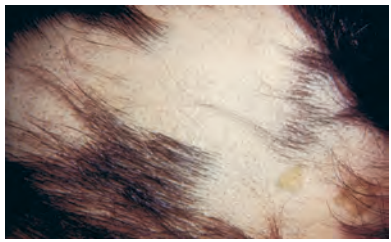
alopecia (alˮō-pē′shē-ă) [Gr. *alopekia,* fox mange] Absence or loss of hair, esp. of the head.

ETIOLOGY: Alopecia may result from serious illness, drugs, endocrine disorders, certain forms of dermatitis, hereditary factors, radiation, or physiological changes as a part of the aging process.

TREATMENT: Treatments may include drugs, such as minoxidil or finas-

teride; surgeries, such as hair transplantation; or prostheses (wigs).

a. areata Loss of hair in sharply defined patches usually involving the scalp or beard. SEE: illus.



ALOPECIA AREATA OF SCALP

a. capitis totalis Complete or near complete loss of hair on the scalp. SEE: illus.

ALOPECIA CAPITIS TOTALIS

cicatricial a. Loss of hair due to formation of scar tissue.

a. congenitalis Baldness due to absence of hair bulbs at birth.

a. follicularis Baldness due to inflammation of the hair follicles of the scalp.

a. liminaris Loss of hair along the hairline, both front and back, of the scalp.

male pattern a. Typical hair loss pattern of males in which the alopecia begins in the frontal area and proceeds until only a horseshoe area of hair remains in the back and at the temples. This loss is dependent on the presence of the androgenic hormone testosterone.

a. medicamentosa Loss of hair as a result of medical treatment, esp. treatment with drugs used in chemotherapy for cancer.

a. pityroides Loss of both scalp and body hair accompanied by desquamation of branlike scales.

a. prematura Premature baldness.

a. symptomatica Loss of hair after prolonged fevers or during the course of a disease; may result from systemic or psychogenic factors.

a. totalis Alopecia capitis totalis.

a. toxica Loss of hair thought to be due to toxins of infectious disease.

a. universalis Loss of hair from the entire body.

alpha (ăl′fă) **1.** The first letter of the Greek alphabet, α. In chemistry, it denotes the first in a series of isomeric compounds or the position adjacent to a carboxyl group. **2.** First in a series. **3.** Prototype. **4.** Dominant figure, personality, or role.

alpha-adrenergic blocking agent A substance that interferes with the transmission of stimuli through pathways that normally allow sympathetic nervous excitatory stimuli to be effective. SEE: *beta-adrenergic blocking agent*.

alpha-D-galactosidase An enzyme, derived from *Aspergillus niger*, used in treating intestinal gas or bloating. SEE: *flatus*.

alpha-fetoprotein ABBR: AFP. An antigen present in the human fetus and in certain pathological conditions in the adult. The maternal serum level should be evaluated at 15 to 22 weeks' gestation. During pregnancy, elevated levels are associated with open neural tube defects, anencephaly, omphalocele, gastroschisis, and fetal death. Decreased levels may indicate an increased risk of having a baby with Down syndrome. If an abnormal level of AFP is found, further tests such as ultrasound or amniocentesis need to be done. Elevated serum levels of AFP are found in adults with certain hepatic carcinomas or chemical injuries. Test results also may be abnormal in persons with diabetes, multiple pregnancies, or obesity.

alpha-fetoprotein kit ABBR: AFP test. A monoclonal antibody test for the presence of alpha-fetoprotein (AFP) in vaginal secretions, used in cases of suspected premature rupture of membranes. In healthy pregnancies AFP is detectable in the amniotic fluid but is present only in very low concentrations in vaginal secretions. If there is leakage of amniotic fluid into the vagina as a result of premature rupture of membranes, AFP levels in the vagina rise significantly.

alpha-globulin One of the serum globulins. SEE: *globulin, serum*.

alpha granule deficiency syndrome A rare autosomal dominant bleeding disorder in which the alpha granules of

platelets lack adenosine diphosphate, which is critical for proper platelet targeting and clumping in response to injury. The platelet count may be abnormally decreased, and the bleeding time is usually prolonged. The abnormality in platelet granulation is visible with an electron microscope. The most common clinical evidence of the disease is easy bruising in response to injury. SYN: *gray platelet syndrome*.

alpha heavy chain disease Immunoproliferative small intestinal disease.

alpha-hydroxy acid ABBR: AHA. A water-soluble acid derived from fruit or milk, having a hydroxyl moiety in the first position in the molecule. AHAs are used in chemical peels and other skin care products to remove the outer layer of the epidermis. This chemical exfoliation is promoted for its cosmetic effects on wrinkled or sun-damaged skin.

alpha-lipoic acid A natural coenzyme and antioxidant.

alpha-methylacyl-CoA racemase ABBR: AMACR. An antibody that is primarily used in histopathology to stain tissues suspected of representing carcinoma of the prostate gland. Its presence substantiates the diagnosis. AMACR is also present in some colonic and some kidney cancer specimens.

alpha-methyltryptamine (ăl″fă-měth″ĭl-trĭp′tă-mēn″, mĭn) [″ + ″ + *tryptamine*] ABBR: AMT. A hallucinogenic compound derived from tryptamine, a crystalline amine formed from tryptophan. It is known colloquially as "spirals."

alpha particles, alpha rays Radioactive, positively charged particles, equivalent to a helium nucleus (two protons and two neutrons), ejected at high speeds in certain atomic reactions.

alpha-rhythm In electroencephalography, rhythmic oscillations in electric potential occurring at an average rate of 10/sec. SYN: *alpha-wave*.

alpha-tocopherol The most active form of vitamin E found in food.

Alphavirus (ăl′fă-vī-rŭs) A genus of the family of Togaviridae viruses (e.g., Sindbis virus; Semliki forest virus) transmitted to humans by mosquito bite. They may cause fever, rash, or CNS infection.

alpha-wave Alpha-rhythm.

Alport's syndrome (ăl′portz) [Arthur Cecil Alport, S. African physician, 1880–1959] Congenital glomerulonephritis associated with deafness and a decrease in large thrombocytes. Occasionally there are eye abnormalities such as cataracts. Although there is no specific treatment for this condition, dialysis or kidney transplantation is used to treat affected patients with kidney failure. SYN: *hereditary nephritis*. SEE: *macrothrombocyte*.

alprazolam (ăl-prā′zō-lăm) A benzodiazepine and antianxiety agent, administered orally to treat anxiety and panic attacks. Trade name is Xanax.

alprostadil (ăl-prŏs′tă-dēl) A synthetic prostaglandin used to treat erectile dysfunction.

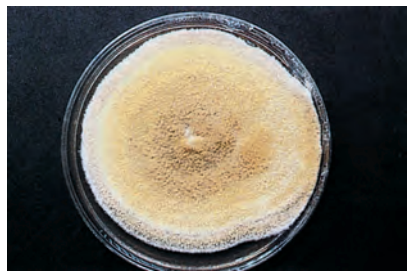
ALS *amyotrophic lateral sclerosis*.

Alstrom syndrome (ahl′strŏm′) [Carl-Henry Alström, Swedish psychiatrist, 1907–1993] A rare autosomal recessive syndrome whose hallmarks include blindness resulting from retinal dystrophy, type 2 diabetes mellitus, hearing loss, heart failure, insulin resistance, obesity, and renal failure.

ALT *alanine aminotransferase.*

alternans (awl-tĕr′nănz) [L. *alternare,* to alternate] Alternation.

Alternaria (awl″tĕr-nā′rē-ă) A genus of fungi of the Dematiaceae family. The fungus can cause pneumonitis and may cause wound or skin infections in immunocompromised patients. It has been implicated as the cause of pulmonary disease in wood pulp workers. SEE: illus.



ALTERNARIA IN CULTURE

alternator An electrical generator that produces alternating current.

altitude sickness SEE: under *sickness*.

altretamine (ăl-trĕ′tă-mīn) A drug used for treating persistent or recurrent ovarian cancer.

altricious (ăl-trĭsh′ŭs) [L. *altrix,* nourisher] **1.** Slow in developing. **2.** Requiring long-term nursing care.

altruism (ăl′troo-ĭz-ĭm) [Fr. *altruisme*] Acting for the benefit of others regardless of the consequences for oneself.

alum (ăl′ŭm) [L. *alumen*] **1.** A double sulfate of aluminum and potassium or aluminum and ammonia; used as an astringent and styptic. **2.** Any of a group of double sulfates of a trivalent metal and a univalent metal.

ammonia a. Aluminum ammonia sulfate.

aluminosis (ă-loo″mĭn-ō′sĭs) [″ + Gr. *osis,* condition of] Chronic inflammation of the lungs in alum workers due to alum particles in inspired air.

aluminum (ă-loo′mĭ-nŭm) SYMB: Al. A silver-whitish metal used to filter low-

energy radiation out of the x-ray beam; atomic mass 26.9815, atomic number 13.

a. acetate A salt formed by the reaction between aluminum sulfate and lead acetate. Its aqueous solution (Burow's solution) is used as a local astringent.

a. ammonia sulfate An astringent. SYN: *ammonia alum*.

a. chloride A chemical substance used as an astringent and antiperspirant.

a. phosphate gel An aqueous suspension of aluminum phosphate used as an astringent and antacid.

a. potassium sulfate An astringent and styptic. SYN: *potassium alum*.

a. sulfate A chemical substance used topically as an antiperspirant.

aluminum poisoning SEE: under *poisoning, aluminum*.

alveoalgia (ăl″vē-ō-ăl′jă) [″ + ″] Pain in the socket of a tooth.

alveobronchiolitis, alveobronchitis (ăl″vē-ō-brŏng″kē-ŏ-lī′tĭs, -brŏng-kī′tĭs) [L. *alveolus,* small hollow or cavity, + Gr. *bronchos,* windpipe, + *itis,* inflammation] Inflammation of the bronchioles and pulmonary alveoli. SYN: *bronchopneumonia*.

alveolalgia (ăl″vē-ŏ-lăl′jē-ă) [″ + Gr. *algos,* pain] Pain in the alveolus of a tooth.

alveolar (ăl-vē′ō-lăr) Pert. to an alveolus.

alveolar pressure The pressure within the tiny gas-exchanging structures of the lungs. When this pressure is positive, it exceeds atmospheric pressure. When it is negative, it is less than the pressure of ambient gases. Gases flow from higher to lower pressures; so when alveolar pressures are higher than atmospheric pressures, respiratory gases tend to be exhaled. When alveolar pressures are less than atmospheric pressures, gas flows into the lungs.

alveolate (ăl-vē′ō-lāt) Honeycombed; pitted.

alveolectomy (ăl″vē-ŏ-lĕk′tō-mē) [L. *alveolus,* small hollow or cavity, + Gr. *ektome,* excision] Surgical removal of all or part of the alveolar process of the mandible or maxilla; usually performed in treatment of neoplasms.

alveoli (ăl-vē′ō-lī) [L.] Pl. of alveolus.

a. breast The glandular structures that comprise the mammary lobules and are the site of milk synthesis.

alveoli-, alveolo- Combining forms meaning *alveolus*.

alveolitis (ăl″vē-ŏ-lī′tĭs) [″ + ″] Inflammation of the alveoli.

allergic a. Inflammation of the bronchial tree, interstitial tissue, and alveoli of the lung caused by a hypersensitivity reaction to an inhaled antigen. With repeated exposure, large numbers of macrophages form granulomas, which damage and scar lung tissue. The inhaled allergens that most often trigger allergic alveolitis are molds and other fungi, vegetables, mushrooms and mushroom compost, flour, tree bark, detergents, and contaminated humidifiers. In the acute stage, patients may present with cough, fever, chills, malaise, and shortness of breath. In the subacute and chronic forms, the onset of symptoms is gradual and prolonged. Farmer's lung and bagassosis are two common names for forms of allergic alveolitis. SYN: *hypersensitivity pneumonitis*.

alveoloclasia (ăl-vē″ō-lō-klā′sē-ă) [″ + Gr. *klasis,* fracture] Destruction of a tooth socket.

alveolodental (ăl-vē″ō-lō-dĕn′tăl) [″ + *dens,* tooth] Pert. to the alveolus of the tooth and to the tooth itself.

alveololingual (ăl-vē″ă-lō-lĭng′gwăl) [″ + ″] Concerning the alveolar process and tongue.

alveoloplasty (ăl-vē″ō-lō-plăs′tē) [″ + Gr. *plassein,* to form] Surgical reconstruction of the alveolus.

alveolotomy (ăl″vē-ŏ-lŏt′ō-mē) [″ + Gr. *tome,* incision] Surgical incision of the alveolus of a tooth.

alveolus (ăl-vē′ō-lŭs) *pl.* **alveoli** [L., small hollow or cavity] **1.** A small hollow. **2.** The bony socket of a tooth. **3.** An air sac of the lungs. SEE: illus. **4.** One of the honeycombed depressions of the gastric mucous membrane. **5.** A follicle of a racemose gland.

pulmonary a. One of the terminal epithelial sacs of an alveolar duct where gases are exchanged in respiration. SYN: *air sac*.

alveus (ăl′vē-ŭs) [L. (concave) vessel] A channel or groove.

a. hippocampi A layer of white matter covering the ventricular surface of the hippocampus. The axons forming the alveus are from the hippocampus and subicular cortex. The axons of the alveus collect to form the fimbria (the beginning of the fornix).

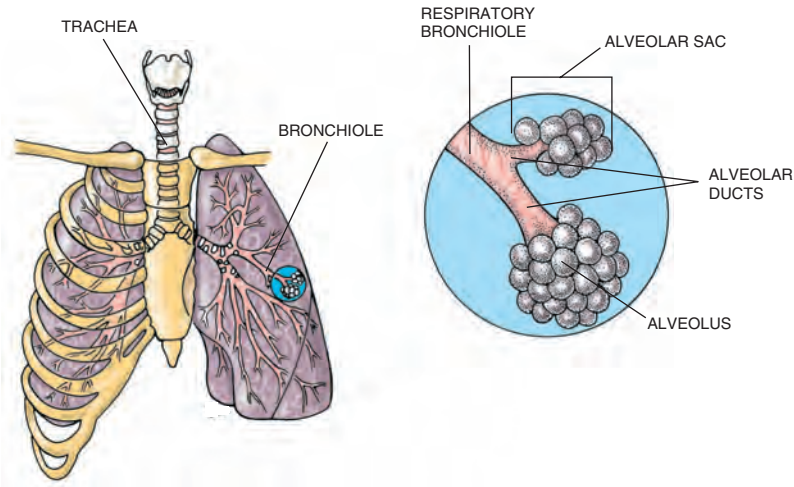
alymphia (ă-lĭm′fē-ă) [Gr. *a-,* not, + L. *lympha,* lymph] Complete or partial deficiency of lymph.

alymphocytosis (ă-lĭm″fō-sī-tō′sĭs) [″ + ″ + Gr. *kytos,* cell, + *osis,* condition] Decreased number or absence of lymphocytes in the blood.

alymphoplasia (ă-lĭm″fō-plā′zē-ă) [″ + ″ + Gr. *plasis,* a developing] Failure of lymphatic tissue to develop.

thymic a. Thymic aplasia.

Alzheimer's disease, Alzheimer disease (ălts′hī-mĕrz) [Alois Alzheimer, Ger. neurologist, 1864–1915] ABBR: AD. A chronic, progressive, degenerative cognitive disorder that accounts for more than 60% of all dementias. The most common form occurs in people over 65;



ALVEOLUS OF LUNGS

the incidence rate of the disease increases with age. The illness affects more than 4 million older Americans, causes significant functional disability, and costs $80 billion to $100 billion for health care and lost wages in the U.S. every year. That number is expected to triple in the next 20 years (14 million by 2050) as more people live into their 80s and 90s. SEE: *tomography, positron emission* for illus.; *Nursing Diagnoses Appendix.*

ETIOLOGY: In most cases of Alzheimer's disease a number of factors seem to interact to cause the disease, and there are certain heritable risk factors. The central biochemical problem in the disease appears to be a defect in the metabolism of alpha-amyloid precursor protein.

SYMPTOMS: The disease begins with a mild memory loss (Stage I), which then progresses to deterioration of intellectual functions, personality changes, and speech and language problems (Stage II). In the terminal stage (Stage III), patients depend on others for activities of daily living. Seizures, hallucinations, delusions, paranoia, or depression can occur in either Stage II or III. SEE: table.

DIAGNOSIS: The diagnosis is usually made by ruling out other causes of cognitive dysfunction, although a variety of

Stages of Alzheimer's Disease

Stage	Common Behaviors
Stage I (early stage, mild dementia)	Loss of short-term memory Decreased judgment (safety concern) Inability to perform mathematical calculations Inability to comprehend abstract ideas
Stage II (middle stage, moderate dementia)	Difficulty with speech and language (aphasia, anomia) Labile personality changes Changes in usual grooming habits Inability to remember purpose of items (apraxia) Urinary incontinence Wandering Seizures Psychotic behaviors, such as hallucinations and paranoia Depression
Stage III (late stage, severe dementia)	Inability to perform activities of daily living, such as eating, dressing, and bathing; requires total care Unable to remember how to walk, toilet, swallow Minimal or no communication Eventually becomes bedridden and develops complications of immobility, such as pneumonia, pressure ulcers, and constipation

laboratory tests also are employed in some settings.

PATHOPHYSIOLOGY: Characteristic pathophysiological changes in the brain are neuritic plaques, neurofibrillary tangles, and marked cerebral atrophy. In addition to structural changes, abnormalities in cranial neurotransmitters may occur. Acetylcholine, e.g., may be reduced by as much as 75%, contributing to cognitive impairment.

TREATMENT: The treatment of Alzheimer's disease includes environmental structuring and drug therapy. Environmental structuring involves providing a safe, stimulating milieu that provides consistency and comfort for the patient. Drug therapy is aimed at improving memory rather than curing the disease. Several cholinergic drugs, such as donepezil HCl (Aricept), are used to slow the decline in cognitive function. Antidepressants and psychotropic medications are used to treat patients who have secondary diagnoses such as depression and hallucinations.

PATIENT CARE: Reality orientation is helpful for patients in early stages of the disease. Validation therapy is most appropriate for patients in Stage II or III. Moderately and severely demented patients are unable to be reoriented and need reassurance and affirmation of their feelings and thoughts. Validation therapy is a form of communication in which the patient's feelings are valued and supported by all members of the health care team rather than refuted.

In collaboration with the physical and occupational therapists, the nurse assesses the patient's need for assistance with activities of daily living. Self-care, exercise, and other activities are encouraged to the fullest extent possible. If sleep disturbances occur, the patient should rest between daytime activities, but sleeping during daytime hours is discouraged. Neurological function, including mental and emotional states and motor capabilities, is monitored for further deterioration. Vital signs and respiratory status are assessed for signs and symptoms of pneumonia and other infections. The patient is evaluated for indications of gastrointestinal or urinary problems (anorexia, dysphagia, and urinary or fecal incontinence), and fluid and food intake is monitored to detect imbalances. The nurse or assistive nursing personnel takes the patient to the bathroom or bedside commode before and after meals and every 2 hr in between. Skin is inspected for evidence of trauma, such as bruises, abrasions, or other breakdown. The occupational therapist, home health nurse, or case manager assesses the patient's living environment to eliminate hazards and teaches the family to monitor the patient's activity to prevent falls, burns, and other injuries. Expectations should not exceed the patient's ability to perform tasks. Because the patient may misperceive the environment, health professionals should speak softly and calmly and allow sufficient time for answers, given the patient's slowed thought processes and impaired ability to communicate verbally. The case manager or nurse evaluates the caregiver's ability to manage the patient at home and makes the appropriate referrals to available local resources such as counseling, support groups, and respite care, as indicated.

Loneliness, helplessness, and boredom, all problems associated with institutionalization, can be reduced by incorporating into the environment plants, pets, aviaries, and children as well as opportunities to handle objects having different tactile surfaces. A décor that is similar to the patient's familiar surroundings may provide comfort. Music therapy may enhance emotional and physical well-being, cognitive skills, ability to communicate, and social functioning. Activity therapy should include the patient's known earlier interests and preferences. Such activities benefit the patient by encouraging interaction with others (patients or health-care providers) and by providing intellectual stimulation.

If mild cognitive impairment or early stage Alzheimer's is suspected, the individual should be evaluated by his/her physician or referred to a neurologist or gerontologist for evaluation. Early diagnosis allows family members to plan and prepare for the future. The physical and emotional health of the primary caregiver is an additional ongoing concern for the health team. Support groups can be a great help and comfort to family members by discussing care issues and exchanging information, as well as considering the caregivers' feelings and coping skills in an accepting atmosphere. Caregivers experience grief and loss symptoms throughout and following the illness and need help in expressing this grief and sharing this pain. Some male caregivers may face unique challenges in taking over many of the tasks traditionally managed by the ill wife or mother. All caregivers share the struggle with the common elements of acceptance: accepting the diagnosis, the devastating changes, the limited understanding of others, the progression of the disease, and the need for nursing home placement if this becomes necessary. Support groups can help with this process. Respite care can give life-sustaining relief to both partners. Friends who want to help may not even know what to offer, so caregivers

must learn how to ask for help with specific tasks.

The local chapter of the Alzheimer's Disease and Related Disorders Association (ADRDA), sometimes simply referred to as the Alzheimer's Association, is an excellent resource. A list of local chapters can be found through the national ADRDA at 919 N. Michigan Avenue, Suite 1000, Chicago, IL 60611-1676 or at their web site at www.alz.org.

Am **1.** *mixed astigmatism*. **2.** *ametropia*. **3.** Symbol for the element americium.

AMA *against medical advice; American Medical Association.*

amaas (ă′măs) Variola minor.

AMACR *alpha-Methylacyl-CoA racemase*.

amacrine (ăm′ă-krĭn) [Gr. *a-,* not, + *makros,* long, + *is, inos,* fiber] Lacking a long process.

amalgam (ă-măl′găm) [Gr. *malagma,* soft mass] Any alloy containing mercury.

dental a. A dental restorative material made by mixing approx. equal parts of elemental liquid mercury (43% to 54%) and an alloy powder (57% to 46%) composed of silver, tin, copper, and sometimes smaller amounts of zinc, palladium, or indium. It has been used for more than 150 years in dental restorations; only gold has been used longer for this purpose. It is known that a fraction of the mercury in amalgam is absorbed by the body and that people with amalgam restorations in their teeth have higher concentrations of mercury in various tissues (including the blood, urine, kidneys, and brain) than those without amalgam fillings. In 1993 the Public Health Service of the U.S. Department of Health and Human Services published a report acknowledging that scientific data are insufficient to conclude that amalgam fillings have compromised health. Furthermore, there is no evidence that removal of amalgam fillings has a beneficial effect on health. SYN: *silver amalgam; silver filling*.

amalgamate (ă-măl′gă-māt″) The combining of mercury with silver, tin, and copper to produce a dental restorative alloy called amalgam.

amalgamation (ă-măl″gă-mā′shŭn) The process of combining mercury with silver, tin, and copper to produce a dental restorative alloy called amalgam.

amalgamator (ă-măl′gă-mā″tor) A device that provides a mechanical means of amalgamation. This can also be done by hand using a mortar and pestle.

amalgam condenser In dentistry, tool used to compress restorative materials into a cavity preparation.

amanita (ăm″ă-nī′tă, -nē′tă) [Gr. *amanitai,* mushrooms] Any of various mushrooms of the genus *Amanita* (e.g., *A. muscaria* and *A. phalloides*). Most are toxic to the liver. SEE: *Poisons and Poisoning Appendix.*

amastia (ă-măs′tē-ă) [″ + *mastos,* breast] Absence of breast tissue, either as a result of a rare congenital anomaly, or more often, because of bilateral mastectomy.

amastigote (ă-măs′tĭ-gōt″) [*a-* + ″] Leishman-Donovan bodies.

amatoxin (ă″mă-tŏk′sĭn) [ama(nita) + ″] The chemical component of poisonous mushrooms that causes early onset of gastrointestinal upset, followed about 36 hours later by liver failure.

amaurosis (ăm″ŏ-rō′sĭs) [Gr., darkening] Complete loss of vision. **amaurotic** (ăm-ŏ-rŏt′ĭk), *adj.*

albuminuric a. Amaurosis caused by kidney disease.

congenital a. Amaurosis present at birth.

diabetic a. Amaurosis associated with diabetes.

epileptoid a. Sudden blindness following an epileptic seizure and lasting up to 2 weeks.

a. fugax Transient monocular blindness.

lead a. Amaurosis caused by lead poisoning.

a. partialis fugax Sudden transitory blindness with symptoms similar to those of migraine: nausea; vomiting; dizziness; and disturbances of vision.

reflex a. Amaurosis due to reflex action caused by irritation of a remote part.

saburral a. Amaurosis in conjunction with acute gastritis.

toxic a. Amaurosis from optic neuritis caused by toxins that may be endogenous (as in diabetes) or exogenous (as in alcohol or tobacco).

uremic a. Amaurosis caused by acute renal failure.

amaxophobia (ă-măks″ō-fō′bē-ă) [Gr. *amaxa,* a carriage, + *phobos,* fear] Fear of riding in a vehicle.

amazia (ă-mā′zē-ă) [Gr. *a-,* not, + *mazos,* breast] Absence of all breast tissue except the nipple.

amber codon (ăm′bĕr) [Med. L. *ambra*] The nucleic acid sequence: uracil, adenine, guanine (abbreviated UAG). It is one of the three codons that signals the end of transcription of an mRNA molecule.

ambi- [L. *ambi-,* on both sides] Prefix indicating *both, both sides, around,* or *about.*

ambidextrous (ăm″bĭ-dĕk′strŭs) [″ + *dexter,* right] Having the ability to work effectively with either hand.

Ambien (ăm′bē-ĭn) SEE: *zolpidem*.

ambient (ăm′bē-ĕnt) [L. *ambiens,* going around] Surrounding.

ambiguous (ăm-bĭg′ū-ŭs) [L. *ambiguus,* uncertain] To have several meanings

or interpretations. In anatomy, being difficult to classify.

ambilevous (ăm-bĭ-lē′vŭs) [″ + *laevus,* lefthanded] Awkward in the use of either hand. SYN: *ambisinister*.

ambiopia (ăm″bē-ō′pē-ă) [″ + Gr. *ops,* eye] Double vision. SYN: *diplopia*.

ambisexual (ăm″bĭ-sĕks′ū-ăl) [″ + *sexus,* sex] Pert. to both sexes. SEE: *bisexual*.

ambisinister (ăm″bĭ-sĭn′ĭs-tĕr) [″ + *sinister,* left] Ambilevous.

ambitendency (ăm″bĭ-tĕn′dĕn-sē) [″ + *tendere,* to stretch] Ambivalence of the will. SEE: *ambivalence*.

ambivalence (ăm-bĭv′ă-lĕns) [″ + *valentia,* strength] Coexistence of contradictory feelings about an object, person, or idea. **ambivalent** (ăm-bĭv′ă-lĕnt), *adj.*

ambivert (ăm′bĭ-vĕrt) [″ + *vertere,* to turn] An individual whose personality type falls between introversion and extroversion, having tendencies of each.

ambly- SEE: *amblyo-*.

amblyacousia (ăm″blē-ă-koo′sē-ă) [Gr. *amblys,* dull, + *akousis,* hearing] Dullness of hearing.

amblychromasia (ăm″blē-krō-mā′sē-ă) [″ + *chroma,* color] The state in which the cell nucleus stains faintly.

amblychromatic (ăm″blē-krō-măt′ĭk) Staining faintly.

amblyo-, ambly- [Gr. *amblys,* dull] Prefixes meaning *dull* or *dim*.

Amblyomma (ăm′blē-ō-mă) A genus of ticks that includes the Lone Star tick (*A. americanum*) and the Gulf Coast tick (*A. maculatum*). Some ticks from this genus cause tick bite paralysis and are vectors of tularemia and human ehrlichiosis.

amblyopia (ăm″blē-ō′pē-ă) [″ + *ops,* eye] Unilateral or bilateral decrease of best corrected vision in an otherwise healthy eye, commonly due to asymmetric refractive error or strabismus. **amblyopic** (-ō′ĭk), *adj.*

crossed a. Amblyopia of one eye with hemianesthesia of the opposite side of the face. SYN: *amblyopia cruciata*.

a. cruciata Crossed a.

deprivation a. Amblyopia resulting from nonuse of the eye. It is usually secondary to an organic problem such as cataract or ptosis.

a. ex anopsia Amblyopia resulting from disuse. It usually occurs in one eye and is associated with convergent squint or very poor visual acuity.

refractive a. Unequal vision resulting from large refractive errors between the two eyes.

strabismic a. Amblyopia secondary to malalignment of the eyes. In this condition, the brain suppresses the visual image from the deviating eye to prevent double vision. About 50% of childhood amblyopia is strabismic.

toxic a. Amblyopia due to the effect of alcohol, tobacco, lead, drugs, or other toxic substances.

uremic a. Dimness or loss of vision during a uremic attack.

amblyoscope (ăm′blē-ō-skōp″) [″ + ″ + *skopein,* to examine] An instrument for measuring binocular vision; used to stimulate vision in an amblyopic eye.

amboceptor unit The smallest quantity of anti–red blood cell (anti-RBC) antibody needed to hemolyze in an excess of complement.

ambos (ăm′bŏs) [Ger.] Incus or anvil bone of the middle ear.

Ambrosia (ăm-brō′zhă) [Gr., food of the gods, immortality] The scientific name of the genus of weeds commonly known as ragweed. *Ambrosia* species include *Ambrosia artemisiaefolia* and *A. trifida* ("giant ragweed") and are a major source of seasonal pollen and allergies in North America. *Ambrosia* allergens are abbreviated *Amb* by the World Health Organization.

ambulance [L. *ambulare,* to move about] A vehicle for transporting the sick or injured, staffed with appropriately certified or licensed personnel and equipped with out-of-hospital emergency medical care supplies and equipment such as oxygen, defibrillator, splints, bandages, adjunctive airway devices, and patient-carrying devices.

ambulant, ambulatory (ăm′bū-lănt, -lă-tō″rē) Able to walk; not confined to bed.

ambulate (ăm′bū-lāt) To walk or move about freely.

ambulation (ăm-bū-lā′shun) The action of walking or moving about freely.

ambulatory surgery center An outpatient surgical center used for cardioversions, endoscopies, and other relatively minor operations that do not require prolonged confinement in a hospital.

ameba (ă-mē′ba) *pl.* **amebas, amebae** [Gr. *amoibe,* change] A unicellular organism of the genus *Amoeba* in the kingdom Protista, found in water and soil. It constantly changes shape by sending out finger-like processes of cytoplasm (pseudopods), through which it moves about and obtains nourishment. It feeds by surrounding its food with pseudopods, forming a food vacuole in which digestion takes place. Oxygen and carbon dioxide are exchanged by simple diffusion through the cell membrane. Reproduction is by binary fission. Some species of *Entamoeba* are parasitic in humans. **amebic** (ă-mē′bĭk), *adj.*

amebiasis, amoebiasis (am″ă-bī′ă-sĭs) [″ + *-iasis,* state] Infection or colonization with amebas, esp. *Entamoeba histolytica*. Approx. 500 million people in tropical countries are infected. The infection typically begins in the colon but may spread to other organs, such as the liver or, less often, the skin or lungs.

SYN: *amebic dysentery*. SEE: *amebapore; cyst; dysentery*.

ETIOLOGY: Amebiasis is acquired by ingesting contaminated food or drink that contains *E. histolytica* cysts, which gastric acid does not destroy. The cysts enter the intestines, where they release trophozoites, the feeding form of the organism, which may invade the walls of the colon or spread to the liver via the portal vein. Trophozoites divide to form new cysts, which may subsequently be excreted in stool.

DIAGNOSIS: The diagnosis of amebiasis is based on the detection of cysts or trophozoites of *E. histolytica* in stools and the presence of antibodies to the amebas in the blood. Antiamebic antibodies appear by the seventh day of infection. A colonoscopy may be performed to obtain tissue samples to differentiate amebiasis from inflammatory bowel disease. A liver abscess is diagnosed when a patient has right upper quadrant pain, jaundice, and fever; a mass in the liver (found by ultrasonography or computed tomography); and positive serological tests for *E. histolytica*.

SYMPTOMS: Most infected patients have no tissue invasion and thus are asymptomatic. Acute colitis, when it occurs, is marked by bloody diarrhea, abdominal pain, tenesmus, and weakness. The symptoms may be confused with those of ulcerative colitis. The dysentery lasts 3 to 4 weeks. Complications occasionally include toxic megacolon and ulcer perforation. Patients who develop liver abscesses present with severe upper right quadrant pain and fever; massive diarrhea is usually not present.

TREATMENT: Asymptomatic patients are treated with paromomycin (500 mg orally tid for 7 days) or iodoquinol (650 mg orally tid for 20 days). Dysentery and liver abscess are treated with metronidazole (750 mg orally tid for 10 days), followed by iodoquinol (650 mg orally tid for 20 days).

PATIENT CARE: People traveling to developing countries, esp. India and Mexico, should be taught to avoid unboiled water, ice, and fresh fruits and vegetables, all of which may be infected with amebic cysts.

hepatic a. Infection of the liver by *Entamoeba histolytica,* resulting in hepatitis and abscess formation; usually a sequel to amebic dysentery.

amebic carrier state State in which an individual harbors a form of pathogenic ameba but has no clinical signs of the disease.

amebicide, amebacide (ă-mē′bĭ-sīd) [Gr. *amoibe,* change, + L. *caedere,* to kill] An agent that kills amebas.

amebiform (ă-mē′bĭ-form) [″ + L. *forma,* shape] Shaped like an ameba.

amebocyte (ă-mē′bō-sīt″) [″ + *kytos,* cell] A cell showing ameboid movements.

ameboid (ă-mē′boyd) [″ + *eidos,* form, shape] Resembling an ameba.

ameboidism (ă-mē′boyd-ĭzm) **1.** Amebalike movements. **2.** Denoting a condition shown by certain white blood cells.

ameboma (ăm″ē-bō′mă) [″ + *oma,* tumor] A tumor composed of inflammatory tissue caused by amebiasis.

ameburia (ăm″ĕ-bū′rē-ă) [Gr. *amoibe,* change, + *ouron,* urine] The presence of amebas in the urine.

amelanotic (ă″mĕl-ă-nŏt′ĭk) Lacking melanin; unpigmented.

amelia (ă-mē′lē-ă) [Gr. *a-,* not, + *melos,* limb] Congenital absence of one or more limbs. SEE: *phocomelia*.

amelification (ă-mĕl″ĭ-fĭ-kā′shŭn) [O. Fr. *amel,* enamel, + L. *facere,* to make] Formation of dental enamel by ameloblasts.

amelioration (ă-mēl″yō-rā′shŭn) [L. *ad,* to, + *melior,* better] Improvement; moderation of a condition.

ameloblast (ă-mĕl′ō-blăst) [O. Fr. *amel,* enamel, + Gr. *blastos,* germ] A cell from which tooth enamel is formed.

ameloblastoma (ă-mĕl″ō-blăs-tō′mă) [″ + ″ + *oma,* tumor] A tumor of the jaw, esp. the lower one, arising from enamel-forming cells and having low-grade malignancy. It may be partly cystic and partly solid and may become large. SYN: *adamantinoma*.

amelodentinal (ăm″ĕ-lō-dĕn′tēn″ăl) [O. Fr. *amel,* enamel, + L. *dens, dent-,* tooth] Pert. to both enamel and dentin.

amelogenesis (ăm″ĕ-lō-jĕn′ĕ-sĭs) [″ + Gr. *genesis,* generation, birth] The formation of dental enamel by ameloblasts.

a. imperfecta ABBR: AI. One of several hereditary disorders that produce enamel that is inadequately mineralized. The enamel may separate easily from the underlying dentin.

Acidulated phosphate fluoride may further damage enamel in patients with amelogenesis imperfecta.

SYMPTOMS: Symptoms include enamel that may be pitted, local, smooth, rough, or lacking. Enamel may also be of normal thickness but poorly calcified or with a mottled appearance.

amelus (ăm′ĕ-lŭs) [Gr. *a-,* not, + *melos,* limb] An individual with congenitally absent arms and legs.

amenity (ă-mĕn′ĭ-tē) [ME. fm. L. *amoenitas,* pleasantness] Any element of health care delivery that increases patient satisfaction, whether or not it improves clinical outcomes.

amenorrhea (ă-mĕn″ō-rē′ă) [″ + ″ + *rhoia,* flow] Absence of menstruation; lack of menarche; either primary amen-

orrhea, failure to menstruate (i.e., lack of menstruation by age 16) or secondary amenorrhea; absence of menstruation for more than 3 months in women who had previously experienced menstruation and who are not pregnant. Amenorrhea may be classed as physiological when it occurs during pregnancy, early lactation, or after menopause or may be caused by medications, e.g., by some forms of hormonal contraception. Pathological, or secondary, amenorrhea is caused by several conditions.

ETIOLOGY: The primary causes of secondary amenorrhea are related either to an underlying hypothalamic-pituitary-endocrine dysfunction or to congenital or acquired abnormalities of the reproductive tract. Common abnormal diagnoses include metabolic disorders, such as diabetes, polycystic ovarian syndrome (PCOS), malnutrition, or obesity; emotional and stress-related disorders, such as anorexia nervosa; and systemic diseases, such as cancer, lupus, or tuberculosis.

TREATMENT: The underlying cause should be determined and corrected. If hormone deficiencies exist, substitutional therapy is recommended.

PATIENT CARE: The patient is assessed for other symptoms and is encouraged to seek medical attention if absence of menses is not related to pregnancy, menopause, or hormonal therapy.

dietary a. Cessation of menses due to voluntary or involuntary (as in starvation) dietary restriction.

emotional a. Amenorrhea resulting from shock, fright, or hysteria.

exercise a. A form of stress-related failure to menstruate, often seen in women who participate in esp. intensive workouts or exercise programs. SEE: *hypothalamic a.*

hyperprolactinemic a. Amenorrhea due to an excessive secretion of prolactin by the pituitary. SEE: *prolactin.*

hypothalamic a. Absence of menstruation related to interference with release of gonadotropin-releasing hormone (GnRH) or with pituitary release of follicle-stimulating hormone or luteinizing hormone. Hypothalamic dysfunction may be drug-induced (e.g., related to abuse of marijuana or tranquilizers); psychogenic (e.g., related to chronic anxiety); functional (e.g., related to excessive exercise, anorexia, or obesity); or related to chronic medical illness, head injuries, or cancer.

lactational a. Suppression of normal cyclic hormonal changes resulting from breastfeeding. The advent of postpartum ovulation and menses is related to the amount of time the mother breastfeeds. Even after the resumption of menses, 50% of initial cycles are anovulatory. Women who stop nursing within 30 days usually experience the return of menstruation between 6 and 10 weeks after delivery; among those who continue to nurse, ovulation usually occurs between postpartum weeks 17 and 28, with menstruation 30 to 36 weeks after the birth.

pathological a. Inability to menstruate related to organic damage, disease, or dysfunction. Common causes include hypothalamic-pituitary dysfunction; ovarian dysfunction; alteration or obstruction of the genital outflow tract; congenital abnormalities; neoplasms; and injuries. Examples of inability to menstruate related to disease include Ascherman's syndrome, Savage's syndrome, Sheehan's syndrome, and Turner's syndrome.

physiological a. Absence of menstruation related to normal aspects of body function in response to age, such as immaturity in the prepubescent girl and aging in the postmenopausal woman, or to hormonal interruptions in the gonadotropic feedback loop, such as occur during pregnancy and lactation. It is not related to organic disease.

postpartum a. Amenorrhea following childbirth that may last for only a month or two and thus would be within normal limits; or it may be permanent and thus abnormal. *NOTE:* The onset of menstruation after childbirth may be delayed by continued breastfeeding. SEE: *Sheehan's syndrome.*

primary a. Delay of menarche until after age 16 or the absence of secondary sex characteristics after age 14. Typical causes include congenital abnormalities of reproductive structures, such as the müllerian ducts; absence of the uterus and/or vagina; imperforate hymen; or ovarian failure secondary to chromosomal abnormalities, such as occurs in Turner's syndrome.

secondary a. Cessation of menses in women who have menstruated previously but have not had a period in 6 months. Pregnancy is the single most common cause of secondary amenorrhea. It should be excluded before other causes are sought.

stress a. Cessation of menses secondary to extreme mental or physical stress. The condition was first identified in women incarcerated in prisoner-of-war camps and has been observed in some female athletes and others undergoing intensive, rigorous training. It may be related to hormonal changes caused by stress or to the concomitant alteration in the ratio of muscle to fat as training intensity increases. SEE: *pseudocyesis.* **amenorrheic** (-rē′ĭk), *adj.*

amentia (ă-mĕn′shē-ă) [L. *ab,* from, + *mens,* mind] **1.** Congenital mental deficiency; mental retardation. **2.** Mental

disorder characterized by confusion, disorientation, and occasionally stupor. SEE: *dementia*.

nevoid a. Sturge-Weber syndrome; a congenital syndrome marked by port-wine nevi along the trigeminal nerve distribution, angiomas of the leptomeninges and choroid, intracranial calcifications, mental retardation, epileptic seizures, and glaucoma.

phenylpyruvic a. Mental retardation due to phenylketonuria.

American Academy of Nursing An organization formed by the American Nurses' Association. Membership in this honorary association indicates that the person selected has contributed significantly to nursing. A member is titled Fellow of the American Academy of Nursing, abbreviated FAAN.

American Association of Blood Banks AABB.

American Association for Clinical Chemistry ABBR: AACC. A U.S.-based association of clinical laboratory scientists including clinical chemists, microbiologists, pathologists, hematologists, and medical technologists.

American Association for Respiratory Care ABBR: AARC. The professional association for respiratory care practitioners in the U.S.

American Association of Retired Persons ABBR: AARP. The largest voluntary association of older adults (retired or not) in the U.S., with a membership of more than 30 million. The association lobbies on behalf of its members, sponsors research on aging, operates a mail-order pharmaceutical service, and publishes magazines and other literature for older adults.

American Board of Internal Medicine ABBR: ABIM. The professional oversight group in the U.S. that sets the standards for the training and professional certification of internists and subspecialists in internal medicine.

American College of Rheumatology ABBR: ACR. An organization of health care professionals and scientists whose primary goals are to study and treat arthritis and other diseases of bones and joints. The organization also educates the public and the profession about rheumatological diseases and works as an advocate in the formulation of public policy pert. to the care of rheumatic and arthritic patients.

American College of Sports Medicine An organization that promotes and integrates scientific research, education, and practical applications of sports medicine and exercise science to maintain and enhance physical performance, fitness, health, and quality of life.

American College of Toxicology The current name of the American Board of Medical Toxicology.

American Federation for Aging Research ABBR: AFAR. An association of physicians, scientists, and other individuals involved or interested in research on biological aging and associated diseases. Its purpose is to encourage and fund research on aging.

American Geriatrics Society ABBR: AGS. An association of health care professionals interested in the problems of older adults. It encourages the study of geriatrics and stresses the importance of medical research in the field of aging.

American Holistic Medical Association A professional and advocacy group for U.S. physicians, osteopaths, and their students, who conduct research, educate others, or practice holistic medicine.

American Holistic Nursing Association A professional and advocacy group for U.S. nurses and their students who conduct research, educate others, or practice holistic nursing.

American Medical Records Association ABBR: AMRA. A professional organization of individuals trained in health information management, including patient records, particularly in medical care facilities.

American Nurses Association ABBR: ANA. The only full-service professional organization representing the 2.2 million registered nurses in the U.S. It comprises 53 State Nurses Associations. The organization fosters high standards of nursing practice, promotes the economic and general welfare of nurses in the work environment, projects a realistic, positive view of nursing, and lobbies Congress and regulatory agencies about health care issues affecting nurses and the public. SEE: *Code for Nurses*.

American Nurses Association Network ABBR: ANA*NET. A wide-area computer network linking the 53 constituent State Nurses Associations with the national headquarters. It provides databases pert. to workplace and practice issues and various databases and services related to nursing practice. Future plans include subscriber service for all nurses, nursing organizations, and nursing schools.

American Occupational Therapy Association ABBR: AOTA. A national professional organization concerned with establishing and promoting education, research, and standards of practice for occupational therapy.

American Physical Therapy Association ABBR: APTA. The national professional association that establishes and promotes standards of practice for physical therapists.

American Psychiatric Nurses Association ABBR: APNA. An organization that provides leadership to advance psychi-

atric-mental health nursing practice; improve mental health care for individuals, families, groups, and communities; and shape health policy for the delivery of mental health services.

American Red Cross A branch of the international philanthropic organization Red Cross Society. It provides emergency aid during civil disasters such as floods and earthquakes, offers humanitarian services for armed forces personnel and their families, and operates centers for collecting and processing blood and blood products.

American Sign Language ABBR: ASL. A nonverbal method of communicating by deaf or speech-impaired people in which the hands and fingers are used to indicate words and concepts. SYN: *Ameslan*.

American Society of Clinical Oncology ABBR: ASCO. A not-for-profit professional organization of physicians who treat cancer. The group includes medical, radiological, and surgical oncologists.

American Society for Biochemistry and Molecular Biology ABBR: ASBMB. A nonprofit organization composed of scientists and educators who seek to advance the sciences of biochemistry and molecular biology.

American Society of Hematology ABBR: ASH. An organization of professional hematologists that provides care to patients with diseases of the blood and promotes education, research, and training within the field. ASH also serves as an advocacy group for the profession.

American Standard Association rating ABBR: ASA rating. A measure of photographic film speed, created by the American Standard Association.

Americans with Disabilities Act ABBR: ADA. Legislation passed by the U.S. Congress in 1990 to ensure the rights of persons with disabilities and to prohibit discrimination on the basis of disability in employment, public services, transportation, public accommodation, communications, state and local governments, and the U.S. Congress. An individual with a disability is defined by ADA as one who has a physical or mental impairment that limits one or more major activities, a person with a history or record of an impairment, or a person perceived by others to have such an impairment. Also called *Public Law 101-336*.

American Type Culture Collection ABBR: ATCC. A nonprofit scientific organization dedicated to maintaining collections of microorganisms and other biological resources for use in academic, governmental, or industrial laboratories. The ATCC also provides educational and technical support about microbiology and biological resources. Phone: 703–365–2700.

americium (ăm-ĕr-ĭsh′ē-ŭm) SYMB: Am. A metallic radioactive element, atomic number 95. The atomic weight of the longest-lived isotope is 243.

Ameslan (ăm′ă-slăn) American Sign Language.

Ames test (āmz) [Bruce Nathan Ames, U.S. biochemist, b. 1928] A laboratory test of the mutagenicity of chemicals. Special strains of organisms are incubated with the test chemical, and their growth is an indicator of the mutagenicity of the substance. Most chemicals that test positive are carcinogens. Use of the test has helped reduce the use of mammals for tests of mutagenicity.

ametria (ă-mē′trē-ă) [Gr. *a-,* not, + *metra,* uterus] Congenital absence of the uterus.

ametrometer (ăm″ĕ-trŏm′ĕ-tĕr) [*ametropia* + Gr. *metron,* measure] An instrument for measuring the degree of ametropia.

ametropia (ă″mĕ-trō′pē-ă) [Gr. *ametros,* disproportionate, + *ops,* eye] Imperfect refractive powers of the eye in which the principal focus does not lie on the retina, as in hyperopia, myopia, or astigmatism. **ametropic,** *adj.*

AMI *acute myocardial infarction.*

amicrobic (ă″mī-krō′bĭk) [Gr. *a-,* not, + *mikros,* small, + *bios,* life] **1.** Lacking microbes. **2.** Not caused by microbes.

amidase (ăm′ĭ-dās) A deamidizing enzyme; one that catalyzes the hydrolysis of amides.

amide (ăm′īd) Any organic substance that contains the monovalent radical —$CONH_2$. It is usually formed by replacing the hydroxyl (—OH) group of the —COOH by the —NH_2 group.

amido- Prefix indicating the presence of the radical $CONH_2$.

amidulin (ă-mĭd′ū-lĭn) [Fr. *amidon,* starch] Soluble starch.

amimia (ă-mĭm′ē-ă) [Gr. *a-,* not, + *mimos,* mimic] Loss of power to express ideas by signs or gestures.

amnesic a. Amimia in which signs and gestures can be made but their meaning is not remembered.

amine (ă-mēn′, ăm′ĭn) Any one of a group of nitrogen-containing organic compounds that are formed when one or more of the hydrogens of ammonia have been replaced by one or more hydrocarbon radicals.

amino- Prefix denoting the presence of an amino group (NH_2).

amino acid One of a large group of organic compounds marked by the presence of both an amino (NH_2) group and a carboxyl (COOH) group. Amino acids are the building blocks of proteins and the end products of protein digestion.

Approx. 80 amino acids are found in nature, but only 20 are necessary for human metabolism or growth. Of these, some can be produced by the liver; the rest—called essential amino acids—must be supplied by food. These are histidine, isoleucine, leucine, lysine, methionine, cysteine, phenylalanine, tyrosine, threonine, tryptophan, and valine. The nonessential amino acids are alanine, aspartic acid, arginine, citrulline, glutamic acid, glycine, hydroxyglutamic acid, hydroxyproline, norleucine, proline, and serine. Oral preparations of amino acids may be used as dietary supplements.

Arginine, while nonessential for the adult, cannot be formed quickly enough to supply the demand in infants and thus is classed as essential in early life.

Some proteins contain all the essential amino acids and are called complete proteins. Examples are milk, cheese, eggs, and meat. Proteins that do not contain all the essential amino acids are called incomplete proteins. Examples are vegetables and grains. Amino acids pass unchanged through the intestinal wall into the blood, then through the portal vein to the liver and into the general circulation, from which they are absorbed by the tissues according to the specific amino acid needed by that tissue to make its own protein. Amino acids, if not otherwise metabolized, may be converted into urea. SEE: illus.; *deaminization; digestion; protein*.

branched-chain a.a. ABBR: BCAA. The essential amino acids, leucine, isoleucine, and valine. "Branched-chain" refers to their chemical structure. Therapeutically, they are valuable because they bypass the liver and are available for cellular uptake from the circulation. Parenteral administration, alone or mixed with other amino acids, is thought to be beneficial whenever catabolism due to physiological stress occurs. Skeletal muscles use BCAAs for their anticatabolic effects.

conditionally dispensable a.a. An amino acid that becomes essential when a specific clinical condition is present.

essential a.a. An amino acid that is required for growth and development but that cannot be produced by the body and must be obtained from food.

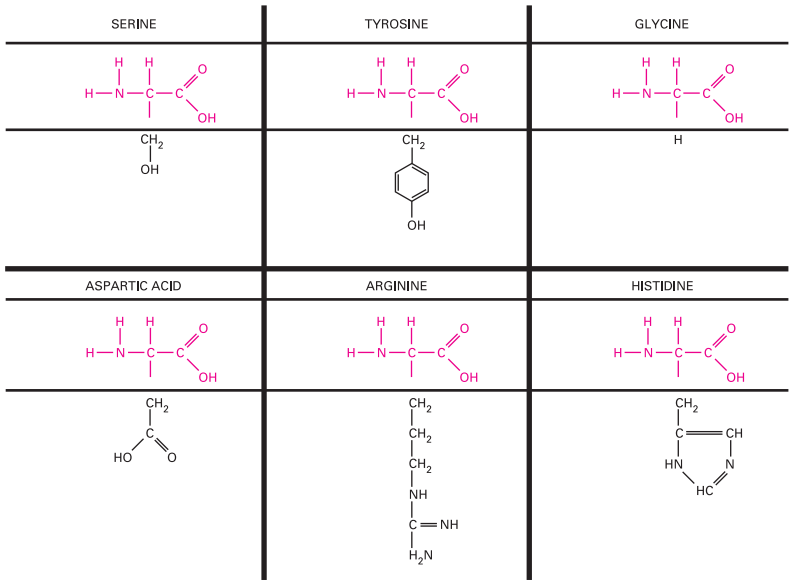
nonessential a.a. An amino acid that can be produced by the body and is not required in the diet.

semi-essential a.a. An amino acid of which an adequate amount must be consumed in the diet to prevent the use of essential amino acids to synthesize it. An example is tyrosine. Without adequate dietary intake, the essential amino acid, phenylalanine, is used to make tyrosine.

aminoacidemia (ă-mē″nō-, ăm″ĭ-nō-ăs″ĭ-dē′mē-ă) [*amino acid* + Gr. *haima,* blood] Excess of amino acids in the blood.

amino acid group The NH_2 group that characterizes the amines.

aminoacidopathies (ăm″ĭ-nō-ăs″ĭ-dŏp′ă-thēz) [″ + Gr. *pathos,* disease, suffering] Various disorders of amino acid metabolism, of which there are nearly



EXAMPLES OF AMINO ACIDS

100, including cystinuria, alkaptonuria, and albinism.

aminoaciduria (ă-mē″nō-, ăm″ĭ-nō-ăs″ĭ-dū′rē-ă) [″ + Gr. *ouron,* urine] Excess amino acids in the urine.

aminobenzene (ă-mē″nō-, ăm″ĭ-nō-bĕn′zēn) The simplest aromatic amine, C_6H_7N; an oily liquid derived from benzene. It is used in the manufacture of medical and industrial dyes. SYN: *phenylamine*.

aminoglutethimide (ăm″ĭ-nō-gloo-tĕth′ĭ-mīd) A chemical that interferes with the production of adrenocortical hormone. It has been used to decrease the hypersecretion of cortisol by adrenal tumors and to treat cancer of the adrenal gland and breast cancer that is sensitive to adrenal hormone stimulation.

aminoglycoside (ă-mē″nō-glī′kă-sīd″, ăm″ĭ-nō-) A class of antibiotics, including gentamicin and tobramycin, some of which are derived from microorganisms while others are produced synthetically.

aminohippuric acid, sodium (ă-mēn″ō-hĭp-ūr′ĭk, ăm″ĭ-nō-) The sodium salt of aminohippuric acid. It is given intravenously to test renal blood flow and the excretory capacity of the renal tubules.

aminolysis (ăm″ĭ-nŏl′ĭ-sĭs) [*amine* + Gr. *lysis,* dissolution] Metabolic transformation of amino-containing compounds by removal of the amino group.

aminophylline (ăm-ĭ-nŏf′ĭ-lĭn, ăm″ĭ-nō-fĭl′ĭn) A mixture of theophylline and ethylenediamine, used esp. to treat patients with reactive airway disease that does not respond to safer medications such as beta-agonist drugs, other bronchodilators, or inhaled or injected corticosteroids. Besides stimulating diaphragmatic movement, it is a bronchodilator and increases heart rate. Common side effects include gastrointestinal upset and tachycardia. SYN: *theophylline ethylenediamine*.

aminopurine (ăm″ĭ-nō-pū′rĭn) An oxidation product of purine; includes adenine and guanine. SEE: *methyl purine; oxypurine*.

aminuria (ăm-ĭ-nū′rē-ă) [*amine* + Gr. *ouron,* urine] Presence of amines in urine.

amiodarone (ă-mē-ō′dă-rōn) An antiarrhythmic drug with a complex pharmacology that is effective in the treatment of both atrial and ventricular rhythm disturbances. Its side effects include pulmonary fibrosis and thyroid dysfunction, among others.

amitosis (ăm″ĭ-tō′sĭs) [Gr. *a-,* not, + *mitos,* a thread, + *osis,* condition] Direct cell division; simple division of the nucleus and cell without the changes in the nucleus that characterize mitosis. **amitotic** (-tŏt′ik), *adj.*

amitriptyline hydrochloride (ăm″ĭ-trĭp′tĭ-lēn) A tricyclic antidepressant administered orally or intramuscularly. Common side effects are drowsiness, sedation, and dry mouth.

AML *acute myelocytic leukemia.*

amlodipine (ăm-lō′dĭ-pēn) A calcium channel blocker and antihypertensive, administered orally to control high blood pressure, angina pectoris, and Prinzmetal's angina.

AMLS *Advanced medical life support.*

amma therapy (ăm′ă) [Chinese, push-pull] A traditional Chinese form of massage composed of pushing and pulling movements (as well as percussion and stretching) applied to a variety of body parts to acupressure points on the body.

ammeter (ăm′mĕ-tĕr) [*ampere* + Gr. *metron,* measure] An instrument, calibrated in amperes, that measures the quantity (number of electrons) in an electric current. SEE: *milliammeter*.

ammoaciduria (ăm″ō-ăs″ĭ-dū′rē-ă) [*ammonia* + *amino acid* + Gr. *ouron,* urine] An abnormal amount of ammonia and amino acids in the urine.

ammonia (ă-mō′nē-ă) [*Ammo,* Egyptian deity near whose temple it was originally obtained] An alkaline gas, NH_3, formed by decomposition of nitrogen-containing substances such as proteins and amino acids. Ammonia is converted into urea in the liver. It is related to many poisonous substances but also to the proteins and many useful chemicals. Dissolved in water, it neutralizes acids and turns litmus paper blue.

blood a. SEE: *ammoniemia*.

ammoniacal (ăm″ō-nī′ă-kăl) Having the characteristics of or pert. to ammonia.

ammoniated (ă-mō′nē-āt′d) Containing ammonia.

ammonia water Ammonium hydroxide.

ammoniemia, ammonemia (ă-mō″nē-ē′mē-ă, ă-mō-nē′mē-ă) [*ammonia* + Gr. *haima,* blood] Excessive ammonia in the blood. Normally, only faint traces of ammonia are found in the blood. Increased amounts are due to a pathological condition such as impaired liver function.

ammonium (ă-mō′nē-ŭm) A radical, NH_4^+, that forms salts analogous to those of alkaline metals.

a. alum Aluminum ammonium sulfate, an astringent. SEE: *alum*.

a. carbonate A compound used in preparing aromatic ammonia spirit; $(NH_4)_2CO_3$.

a. chloride A compound used as an expectorant and as an acidifier in treating acid-base balance; NH_4Cl.

a. hydroxide A solution of ammonia in water, used as a household cleaner and a refrigerant; NH_4OH. SEE: *Poisons and Poisoning Appendix.*

a. thiosulfate The chemical in fixing solution that removes unexposed silver bromide crystals from radiographic film during the development process.

ammoniuria (ă-mō″nē-ū′rē-ă) [″ + Gr. *ouron,* urine] Excessive ammonia in the urine.

amnesia (ăm-nē′zē-ă) [Gr.] Partial or total, permanent or transient loss of memory. The term is often applied to episodes during which patients forget recent events, although they may conduct themselves appropriately, and following which no memory of the period persists. Such episodes often are caused by strokes, seizures, trauma, senility, alcoholism, or intoxication. Often the cause is unknown. **amnestic** (-nĕs′tĭk), *adj.*

anterograde a. Amnesia for events that occurred after a precipitating event or medication.

Short-term memory loss may be induced in people who use benzodiazepine drugs (e.g., triazolam, lorazepam, or flurazepam).

auditory a. Word deafness.

dissociative a. Inability to recall important personal information, usually of a traumatic or stressful nature, that is too extensive to be explained by ordinary forgetfulness. This was formerly called psychogenic amnesia. SYN: *psychogenic amnesia*.

lacunar a. Loss of memory for isolated events.

posttraumatic a. ABBR: PTA. A state of agitation, confusion, and memory loss that the patient with traumatic brain injury (TBI) enters soon after the injury or on awakening from coma. Edema, hemorrhage, contusions, shearing of axons, and metabolic disturbances impair the brain's ability to process information accurately, resulting in unusual behaviors that often are difficult to manage. Trauma patients with normal brain scans may have mild TBI and display some of the symptoms of PTA. Posttraumatic amnesia can last for months but usually resolves within a few weeks. During PTA, the patient moves from a cognitive level of internal confusion to a level of confusion about the environment. SEE: *Rancho Los Amigos Guide to Cognitive Levels*.

SYMPTOMS: Symptoms include restlessness, moaning or crying out, uninhibited behavior (often sexual or angry), hallucinations (often paranoid), lack of continuous memory, story fabrication to replace memory (confabulation), combative behavior, confused language, disorientation, repetition of movements or thoughts (perseveration), and sleep disturbances. Problem solving abilities, reasoning, and carrying out planned motor movements (as in activities of daily living). may also be impaired.

PATIENT CARE: The patient is continually reoriented by keeping a large calendar and clock within sight; each interaction with the patient begins with a repetition of who is in attendance, why the attendant is present, and what activity is planned; and the patient is kept safe and comfortable and is allowed as much freedom of movement as possible.

As the patient becomes confused, he or she may show agitation. Health care professionals can limit agitation and confusion by speaking softly in simple phrases, using gestures as necessary, and allowing time for the patient to respond. Regular visits from family are important; they should be prepared for the patient's appearance and behavior, and their participation in assisting the patient with activities of daily living should be encouraged.

Equipment designed for agitated patients is used; wrist restraints are avoided if possible. Urinary catheters may increase agitation due to physical discomfort (incontinence briefs can be used during the training period of a toileting program). The patient's swallowing function is evaluated as soon as possible to avoid feeding tubes, but swallowing precautions are observed. A list of stimulations that increase or decrease the patient's agitation is posted for the use of everyone in contact with the patient. Distance is maintained during aggressive outbursts. The patient's personal space should not be invaded without warning (e.g., the patient should be told in advance that his or her body parts are to be touched or washed). The patient should be approached from the front, and items should be placed in positions where the patient can best see them.

Health care professionals should watch closely for impulsive movement that can jeopardize the patient. They should warn others that the patient cannot monitor behavior, and that words and actions may occur without awareness or forethought. Independent behavior and self-care are encouraged. The patient is engaged in short activities with a motor component. One behavior at a time should be monitored if the patient displays several that interfere with treatment. To promote abstract reasoning, humor should be used if the patient understands it. A consistent daily schedule provides structure. The patient is taught to use compensatory cues (a watch or written activity schedule) to aid memory. The patient is also assessed for posttraumatic headache, which is treated with prescribed medications.

psychogenic a. Dissociative amnesia.

retrograde a. Amnesia for events that occurred before a specific precipi-

tant (e.g. a drug overdose, surgical operation, stroke, or trauma).

selective a. Inability to remember events that occurred at the same time as other experiences that are recalled.

tactile a. Astereognosis.

transient global a. Short-term memory loss that occurs in otherwise healthy people; remote memory is retained.

traumatic a. Amnesia caused by sudden injury to the brain.

visual a. Inability to remember the appearance of objects or to be cognizant of printed words.

amnesiac, amnesic A person who has amnesia.

amnestic (ăm-nĕs′tĭk) [″ + ″] **1.** A drug that impairs memory. **2.** Pert. to, or caused by, amnesia.

amnestic disorder (ăm-nĕs′tĭk dĭs-ŏr′dĕr) Any of a group of disorders marked by memory disturbance that is due either to the direct physiological effects of a general medical condition or to the persistent effects of a drug, toxin, or similar substance. Affected patients are unable to recall previously learned information or past events. Social or occupational functioning is significantly impaired.

amniocentesis (ăm″nē-ō-sĕn-tē′sĭs) [Gr. *amnion,* lamb, + *kentesis,* puncture] Transabdominal puncture of the amniotic sac under ultasound guidance using a needle and syringe in order to remove amniotic fluid. The sample obtained is studied chemically and cytologically to detect genetic and biochemical disorders and maternal-fetal blood incompatibility and, later in the pregnancy, to determine fetal maturity. The procedure also allows for transfusion of the fetus with platelets or blood and instillation of drugs for treating the fetus.

This procedure is usually performed no earlier than at 14 weeks' gestation. It is important that the analysis be done by experts in chemistry, cytogenetics, and cell culture. Cell cultures may require 30 days, and if the test has to be repeated, the time required may be insufficient to allow corrective action. SEE: illus.

The procedure can cause abortion or trauma to the fetus.

PATIENT CARE: The patient's knowledge about the procedure is evaluated, misconceptions corrected, and information provided as necessary. The patient is informed about sensations that she may experience and signs a consent form. The amniocentesis equipment is assembled; amber-colored test tubes are used (or clear test tubes are covered with aluminum foil) to shield the fluid from light, which could break down bilirubin. Baseline vital signs and fetal heart rate are obtained, and the fundus is palpated for fetal position and fetal and uterine activity for 30 min before, during, and 30 min after the procedure. The patient is assessed for light-headedness, nausea, and diaphoresis as well as for anxiety, pain, and labor onset. During the procedure, emotional support is provided. After the procedure, the patient is positioned on her left side and is instructed to report unusual fetal hyperactivity or hypoactivity, clear or bloody vaginal drainage, uterine contractions, abdominal pain, or fever and chills, any of which is indicative of complications. Rh-negative women with an Rh-positive fetus should be given RhoGam. SEE: *chorionic villus sampling; fetal monitoring in utero.*

amniochorial, amniochorionic (ăm″nē-ō-kō′rē-ăl, -kō-rē-ŏn′ĭk) Relating to both the amnion and chorion.

amniogenesis (ăm″nē-ō-jĕn′ĕ-sĭs) [″ + *genesis,* generation, birth] Formation of the amnion.

amniography (ăm″nē-ŏg′ră-fē) [″ + *graphein,* to write] Radiography of the fetus for abnormalities after injection of a water-soluble contrast medium into the amniotic sac, an obsolete technique replaced by ultrasonography of the fetus.

amnioinfusion (ăm″nē-ō-ĭn-fū′zhŭn) The instillation of fluid, usually normal saline, into the amniotic sac to increase the amniotic fluid volume. This is usually done by using a catheter passed through the cervix into the uterine cavity (or rarely, through the abdominal wall).

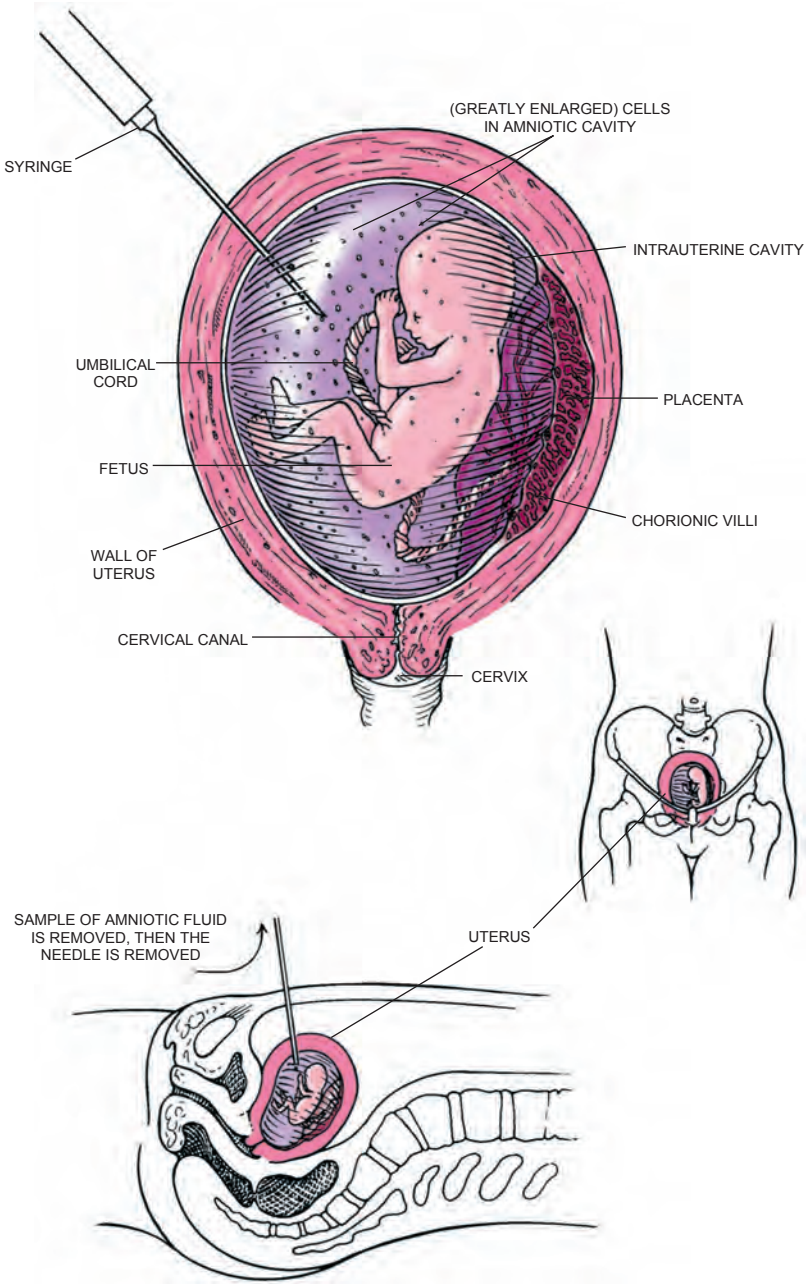
INDICATIONS: The main indication for amnioinfusion is the treatment of repeated severe variable decelerations and fetal bradycardia unresponsive to conventional therapies. It may also be used to reduce the risk of meconium aspiration syndrome in labors where thick meconium fluid is noted or to protect against cord compression due to oligohydramnios. Controversy exists as to whether the benefits of performing this procedure outweigh the risks in the latter two cases. Several other clinical applications are being investigated.

CONTRAINDICATIONS: Contraindications include amnionitis, known fetal or uterine anomaly, placenta previa or abruption, severe fetal distress, polyhydramnios, hypertonic uterus, and multiple gestation.

COMPLICATIONS: Complications are rare and may include uterine overdistention and increased uterine resting tone, amniotic fluid embolus, umbilical cord prolapse, and disruption of a previous uterine scar.

PATIENT CARE: Consult local protocols for amnioinfusion, as these may vary from hospital to hospital.

amnion (ăm′nē-ŏn) [Gr. *amnion,* lamb]



AMNIOCENTESIS

The innermost fetal membrane; a thin, transparent sac that holds the fetus suspended in the liquor amnii, or amniotic fluid. The amnion grows rapidly at the expense of the extraembryonic coelom, and by the end of the third month it fuses with the chorion, forming the amniochorionic sac. Commonly called the bag of waters. SEE: *oligohydramnios*.

amniotic (-ŏt′ĭk), *adj.*

a. nodosum Rounded or oval opaque elevations in the placenta, 1 to 6 mm in diameter, that are seen in the part of the amnion in contact with the chorionic plate and near the insertion of the cord into the placenta. These are usually associated with prolonged oligohydramnios.

amnionitis (ăm″nē-ō-nī′tĭs) [″ + *itis,* inflammation] Chorioamnionitis.

amniorrhea (ăm″nē-ă-rē′ă) [″ + *rhoia,* flow] Escape of the amniotic fluid.

amniorrhexis (ăm″nē-ō-rĕks′ĭs) Rupture of the amnion.

amnioscope (ăm′nē-ŏ-skōp) [Gr. *amnion,* lamb, + *skopein,* to examine] An endoscope that allows the fetus and amniotic fluid to be observed through the intact amniotic membrane.

suction a. Amnioscope that allows suction to be applied so that it is held in place against the fetal scalp. This permits evacuation of the amniotic fluid from the area pressing against the scalp, leaving a clear field for sampling blood from that site.

amnioscopy (ăm″nē-ŏs′kō-pē) Direct visual examination of the fetus through an endoscope inserted into the amniotic cavity.

amniote (ăm′nē-ōt) Any animal or group belonging to the Amniota, a major group of vertebrates, the members of which develop an amnion. Included are reptiles, birds, and mammals.

amniotic band disruption sequence syndrome (ăm″nē-ŏt′ĭk) A collection of fetal malformations associated with multiple fibrous strands of amnion that appear to develop or entangle fetal parts in utero. This leads to structural malformations and deformations and disruption of function. Defects associated with this condition include limb defects and amputations; abnormal dermal ridge patterns; simian creases; clubbed feet; craniofacial defects, including cleft lip and palate; and visceral defects such as gastroschisis and omphalocele. Failure to understand the cause of this condition can lead to misdiagnosis and inappropriate family and genetic counseling. SEE: *multiple malformation syndrome*.

amniotic fluid embolism SEE: *embolism, amniotic fluid*.

amniotitis (ăm-nē-ŏ-tī′tĭs) [Gr. *amnion,* lamb, + *itis,* inflammation] Chorioamnionitis.

amniotome (ăm′nē-ŏ-tōm) [″ + Gr. *tome,* incision] Instrument for puncturing fetal membranes.

amniotomy (ăm″nē-ŏt′ō-mē) Intentionally breaking the amniotic sac with a sterile amniohook, Allis' forceps, or amniotome to stimulate or augment labor. SYN: *artificial rupture of membranes*.

PATIENT CARE: Explanation of the procedure is reinforced. The patient is positioned and draped correctly, and the perineum is thoroughly cleansed. Before the procedure, baseline information is obtained on fetal heart rate (FHR) and uterine contractions, and these are monitored during and after the procedure. Immediately after the amniotomy, the FHR is auscultated or electronic recording of FHR is checked, because the procedure increases the risk of cord compression or prolapse. The color, odor, consistency, and approximate amount of amniotic fluid expelled are assessed and documented. If any question exists as to its origin (amniotic fluid versus urine), the fluid's pH is tested with nitrazine paper, which will turn blue (demonstrating alkalinity) in the presence of amniotic fluid. Bloody show or insufficient amniotic fluid can cause a false test result. The patient is evaluated for onset of labor, which should begin within 12 hr of rupture, and for fever or other signs of infection in prolonged rupture. Oxytocin induction often is used with amniotomy to limit this potential.

amnitis (ăm-nī′tĭs) Inflammation of the amnion. SYN: *amniotitis; amnionitis*.

amobarbital (ăm″ō-bar′bĭ-tăl) An odorless white crystalline powder used as a sedative; $C_{11}H_{18}N_2O_3$.

a. sodium An odorless white granular powder used as a sedative; $C_{11}H_{17}N_2NaO_3$. It is absorbed and inactivated rapidly in the liver.

A-mode (ā′mōd″) A-mode ultrasound.

A-mode (amplitude modulation) display SEE: *ultrasound, A-mode*.

Amoeba (ă-mē′ba) [Gr. *amoibe,* change] A genus of protozoa of the class Sarcodina; commonly called amebas. Some are parasitic in humans but most of the parasitic species have been reclassified in the genus *Entamoeba*.

amoeba (ă-mē′ba) *pl.* **amoebas, amoebae** SEE: *ameba*.

amoebapore (ă-mē′bă-pawr″) A pore-forming protein used by *Entamoeba histolytica* to destroy red blood cell membranes. Amoebepores are localized in cytoplasmic vesicles and appear to destroy erythrocytes intracellularly rather than being released outside the cell to destroy host cells.

amok (ă-mŏk′, ă-mŭk′) [Malay, to engage furiously in battle] A state of murderous frenzy. Also spelled *amuck*.

amoxicillin (ă-mŏks″ĭ-sĭl′ĭn) A semisynthetic penicillin used primarily to treat infections of the sinuses and the middle ear.

Amoxil (ă-mŏk′sĭl) SEE: *amoxicillin*.

AMP *adenosine monophosphate*.

amperage (ăm-pēr′ĭj) The rate of flow of electrons in an electrical circuit.

ampere (ăm′pēr) ABBR: amp. The basic unit of current, defined as the flow of 6.25×10^{-18} electrons per sec (1 cou-

lomb of charge flowing per sec). SEE: *electromotive force*.

amph- SEE: *ampho-*.

amphetamine (ăm-fĕt′ă-mēn, -mĭn) **1.** A colorless liquid that volatilizes slowly at room temperature. It is a central nervous system stimulant. The preparation most commonly used is the sulfate form, marketed as tablets or capsules. SEE: *a. sulfate*. **2.** An adrenergic administered orally to treat narcolepsy. Its therapeutic class is central nervous system stimulant.

a. sulfate A synthetic white crystalline substance that acts as a central nervous system stimulant; $(C_9H_{13}N)_2SO_4$. It is used to treat narcolepsy and certain types of mental depression. Use of amphetamine sulfate to control appetite is contraindicated. High doses are toxic, and prolonged use may cause drug dependence.

amphi- [Gr. *amphi,* on both sides] Prefix indicating *on both sides, on all sides, double.* In chemistry, it denotes certain positions or configurations of molecules.

amphiarthrosis (ăm″fē-ăr-thrō′sĭs) [″ + *arthrosis,* joint] A form of articulation in which the body surfaces are connected by cartilage; mobility is slight but may be exerted in all directions. The articulations of the bodies of the vertebrae are examples.

amphiaster (ăm″fē-ăs′tĕr) [″ + *aster,* star] Double star figure formed during mitosis. SYN: *diaster*.

Amphibia (ăm-fĭb′ē-ă) [Gr. *amphibios,* double life] A class of cold-blooded animals that live on land and in water; includes salamanders, frogs, and toads. They breathe through gills during their aquatic larval stage but through lungs in their adult stage.

amphibious (ăm-fĭb′ē-ŭs) Able to live or function both on land and in water.

amphiblastula (ăm″fĭ-blăs′chă-lă) [Gr. *amphi,* on both sides, + *blastula,* little sprout] A form of blastula in which the blastomeres are of unequal size; seen in sponges.

amphibolism (ăm-fĭb′ŏ-lĭzm) Metabolic pathways that lead to both catabolic and anabolic outcomes, such as beta-oxidation of fatty acids by the liver. The resulting acetyl groups may enter the citric acid cycle for energy production or may be used for the synthesis of other lipids or steroids.

amphichroic, amphichromatic (ăm″fĭ-krō′ĭk, -krō-măt′ĭk) [″ + *chroma,* color] **1.** Turning red litmus paper blue, and blue litmus paper red. **2.** Reacting as both an acid and an alkali. **3.** Capable of exhibiting two colors.

amphicyte (ăm′fĭ-sīt″) SEE: *cell, satellite*.

amphidiarthrosis (ăm″fĭ-dī″ăr-thrō′sĭs) [″ + *diarthrosis,* articulation] An articulation containing an amphiarthrosis and a diarthrosis, such as that of the lower jaw.

amphipathic (ăm″fĭ-păth′ĭk) In chemistry, having polar and nonpolar (water-soluble and water-insoluble) regions within a single molecule. This two-part structure allows these chemicals to link, or to segregate, oils and water. Phospholipids, bile salts, and detergents are examples of amphipathic molecules.

amphitheater (ăm″fĭ-thē′ă-tĕr) [″ + *theatron,* theater] An operating room or auditorium with tiers of seats around it for students and other observers.

amphitrichate, amphitrichous (ăm-fĭt′rĭ-kāt, -kŭs) [″ + *thrichos,* hair] Having a flagellum or flagella at both ends, said of microorganisms.

ampho-, amph- [Gr. *ampho,* both] Prefixes indicating *both, both sides, on all sides,* or *double.*

amphocyte (ăm′fō-sīt) [″ + *kytos,* cell] A cell that stains with either acid or basic stains.

amphodiplopia (ăm-fō-dĭ-plō′pē-ă) [″ + *diploos,* double, + *ops,* vision] Double vision in each eye. SYN: *amphoterodiplopia*.

ampholyte (ăm′fō-līt) [″ + *electrolyte*] A substance that acts as a base or an acid, depending on the pH of the solution into which it is introduced.

amphophil (ăm′fō-fĭl) Amphocyte.

amphoric (ăm-for′ĭk) [L. *amphoricus*] Pert. to a sound such as that caused by blowing across the mouth of a bottle; a resonance; a cavernous sound on percussion of a pulmonary cavity.

amphoricity (ăm″for-ĭs′ĭ-tē) The condition of producing amphoric sounds.

amphoriloquy (ăm″fă-rĭl′ă-kwē) [L. *amphora,* jar, + *loqui,* to speak] The presence of amphoric sounds in speaking.

amphorophony (ăm″fă-rŏf′ă-nē) [Gr. *amphoreus,* jar, + *phone,* voice] Amphoric voice sound.

amphoteric, amphoterous (ăm″fă-tĕr′ĭk, ăm-fŏt′ĕr-ŭs) [Gr. *amphoteros,* both] Being able to react as both an acid and a base.

amphotericin B (ăm″fō-tĕr′ĭ-sĭn) An antibiotic agent obtained from a strain of *Streptomyces nodosus*. It is used to treat deep-seated fungal infections. The drug usually is administered intravenously. Premedication with antipyretics, antihistamines, or corticosteroids is often necessary to decrease febrile hypersensitivity reactions. Patients must be monitored for hypokalemia or renal failure.

amphoteric reaction Reaction in which a compound reacts as both an acid and a base.

amphoterism (ăm″fă-tĕr′ĭzm) State of reacting as both an acid and a base.

amphoterodiplopia (ăm-fŏt″ĕr-ō-dĭ-plō′pē-ă) [″ + *diploos,* double, + *ops,*

vision] Double vision in each eye. SYN: *amphodiplopia*.

ampicillin (ăm″pĭ-sĭl′ĭn) A semisynthetic penicillin. Trade names include Amcill, Omnipen, Polycillin, and Principen.

amplicon (ăm′plĭ-kŏn) An amplified segment of specific DNA or RNA sequences, i.e., one in which multiple copies of the nucleic acid sequences are found. Amplicons can be made during polymerase chain reactions or may occur spontaneously, e.g., in the nucleic acid content of certain organisms or tumors.

amplification (ăm″plĭ-fĭ-kā′shŭn) [L. *amplificatio,* making larger] Enlargement, magnification, expansion.

amplifier (ăm′plĭ-fī″ĕr) **1.** That which enlarges, extends, increases, or makes more powerful. **2.** In electronics, a device for increasing the electric current or signal.

amplitude (ăm′plĭ-tūd) [L. *amplitudo*] **1.** Amount, extent, size, abundance, or fullness. **2.** In physics, the extent of movement, as of a pendulum or sound wave. The maximum displacement of a particle, as that of a string vibrating, as measured from the mean to the extreme. **3.** Magnitude of an action potential. **4.** In radiography, the extent of tube travel during tomography.

amplitude modulation Altering the height (amplitude) of an electrical or acoustical wave. SEE: *A-mode ultrasound*.

ampule (ăm′pūl) [Fr. *ampoule*] A small glass container that can be sealed and its contents sterilized. This is a French invention for containing hypodermic solutions.

ampulla (ăm-pŭl′lă) *pl.* **ampullae** [L., little jar] Saclike dilatation of a canal or duct.

a. ductus deferentis An irregular and nodular dilatation of the vas deferens just before its junction with the secretory duct of the seminal vesicle.

hepatopancreatic a. The entry of the common bile duct and main pancreatic duct into the duodenum. SYN: *papilla of Vater*.

a. of lacrimal duct Slight dilatation of the lacrimal duct medial to the punctum.

a. of rectum Slight dilatation of the rectum proper just before continuing as the anal canal. Also called *infraperitoneal portion of rectum proper*.

a. of semicircular canal In the inner ear, one of the dilations at the ends of the three bony semicircular canals that house an ampulla of a semicircular duct. These dilations house the corresponding dilations (ampullae) of the semicircular ducts inside the canals.

a. of semicircular ducts Dilatation of semicircular ducts near their junction with the utricle. In their walls are the cristae ampullares.

a. of uterine fallopian tube The dilated distal end of a uterine tube terminating in a funnel-like infundibulum.

a. of vas deferens Ampulla ductus deferentis.

a. of Vater [Abraham Vater, Ger. anatomist, 1684–1751] Former name for Vater's papilla.

ampullitis (ăm″pŭl-lī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of any ampulla, esp. of the ductus deferens.

amputation (ăm″pū-tā′shŭn) [L. *amputare,* to cut around] Removal of a limb, body part, or organ, usually as a result of surgery but occasionally trauma. In western countries during peacetime, the most common underlying reason for loss of a limb is peripheral vascular disease, e.g., a blockage to blood flow to the legs caused by cigarette smoking, hypertension, high cholesterol, physical inactivity, or uncontrolled diabetes mellitus. Severe limb trauma can result from work or play injuries and war injuries.

PATIENT CARE: In the immediate postoperative period after amputation, vital signs are assessed, the dressing is observed for bleeding at least every 2 hr, drain patency is checked, and the amount and character of drainage are documented. Limb circulation is ascertained by checking pulses, skin color, and temperature. Postoperative pain is managed by intravenous and later, oral analgesics. To prevent contracture formation, the patient is encouraged to ambulate, change position, rest in proper body alignment with the residual limb in extension rather than in flexion, do range-of-motion exercises (esp. extension), and do muscle-strengthening exercises as soon as these are prescribed postoperatively. Residual limb-conditioning exercises and correct residual limb bandaging (applying graded, moderate pressure to mold the residual limb into a cone shape that allows a good prosthesis fit) assist limb shrinkage. The residual limb may initially have a rigid cast. The patient is instructed in skin hygiene techniques; to massage the limb; to examine the entire limb daily, using a mirror to visualize hidden areas; and to report symptoms such as swelling, redness, excessive drainage, increased pain, and residual limb skin changes (rashes, blisters, or abrasions). The patient is taught how to bandage the residual limb or, when it is dry, to apply a residual limb shrinker (a custom-fitted elastic stocking that fits over the residual limb) and is advised against applying body oil or lotion because it can interfere with proper fit of a prosthesis. The need for constant bandaging until edema subsides and the prosthesis is properly fitted and the use of a residual limb sock

and proper prosthesis care are explained. The patient is encouraged to verbalize anger and frustration; to cope with grief, self-image, and lifestyle adjustments; and to deal with phantom limb sensation (itching, numbness, or pain perceived in the area of amputation even though the limb is no longer there) if this occurs. The patient may require referral to a local support group or for further psychological counseling. SEE: *Nursing Diagnoses Appendix.*

congenital a. Amputation of parts of the fetus in utero, formerly believed to be caused by constricting bands but now believed to be a developmental defect.

double-flap a. Amputation in which two flaps of soft tissue are formed to cover the end of the bone.

a. in contiguity Amputation at a joint.

a. in continuity Amputation at a site other than a joint.

primary a. Amputation performed before inflammation or infection sets in.

secondary a. Amputation performed after onset of infection.

spontaneous a. Nonsurgical separation of an extremity or digit. SEE: *ainhum*.

traumatic a. The sudden amputation of some part of the body due to an accidental injury. SEE: illus.

TRAUMATIC AMPUTATION

Traumatic amputation of the middle finger resulting from a gunshot wound

amputee (ăm″pū-tē′) A person who has had one or more amputations of an extremity; it may be congenital or acquired through trauma or surgery.

Amsler grid (ămz′lĕr) [Marc Amsler, Swiss ophthalmologist, 1891–1968] A grid of lines used in testing for macular degeneration. The grid is observed with each eye separately.

Amsterdam criteria (ăm′stĕr-dăm″) A means of screening family members for evidence of a hereditary predisposition to colorectal cancer. Persons in families with nonpolyposis colorectal cancer are screened for evidence of other malignancies of the skin, endometrium, and stomach. Those who meet the Amsterdam criteria should be closely followed, e.g., with regular colonoscopies.

AMT *American Medical Technologists.*

amuck (ă-mŭk′) Amok.

amusia (ă-mū′sē-ă) [Gr. *amousos,* unmusical] Music deafness; inability to produce or appreciate musical sounds.

motor a. Inability to produce musical sounds.

sensory a. Music deafness; inability to appreciate musical sounds.

vocal a. Inability to sing.

Amussat's operation (ăm′ū-săz) [Jean Z. Amussat, Fr. surgeon, 1796–1856] A surgical procedure formerly used in order to form an artificial anus.

amychophobia (ă-mī″kō-fō′bē-ă) [Gr. *amyche,* scratch, + *phobos,* fear] Morbid fear of being scratched; fear of the claws of any animal.

amyelencephaly (ă-mī″ĕl-ĕn-sĕf′ă′lē) [Gr. *a-,* not, + *myelos,* marrow, + *enkephalos,* brain] Congenital absence of the brain and spinal cord.

amyelia (ă-mī-ē′lē-ă) [″ + *myelos,* marrow] Congenital absence of the spinal cord.

amyelinic (ă-mī″ĕ-lĭn′ĭk) Not possessing a myelin sheath.

amyelus (ă-mī′ĕ-lŭs) An individual with congenital absence of the spinal cord.

amygdala (ă-mĭg′dă-lă) *pl.* **amygdalae** [Gr. *amygdalon,* almond] A spherical collection of nuclei of the central nervous system, lying inside the front tip of the temporal lobe of each cerebral hemisphere. This part of the limbic system receives inputs from the nearby temporal lobe cortex and from the olfactory system. In humans stimulation of the whole amygdaloid complex of nuclei produces fear, confusion, disturbed awareness, and temporary amnesia while reducing emotional excitability and aggressive behavior.

amygdalin (ă-mĭg′dă-lĭn) A bitter-tasting glycoside derived from the pit or other seed parts of several plants, including almonds and apricots. Amygdalin, from which the poisonous hydrocyanic acid can be produced by enzymatic action, is the substance known in the U.S. as laetrile. Amygdalin has no therapeutic or nutritional value. SEE: *laetrile*.

amygdaline (ă-mĭg′dă-līn, -lĭn) [L. *amygdalinus*] **1.** Pert. to a tonsil. **2.** Pert. to or shaped like an almond. SYN: *amygdaloid*.

amygdaloid (ă-mĭg′dă-loyd) [Gr. *amygdale,* almond, + *eidos,* form, shape] Resembling an almond.

amygdalolith (ă-mĭg′dă-lō-lĭth″) [″ + *lithos,* stone] Stone in a distended crypt of a tonsil.

amygdalopathy (ă-mĭg″dă-lŏp′ă-thē) [″ + *pathos,* disease, suffering] Any disease of a tonsil.

amygdalotome (ă-mĭg′dă-lō-tōm″) [″ +

tome, incision] An instrument for excision of a tonsil.

amyl (ăm′ĭl) [Gr. *amylon,* starch] A hypothetical univalent radical, C_5H_{11}, nonexistent in a free state.

a. nitrite $C_5H_{11}NO_2$; a volatile and highly flammable clear liquid used as a vasodilator, esp. in the past for anginal pain.

amyl-, amylo- [Gr. *amylon,* starch] Prefixes meaning *starch* or *polysaccharide*.

amylaceous (ăm″ĭ-lā′shē-ŭs) Starchy.

amylase (ăm′ĭ-lās) [″ + *-asis,* colloid enzyme] A class of enzymes that split or hydrolyze starch. Those found in animals are called alpha-amylases; those in plants, beta-amylases. Serum levels of amylase become elevated in mumps, pancreatitis, and intraperitoneal organ rupture, among other diseases and conditions. SEE: *macroamylase*.

pancreatic a. Amylopsin.

salivary a. Ptyalin.

vegetable a. Diastase.

amylasuria (ăm″ĭ-lās-ū′rē-ă) [″ + *ouron,* urine] Increased amount of amylase in the urine; occurs in pancreatitis.

amylin (ăm′ĭ-lĭn) A peptide made of 37 amino acids that is secreted at the same time as insulin by the beta cells of the pancreas. It is secreted along with insulin in response to a meal. Amylin has been shown to

1. inhibit appetite;
2. slow gastric emptying;
3. decrease the secretion of glucagons; and
4. inhibit the activity of osteoclasts, the cells that resorb bone.

SYN: *islet amyloid polypeptide*.

amylo- SEE: *amyl-*.

amylodextrin (ăm″ĭ-lō-děks′trĭn) [″ + *dexter,* right] Soluble substance produced during the hydrolysis of starch into sugar.

amylodyspepsia (ăm″ĭ-lō-dĭs-pĕp′sē-ă) [″ + *dys,* bad, + *pepsis,* digestion] Inability to digest starchy foods.

amylogenesis (ăm″ĭ-lō-jĕn′ĕ-sĭs) [″ + *genesis,* generation, birth] The production of starch. **amylogenic** (-jĕn′ĭk), *adj.*

amyloid (ăm′ĭ-loyd) [Gr. *amylon,* starch, + *eidos,* form, shape] **1.** Resembling starch; starchlike. **2.** A protein-polysaccharide complex produced and deposited in tissues during some chronic infections, malignancies, and rheumatological disorders. It is a homogeneous substance staining readily with Congo red. It is associated with a variety of chronic diseases, particularly tuberculosis, osteomyelitis, leprosy, Hodgkin's disease, and carcinoma. SEE: *amyloidosis; amyloid degeneration*.

amyloid disease Amyloidosis.

amyloidosis (ăm″ĭ-loy-dō′sĭs) [Gr. *amylon,* starch, + *eidos,* form, shape, + *osis,* condition] A group of incompletely understood metabolic disorders resulting from the insidious deposition of protein-containing fibrils (amyloid) in tissues. The disease may cause localized or widespread organ failure. Amyloid may infiltrate many organs, including the heart and blood vessels, brain and peripheral nerves, kidneys, liver, spleen, skin, endocrine glands, or intestines. As a result, the clinical manifestations of amyloidosis are enormously varied, and the disease may mimic many other conditions ranging from nephrotic syndrome (when kidneys are infiltrated) to dementias (brain involvement) or congestive heart failure (myocardial deposition). Amyloidosis of the tongue may cause this organ to become markedly enlarged, interfering with speech or swallowing. Amyloid infiltration of endocrine organs can cause pituitary, thyroid, or pancreatic dysfunction, among others.

Primary amyloidosis is said to be present when amyloid proteins are deposited throughout the body as a result of their overproduction by malignant clones of immune cells. Multiple myeloma and B-cell lymphoma are the two hematologic malignancies associated with primary amyloidosis.

Secondary amyloidosis is the production and deposition of amyloid in patients with chronic inflammatory conditions (e.g., chronic tuberculosis or rheumatoid arthritis). This category of amyloidosis is also known as *reactive, systemic amyloidosis.*

Localized amyloidosis is present when amyloid infiltrates an isolated organ (e.g., the brain or the pancreas).

DIAGNOSIS: Amyloid in tissues can be demonstrated by its characteristically green appearance when stained with Congo Red stain and viewed under a polarizing microscope.

TREATMENT: Corticosteroids and melphalan or very-high-dose chemotherapy followed by stem-cell transplantation have been used to treat primary amyloidosis. In secondary amyloidosis, controlling the primary inflammatory illness may arrest the progress of the disease.

lichen a. A form of amyloidosis limited to the skin.

localized a. Amyloidosis in which isolated amyloid tumors are formed. SEE: *amyloidosis*.

primary a. Amyloidosis not associated with a chronic disease. SEE: *amyloidosis*.

secondary a. Amyloidosis associated with a chronic disease, such as tuberculosis, syphilis, Hodgkin's disease, or rheumatoid arthritis, and with extensive tissue destruction. The spleen, liver, kidneys, and adrenal cortex are

most frequently involved. SEE: *amyloidosis*.

amylolysis (ăm″ĭl-ŏl′ĭ-sĭs) [″ + *lysis,* dissolution] Hydrolysis of starch into sugar in the process of digestion. **amylolytic** (-ō-lĭt′ĭk), *adj.*

amylopectin (ăm″ĭl-ō-pĕk′tĭn) The insoluble component of starch. The soluble component is amidin.

amylophagia (ăm″ĭ-lō-fā′jē-ă) [″ + *phagein,* to eat] Abnormal craving for starch.

amylopsin (ăm″ĭ-lŏp′sĭn) [″ + *opsis,* appearance] An enzyme in pancreatic juice that hydrolyzes starch into achroodextrin and maltose. SYN: *pancreatic amylase*. SEE: *digestion; duodenum; enzyme*.

amylose (ăm′ĭ-lōs) [Gr. *amylon,* starch] A group of carbohydrates that includes starch, cellulose, and dextrin.

amylosuria (ăm″ĭ-lō-sū′rē-ă) [″ + *ouron,* urine] Amylose in the urine.

amyluria (ăm″ĭl-ū′rē-ă) [″ + Gr. *ouron,* urine] Starch in the urine.

amyoplasia (ā″mī″ō-plā′zhă, zē-ă) The most common form of arthrogryposis multiplex congenita, a disease of bone and muscle in which children are born with multiple contracted joints.

amyosthenia (ă-mī″ŏs-thē′nē-ă) [Gr. *a-,* not, + *mys,* muscle, + *sthenos,* strength] Muscular weakness. SEE: *myasthenia*. **amyosthenic, amyasthenic,** *adj.*

amyotonia (ă-mī″ō-tō′nē-ă) [″ + ″ + *tonos,* tone] Deficiency or lack of muscular tone.

a. congenita SEE: *myotonia congenita*.

amyotrophia, amyotrophy (ă-mī″ō-trō′fē-ă, ă-mī-ŏt′rō-fē) [″ + ″ + *trophe,* nourishment] Muscular atrophy. **amyotrophic** (-trŏf′ĭk), *adj.*

neuralgic a. Plexopathy.

progressive spinal a. Progressive muscular atrophy.

amyxia (ă-mĭks′ē-ă) [″ + *myxa,* mucus] Absence or deficiency of mucus.

amyxorrhea (ă-mĭks-ō-rē′ă) [″ + ″ + *rhoia,* flow] Lack of normal secretion of mucus.

An **1.** Symbol for actinon. **2.** *anisometropia.* **3.** *anode.* **4.** *antigen.*

an- [Gr.] SEE: *a-*.

ANA *American Nurses Association.*

ana- Prefix used in words derived from Greek. It indicates *up, against,* or *back.*

anabolic agent Testosterone, or a steroid hormone resembling testosterone, which stimulates the growth or manufacturing of body tissues. Anabolic steroids have been used, sometimes in large doses, by male and female athletes to improve performance, esp. in events requiring strength. This use has been judged to be illegal by various organizations that supervise sports, including the International Olympic Committee and the U.S. Olympic Committee. They also are used to treat patients with wasting illnesses. SEE: *doping; ergonomic aid*.

Indiscriminate use of anabolic agents is inadvisable because of the undesirable side effects they may produce (e.g., in women, hirsutism, masculinization, and clitoral hypertrophy; in men, aggressiveness, testicular atrophy, and other conditions).

anabolism (ă-năb′ō-lĭzm) [Gr. *anabole,* a building up, + *-ismos,* condition] The building of body tissues; the constructive phase of metabolism by which cells take from the blood nutrients required for repair or growth and convert these inorganic chemicals into cell products or parts of living cells. Anabolism is the opposite of catabolism, the destructive phase of metabolism. **anabolic** (ăn″ă-bŏl′ĭk), *adj.*

anabolite (ă-năb′ō-līt″) Any product of anabolism.

anacamptometer (ăn″ă-kămp-tŏm′ĕ-tĕr) [Gr. *ana,* up, + *kamptos,* bent, + *metron,* to measure] A device for measuring the intensity of deep reflexes.

anacatesthesia (ăn″ă-kăt″ĕs-thē′zē-ă) [″ + ″ + *aisthesis,* sensation] A sensation of hovering.

anacidity (ăn″ă-sĭd′ĭ-tē) [Gr. *an-,* not, + L. *acidum,* acid] Abnormal deficiency of acidity, esp. of hydrochloric acid in the gastric juice.

anaclasis (ă-năk′lă-sĭs) [Gr. *anaklasis,* reflection] **1.** Refraction or reflection of light. **2.** Refraction of light in the interior of the eye. **3.** Reflex action. **4.** Refraction for therapeutic reasons. **5.** Forcible movement of a joint in order to treat fibrous ankylosis.

anaclitic (ăn″ă-klĭt′ĭk) Leaning or depending on. In psychoanalysis, pert. to the dependence of an infant on the mother figure for care.

anacrotic (ăn″ă-krŏt′ĭk) [Gr. *ana,* up, + *krotos,* stroke] **1.** Pert. to the ascending or vertical upstroke of a sphygmogram. **2.** Pert. to a pulse wave tracing with a notched appearance near its summit. **3.** Pert. to two heartbeats traced on the ascending line of a sphygmogram. SEE: *pulse*.

anacrotism (ă-năk′ră-tĭzm) The presence of a double beat or a notched wave on the ascending line of a pulse wave tracing. SYN: *anadicrotism*.

anacusia, anacusis, anakusis (ăn-ă-kū′sē-ă, -sĭs) [Gr. *an-,* not, + *akouein,* to hear] Total deafness.

anadicrotism (ăn-ă-dĭk′rō-tĭzm) [Gr. *ana,* up, + *dikrotos,* double beating] Anacrotism. **anadicrotic** (ăn-ă-dī-krŏt′ĭk), *adj.*

anadidymus (ăn″ă-dĭd′ĭ-mŭs) [″ + *did-*

ymos, twin] A developmental abnormality in which the upper parts of the bodies of twins are fused, but the buttocks and legs are free.

anadipsia (ăn″ă-dĭp′sē-ă) [Gr. *ana,* intensive, + *dipsa,* thirst] Intense thirst.

anadrenalism (ăn″ă-drē′năl-ĭzm) [Gr. *an-,* not, + *adrenal* + Gr. *-ismos,* condition] Failure of the adrenal gland to function.

anadromous (ăn″ă-drō′mŭs) [Gr. *anadromos,* running upward] Descriptive of fish that migrate from seawater to freshwater.

anaerobe (ăn′ĕr-ōb) [Gr. *an-,* not, + *aer,* air, + *bios,* life] A microorganism that can live and reproduce in the absence of oxygen.

facultative a. An organism that can live and reproduce with or without oxygen.

obligate anaerobe An organism that can live and reproduce only in the absence of oxygen.

anaerobic (ăn″ĕr-ō′bĭk) **1.** Taking place in the absence of oxygen. **2.** Concerning an organism that lives and reproduces in the absence of oxygen.

anaerobiosis (ăn″ĕr-ō-bī-ō′sĭs) [″ + *aer,* air, + *bios,* life, + *osis,* condition] **1.** Life in an oxygen-free atmosphere. **2.** Functioning of an organ or tissue in the absence of free oxygen.

Anaerococcus (ăn″ĕr-ō-kŏk′ŭs) [″ + ″ + ″] A genus of anaerobic gram-positive cocci, formerly classified as members of the genus *Peptostreptococcus*. They are butyrate-producing saccharolytic bacteria, sometimes pathogenic to humans.

anagen (ăn′ă-jĕn) [Gr. *ana,* up, + *genesis,* generation, birth] The growth stage of hair development. SEE: *catagen; telogen*.

anakatadidymus (ăn″ă-kăt″ă-dĭd′ĭ-mŭs) [Gr. *ana,* up, + *kala,* down, + *didymos,* twin] A congenital anomaly in which twins are separated above and below but joined at the trunk.

anakré [African, big nose] Goundou.

anal (ā′năl) [L. *analis*] Rel. to the anus or outer rectal opening.

anal dynamic graciloplasty The construction of a "new" anal sphincter to treat severe intractable fecal incontinence. The gracilis muscle tendon is detached at its insertion, mobilized, and reattached by wrapping it around the sphincter. Some patients can be trained to make the sphincter functional. If necessary a sustained contraction can be stimulated by implanted electrodes, closing the anus. Additional procedures have been employed as gluteal muscle mobilization. An implantable artificial sphincter has been employed. The functional result of all of these procedures is variable.

analeptic (ăn″ă-lĕp′tĭk) [Gr. *analeptikos,* restorative] **1.** A drug that stimulates the central nervous system. **2.** A restorative agent.

anal erotism Anal eroticism.

analgesia (ăn-ăl-jē′zē-ă) [Gr. *an-,* not, + *algos,* pain] Absence of a normal sense of pain.

a. algera Spontaneous pain with loss of sensibility in a part.

continuous caudal a. Analgesia to reduce the pain of childbirth. The anesthetic is injected continuously into the epidural space at the sacral hiatus.

epidural a. A pain management technique in which narcotics are infused into the peridural space through an indwelling catheter. Administration may be at a continuous basal infusion rate or self-administered within programmed limits.

USES: Epidurally administered medications diffuse across the dura mater, through the arachnoid and pia mater to provide pain relief, and are indicated to treat pain in the thoracic, lumbar, or sacral areas (e.g., in patients in labor or those undergoing thoracic or abdominal surgeries), and the acute and chronic pain of chronic lumbosacral radiculopathy, cancer pain, phantom limb pain, pancreatic pain, and incisional pain. Epidural anesthesia can be used for surgeries such as cholecystectomy, coronary artery bypass grafting, hysterectomy, arthroplasty, or even abdominal aortic aneurysm repair. Epidural needles and catheters can be inserted at spinal levels C7 to T1 to treat patients with chronic pain symptoms or for surgeries of the arms and shoulders; from T4 to T5 for thoracic surgery; from T8 to T10 for upper abdominal surgery; and at L2 to L3 for lower abdominal surgery and labor and delivery. Drugs used for epidural anesthesia include anesthetics such as lidocaine, analgesics such as morphine, or steroids such as methylprednisolone acetate. Epidural anesthesia is contraindicated in patients receiving systemic anticoagulation and antiplatelet therapy (such as aspirin products or NSAIDs), patients with abnormal or reduced concentrations of clotting factors, patients in hypovolemic shock, with abruptio placentae, and whenever there is evidence of active infection near the epidural catheter insertion site. Relative contraindications include history of headaches or backaches, chronic neurological disorders, and allergy to drugs being used.

PATIENT CARE: The anesthesia provider discusses the procedure, benefits, and risks with the patient and answers any questions. An informed consent form must be signed by the patient. The nurse may reinforce or clarify information as necessary and witness the pa-

tient's signature on the consent form. Before the procedure the patient should have an IV line infusing lactated Ringer's solution or 0.9% sodium chloride solution and should have supplemental oxygen via a nasal cannula or simple face mask. Blood pressure and oxygen saturation should be monitored throughout the procedure. The health care professional helps to position the patient in the preferred sitting position with head down, shoulders slumped, and arms out in front to bend the back forward and open the vertebral spaces. Legs may be extended forward or hang over the side of the bed or table. If this position cannot be tolerated, the patient is positioned laterally with chin tucked against chest and knees in a fetal position. The patient is assisted to remain still and kept as comfortable as possible, with reassurance and emotional support provided. Once inserted, the epidural catheter is labeled according to the facility's policy, making sure it is properly and prominently identified so that only epidural drugs are administered through it, because these are "pure" preservative-free medications, not the same formulation as for usual intravenous preparations of the same drug. The patient should then be assisted to a position of comfort or positioned for the particular surgery being done. Epidural medication administration and catheter removal are determined by state nursing laws; nurses therefore need to be aware of the scope of practice in their state. Epidural medications are usually administered by a certified registered nurse anesthetist or an anesthesiologist and are managed by a staff nurse. Drugs given epidurally must be administered with a sterile technique. The dose is determined by patient response as the desired level of anesthesia is reached.

The patient should be assessed periodically following the facility's policy, and his blood pressure, heart rate, respiratory rate, and oxygen saturation should be documented. The insertion site and dressing also are examined periodically for bleeding or medication leakage. The patient is assessed for pain related to the catheter or infusion and for breakthrough pain related to the surgical procedure or painful condition being managed. Continuous infusion via a pump or patient-controlled analgesia pump also must be checked for correct functioning. Muscle weakness and sensory loss may be indicators of epidural bleeding and nerve impingement, requiring emergency surgical intervention to prevent permanent tissue and nerve damage. Any problems encountered should be called to the attention of the anesthesia provider. Hypotension is commonly experienced. The patient's IV fluid infusion rate may need to be increased dramatically to manage this, or a vasoactive agent may be administered as prescribed. Respiratory distress will occur if the needle or catheter enters the subarachnoid space, causing high spinal anesthesia with increased loss of respiratory muscle function. The anesthesia provider and rapid response team should be notified immediately, and basic life support guidelines followed to maintain airway, breathing, and cardiovascular status.

The catheter may migrate into an epidural vein as a result of the patient's movement, causing epidural medication to enter the bloodstream and produce an overdose. Prevention of this complication involves slow, careful movement and repositioning by a caregiver team, with the patient providing minimal aid. If the dura mater is torn by the large needle or catheter during epidural insertion, a cerebrospinal fluid leak into the epidural space can occur. This complication should be suspected if the patient experiences severe and sudden headache when upright. The patient should be kept supine, the anesthesia provider notified, and the patient treated, which may involve administration of additional IV fluid, caffeine, analgesics, or an epidural blood patch. Infection is a rare complication: it is prevented by maintaining sterile technique throughout the insertion, management, and removal of the epidural device.

Excessive sedation, hypotension, respiratory depression, and coma may occur if patients receiving epidural analgesia are also given other central nervous system depressant drugs.

infiltration a. Anesthesia produced in a local area by injecting an anesthetic agent into the nerve endings.

paretic a. Complete analgesia of an upper limb in conjunction with partial paralysis.

patient-controlled a. ABBR: PCA. A drug administration method that permits the patient to control the rate of drug delivery for the control of pain. It is usually accomplished by the use of an infusion pump.

PATIENT CARE: Any adult or child who is cognitively and physically able to use the equipment and who understands that pressing a button can result in pain relief is an appropriate candidate to administer his own pain medications when they are needed. Safety is secured because opioid and opiate drugs, the analgesics most often administered by PCA, cause sedation before respiratory depression. A sedated pa-

tient will drop rather than push the PCA button, preventing delivery of more drug and respiratory concerns. This safeguard can be circumvented when some unauthorized person, well-meaning though that person may be, presses the PCA button for the patient. Health care professionals should advise patients, family members, and other visitors that the PCA should be used only by the patient. When patients are unable to use PCA appropriately, a family member or nurse may be authorized to manage the system. This primary pain manager must be taught how to assess for pain and its relief, using an appropriate method for the specific patient, and how to recognize and manage the adverse effects of opioids and opiates (nausea, vomiting, constipation, sedation, and respiratory depression). The manager also needs to know how to assess the patient's sedation level using a sedation scale, such as the following: S = sleep, easy to arouse (awaken patient to determine arousability before administering a bolus); 1 = awake and alert (acceptable, may administer bolus); 2 = slightly drowsy, easily aroused (acceptable, may administer bolus); 3 = frequently drowsy, arousable, drifts off during conversation (unacceptable, notify primary nurse or health care provider); 4 = somnolent, minimal, or no response to physical stimulation (unacceptable, notify primary care provider immediately). In some cases, a secondary or even tertiary pain manager should be appointed for those times when the primary manager needs a respite. Nurse-activated dosing is appropriate for patients who have no family members who can manage pain and is useful in the intensive care unit, where the patient is usually critically ill. Health care agencies should develop criteria for selecting appropriate patients for PCA, family-controlled analgesia, and nurse-activated dosing. Patients, family members, and visitors should be taught about proper PCA use. If the patient's pain appears to be unrelieved, the patient or concerned visitor should notify the patient's primary nurse. Patients receiving PCA should be monitored at least every 2 hr for the first 24 hr, assessing vital signs, pain level, and sedation level. If sedation is at a level of 3, the opioid or opiate dose should be decreased and the basal infusion (if in use) stopped; monitoring should be increased until the sedation level is 2 or lower; and the patient's or pain manager's ability to manage the pain safely should be evaluated. If high sedation levels are found to be related to the inability to safely manage the pain using PCA, an alternative approach to pain management should be used.

preemptive a. The administration of anesthetic before surgery in an attempt to abort postoperative pain and disability.

analgesic (ăn″ăl-jē′sĭk) **1.** Relieving pain. **2.** A drug that relieves pain. Analgesic drugs include nonprescription drugs, such as aspirin and other nonsteroidal anti-inflammatory agents and those classified as controlled substances and available only by prescription. SYN: *analgetic*.

analgesic ladder, World Health Organization analgesic ladder A framework for the treatment of pain in patients with cancer and other disorders, in which the patient is treated first with anti-inflammatory analgesics such as ibuprofen or mild, non-narcotic pain relievers such as acetaminophen but subsequently may be treated with narcotic analgesics of increasing strengths if anti-inflammatory drugs or adjunctive therapies do not alleviate pain.

analgetic (ăn″ăl-jĕt′ĭk) Analgesic.

analgia (ăn-ăl′jē-ă) [″ + *algos,* pain] State of being without pain.

anal intraepithelial neoplasia ABBR: AIN. A precancerous change in the squamous cells of the anus that may eventually develop into anorectal cancer.

analog, analogue (ăn′ă-lŏg) [Gr. *analogos,* analogy, proportion] **1.** One of two organs in different species that are similar in function but different in structure. **2.** In chemistry, a compound that is structurally similar to another. **3.** Capable of representing an infinite number of values; the opposite of digital.

estrogen a. A compound that mimics the effects of estrogens.

analogous (ă-năl′ō-gŭs) Similar in function but different in origin or structure.

analogy (ă-năl′ō-jē) [Gr. *analogos,* analogy, proportion] **1.** Likeness or similarity between two things that are otherwise unalike. **2.** In biology, similarity in function but difference in structure or origin; opposite of homology.

anal personality In Freudian psychology, a personality disorder marked by excessive orderliness, stinginess, and obstinacy. If carried to an extreme, these qualities lead to the development of obsessive-compulsive behavior. SYN: *anal characteristic*.

anal stage SEE: under *stage*.

anal wink Contraction of the anal sphincter in response to pinprick stimulus of the perineum. This reflex is evidence of normal motor function at S4–S5. It is also known as the anal or anocutaneous reflex.

analysand (ăn-ăl′ĭ-zănd) A patient undergoing psychoanalysis.

analysis (ă-năl′ĭ-sĭs) *pl.* **analyses** [LL. *ana,* up, back, + Gr. *lysis,* dissolution] **1.** Separation of anything into its con-

stituent parts. **2.** In chemistry, determination of or separation into constituent parts of a substance or compound. Particular analyses are listed under the first word. SEE: e.g., *blood gas analysis; continuous-flow analysis; hair specimen analysis*. **analytic** (ăn-ă-lĭt′ĭk), *adj.*

analysis of occupational performance That part of the occupational therapy evaluation that determines a person's ability to carry out activities of daily living.

It identifies performance skills and patterns, activity demands, barriers, and contextual factors as a precursor to the selection of more specific performance assessment tools.

analysis of variance ABBR: ANOVA. A statistical technique for defining and segregating the causes of variability affecting a set of observations. Use of this technique provides a basis for analyzing effects of various treatments or variables on subjects or patients being investigated. In an experimental design in which several samples or groups are drawn from the same population, estimates of population variance between samples should differ from each other only by chance. ANOVA provides a method for testing the hypothesis that several random and independent samples are from a common, normal population.

analyst (ăn′ă-lĭst) [Fr. *analyse,* analysis] **1.** One who analyzes. **2.** Psychoanalyst.

analyte (ăn′ă-līt″) A substance being analyzed, esp. a chemical. SEE: *measurand*.

analytical reading Thinking carefully, critically, and deeply while reading. The act of making sense of an author's writing by comparing and contrasting it with one's experiences, feelings, thoughts, and previously gained knowledge.

analyze (ăn′ă-līz) [Fr. *analyse,* analysis] To separate into parts; to examine methodically.

analyzer (ăn′ă-lī″zĕr) Any device that determines some characteristic of an object or process, such as its chemical composition, cellularity, mass, oxygen content, or particle content, among other features.

automated a. A chemical instrument designed to perform assays with a minimum of human intervention.

batch a. An automated chemical analyzer in which the instrument system sequentially performs a single test on each of a group of samples.

continuous flow a. An automated chemical analyzer in which the samples and reagents are pumped continuously through a system of modules interconnected by tubing.

discrete a. An automated chemical analyzer in which the instrument performs tests on samples that are kept in "discrete containers," in contrast to a continuous flow analyzer.

parallel a. A discrete automated chemical analyzer that performs a single test on a group of samples at practically the same time (within milliseconds of one another).

pulse height a. ABBR: PHA. A circuit that differentiates between pulses of varying sizes. It is used in scintillation, blood cell, and particle counters.

anamnesis (ăn″ăm-nē′sĭs) [Gr. *anamnesis,* recalling] **1.** The faculty of remembering; recollection. **2.** That which is remembered. **3.** A medical history, as recalled by the patient. SEE: *catamnesis*.

anamnestic (ăn″ăm-nĕs′tĭk) **1.** Pert. to the medical history of a patient. **2.** Assisting the memory.

anamnestic reaction The rapid reappearance in the blood of antibodies to an antigen after re-exposure to the antigen. Anamnesia is a cell-mediated phenomenon caused by the presence of antigen-specific memory B lymphocytes.

anamniotic (ăn″ăm″nē-ŏt′ĭk, -ōt′ik) [Gr. *an-,* not, + *amnion,* amnion] Without an amnion.

anamorph (ăn′a-mŏrf″) [″ + Gr. *morphe,* form] The asexual state of fungi (i.e., the state in which fungi reproduce by mitosis rather than by the union of two cell nuclei and meiosis). Fungi that reproduce anamorphically are said to be "imperfect" fungi. Fungi that reproduce sexually are said to be "perfect." **anamorphic** (ăn′a-mŏr′fĭk), *adj.* SEE: *teleomorph*.

anandamide (ăn-ăn′dă-mīd″) [Sanskrit *ananda,* endlessness, eternal bliss + ″] A neurotransmitter that binds to and activates cannabinoid receptors on brain cells.

ANA*NET *American Nurses Association Network.*

anangioplasia (ăn-ăn″jē-ŏ-plā′sē-ă) [Gr. *an-,* not, + *angeion,* vessel, + *plassein,* to form] Imperfect vascularization of a part. **anangioplastic** (-plăs′tĭk), *adj.*

anaphase (ăn′ă-fāz) [″ + *phainein,* to appear] The third stage in meiosis and mitosis (between metaphase and telophase), in which there is longitudinal bisection of chromosomes (the chromatids), which separate and move toward their respective poles.

anaphoresis (ăn″ă-fō-rē′sĭs) [″ + *phoresis,* bearing] The flow of electrically positive particles toward the anode (positive pole) in electrophoresis.

anaphoria (ăn″ă-for′ē-ă) [Gr. *ana,* up, + *phorein,* to carry] The tendency of the eyeballs to turn upward. SYN: *anatropia*.

anaphrodisia (ăn-ăf″rō-dĭz′ē-ă) [Gr. *an-,* not, + *aphrodisia,* sexual desire] Di-

minished or absent desire for sex. SEE: *aphrodisiac*.

anaphrodisiac (ăn″ăf-rō-dĭz′ē-ăk) **1.** Repressing sexual desire. **2.** An agent that represses sexual desire.

anaphrodite (ăn-ăf′rō-dīt) A person with impaired or absent sexual desire.

anaphylactic Of or pert. to anaphylaxis. SEE: *anaphylactic shock*.

anaphylactic reaction Anaphylaxis.

anaphylactogenic (ăn″ă-fĭ-lăk″tō-jĕn′ĭk) **1.** Producing anaphylaxis. **2.** The agent producing anaphylactic reactions.

anaphylactoid reaction (ăn″ă-fĭ-lăk′toyd) A reaction that resembles anaphylaxis (e.g., characterized by hives, angioedema, laryngeal edema, or shock) but does not involve IgE antibodies or allergens and therefore is without an allergic basis.

ETIOLOGY: This relatively uncommon type of reaction can be caused by exercise; as the result of the release of histamine when body temperature rises; by elevated endorphin levels; by ionic compounds, such as contrast media that contain radiographic iodine or polymyxin B antibiotic; by solutions containing polysaccharides, such as dextran; by morphine, codeine, or meperidine; and by NSAIDs. The term should not be used as a synonym for mild anaphylaxis produced by IgE-allergen reactions.

SYMPTOMS: Anaphylactoid reactions produce hives and itching identical to that caused by anaphylaxis. Very rarely, severe anaphylaxis or anaphylactic shock occurs. Anaphylactoid reactions are treated with the same drugs used to treat anaphylaxis.

anaphylatoxin (ăn″ă-fĭ-lă-tŏk′sĭn) Complement components C3a, C4a, and C5a, which cause degranulation of mast cells and release of chemical mediators that promote the smooth muscle spasm, increased vascular permeability, increased mucus secretion, and attraction of neutrophils and eosinophils associated with systemic anaphylaxis.

anaphylaxis (ăn″ă-fĭ-lăk′sĭs) [″ + *phylaxis,* protection] A type I hypersensitivity (allergic) reaction between an allergenic antigen and immunoglobulin E (IgE) bound to mast cells, which stimulates the sudden release of immunological mediators locally or throughout the body. The first symptoms occur within minutes, and a recurrence may follow hours later (late-stage response). Anaphylaxis can only occur in a person previously sensitized to an allergen because the initial exposure causes immunoglobulin E (IgE) to bind to mast cells. Anaphylaxis may be local or systemic. Local anaphylactic reactions include hay fever, hives, and allergic gastroenteritis. Systemic anaphylaxis produces peripheral vasodilation, bronchospasm, and laryngeal edema and can be life-threatening. **anaphylactic** (-lăk′tĭk), *adj.*

ETIOLOGY: IgE antibodies bound to mast cells throughout the body from previous exposure to an allergenic antigen (sensitization) react when the allergen is introduced a second time. The mast cells release packets containing chemical mediators (degranulators) that attract neutrophils and eosinophils and stimulate urticaria, vasodilation, increased vascular permeability, and smooth muscle spasm, esp. in the bronchi and gastrointestinal tract. Chemical anaphylactic mediators include histamine, proteases, chemotactic factors, leukotrienes, prostaglandin D, and cytokines (e.g., TNF-α and interleukins 1, 3, 4, 5, and 6). The most common agents triggering anaphylaxis are food, drugs, and insect stings. Local anaphylactic reactions are also commonly triggered by pollens (e.g., hay fever, allergic rhinitis, allergic asthma). SEE: *anaphylactic shock*.

SYMPTOMS: Local anaphylaxis causes signs to appear at the site of allergen-antibody interaction such as urticaria (hives), edema, warmth, and erythema. In systemic anaphylaxis the respiratory tract, cardiovascular system, skin, and gastrointestinal system are involved. The primary signs are urticaria, angioedema, flushing, wheezing, dyspnea, increased mucus production, nausea and vomiting, and feelings of generalized anxiety. Systemic anaphylaxis may be mild or severe enough to cause shock when massive vasodilation is present.

TREATMENT: Local anaphylaxis is treated with antihistamines or, occasionally, epinephrine if the reaction is severe. Treatment for systemic anaphylaxis includes protection of the airway and administration of oxygen; antihistamines (e.g., diphenhydramine or cimetidine to block histamine H_1 and H_2 receptors); IV fluids to support blood pressure); and vasopressors (e.g., epinephrine or dopamine) to prevent or treat shock. Epinephrine is also used to treat bronchospasm. Generally, drugs are given intravenously; drugs may also be given intramuscularly (e.g., diphenhydramine) or endotracheally (e.g., epinephrine). In mild cases they may be given subcutaneously. Corticosteroids may be used to prevent recurrence of bronchospasm and increased vascular permeability.

PATIENT CARE: *Prevention:* A history of allergic reactions, particularly to drugs, blood, or contrast media, is obtained. The susceptible patient is observed for reaction during and immediately after administration of any of these agents. The patient is taught to

identify and avoid common allergens and to recognize an allergic reaction.

Patients also should be taught to always wear tags identifying allergies to medications, food, or insect venom to prevent inappropriate treatment during an emergency. Those who have had an anaphylactic reaction and are unable to avoid future exposure to allergens should carry a kit containing a syringe of epinephrine and be taught how to administer it. Patients allergic to the venom of Hymenoptera (bees, wasps, hornets) can receive desensitization.

active a. Anaphylaxis resulting from injection of an antigen.

aggregate a. Anaphylaxis stimulated by the presence of antigen-antibody complexes in the blood, which in turn cleave complement and degranulate (lose granules) mast cells and basophils.

exercise-induced a. Anaphylactoid reaction.

local a. A reaction between IgE antibodies bound to mast cells and an allergen that is limited to a small part of the body. Localized edema and urticaria (hives) result and may vary in intensity. SEE: *anaphylaxis*. SYN: *Arthus reaction*.

passive a. Anaphylaxis induced by injection of serum from a sensitized animal into a normal one. After a few hours the latter becomes sensitized.

passive cutaneous a. ABBR: PCA. A laboratory test of antibody levels in which serum from a sensitized individual is injected into the skin. Intravenous injection of an antigen accompanied by Evan's blue dye at a later time reacts with the antibodies produced in response to the antigen, creating a wheal and blue spot at the site, indicating local anaphylaxis.

systemic a. A reaction between IgE antibodies bound to mast cells and an allergen that causes the sudden release of immunological mediators in the skin, respiratory, cardiovascular, and gastrointestinal systems. The consequences may range from mild (e.g., itching, hives) to life-threatening (airway obstruction and shock).

anaplasia (ăn″ă-plā′zē-ă) [″ + *plassein,* to form] Loss of cellular differentiation and function characteristic of most malignancies. **anaplastic** (ăn″ă-plăs′tĭk), *adj.*

Anaplasma phagocytophilum (ăn″ă-plăz′mă fă″gō-sī-tŏf′ĭ-lŭm) [NL.] A small gram-negative coccus that is an obligate intracellular parasite. It can be transmitted to humans by tick bite and is the cause of human granulocytic ehrlichiosis or human granulocytic anaplasmosis. It was formerly called *Ehrlichia phagocytophila*.

anaplasmosis (ăn″ă-plăz-mō′sĭs) [″ + ″] Infection with species of *Anaplasma*. Although the disease is usually found in cattle, humans may sometimes contract it after a tick bite. Anaplasmosis is characterized by fevers, chills, muscle aches, headache, and interstitial pneumonia.

anapnea (ăn″ăp-nē′ă) [Gr. *anapnein,* to breathe again] **1.** Respiration. **2.** Regaining the breath.

anapneic (ăn″ăp-nē′ĭk) Pert. to anapnea or relieving dyspnea.

anapophysis (ăn″ă-pŏf′ĭ-sĭs) [Gr. *ana,* back, + *apophysis,* offshoot] An accessory spinal process of a vertebra, esp. a thoracic or lumbar vertebra.

Anaprox, Anaprox DS Naproxen.

anapyrexia (ă″nă-pī-rĕk′sē-ă) A decrease in body temperature below normal. SEE: *hypothermia*.

anarthria (ăn-ăr′thrē-ă) [Gr. *an-,* not, + *arthron,* joint] Loss of motor power to speak distinctly. It may result from a neural lesion or a muscular defect. SYN: *aphemia*.

anasarca (ăn″ă-săr′kă) [Gr. *ana,* through, + *sarkos,* flesh] Severe generalized edema. SYN: *dropsy*. **anasarcous** (-săr′kŭs), *adj.*

anaspadias (ăn″ă-spā′dē-ăs) [″ + *spadon,* a rent] Congenital opening of the urethra on the dorsum of the penis; or opening by separation of the labia minora and a fissure of the clitoris. SYN: *epispadias*.

anastole (ăn-ăs′tō-lē) [Gr.] Shrinking away or retraction of the edges of a wound.

anastomose (ă-năs′tō-mōs) [Gr. *anastomosis,* opening] **1.** To communicate directly or by means of connecting two parts together, esp. nerves or blood vessels. **2.** To make such a connection surgically.

anastomosis (ă-năs″tō-mō′sĭs) *pl.* **anastomoses** [Gr., opening] **1.** A natural communication between two vessels; may be direct or by means of connecting channels. **2.** The surgical or pathological connection of two tubular structures. **anastomotic** (-mŏt′ĭk), *adj.*

antiperistaltic a. Anastomosis between two parts of the intestine such that the peristaltic flow in one part is the opposite of that in the other.

arteriovenous a. Anastomosis between an artery and a vein by which the capillary bed is bypassed.

biofragmentable a. ring ABBR: BFR; BAR. An absorbable (i.e., temporary) surgical implant used to join resected loops of bowel. The ring is composed of two parts polyglycolic acid (Dexon) and one part barium sulfate. It dissolves, or "fragments," about 3 weeks after implantation, when major tissue healing has occurred. The ring is easy to use; postoperative complications may

include leakage and, rarely, intestinal stricture.

crucial a. An arterial anastomosis on the back of the thigh, formed by the medial femoral circumflex, inferior gluteal, lateral femoral circumflex, and first perforating arteries.

end-to-end a. Anastomosis in which the ends of two structures are joined.

Galen's a. Anastomosis between the superior and inferior laryngeal nerves.

heterocladic a. Anastomosis between branches of different arteries.

homocladic a. Anastomosis between branches of the same artery.

Hyrtl's a. SEE: *Hyrtl's anastomosis*.

ileal pouch anal a. A reservoir constructed in the terminal ileum of patients who have undergone colectomy, designed to create fecal continence. The pouch may be sewn or stapled together in a J-, W-, or S-shape. The procedure is complicated by inflammation ("pouchitis") in about 50% or by stricture formation in about 10% of patients.

intestinal a. Surgical connection of two portions of the intestines. SYN: *enteroenterostomy*.

isoperistaltic a. Anastomosis between two parts of the intestine such that the peristaltic flow in both parts is in the same direction.

magnetic ring a. A surgical instrument that holds two segments of resected bowel together with progressively increasing magnetic force. It is used to help restore bowel continuity in patients who have had colonic resection. It consists of two cobalt magnetic circles embedded in polyester and applied to the bowel so that the submucosal layers of the resected bowel segments are brought into tight apposition. After 7 to 12 days of intestinal healing, the submucosal and intermediate layers of bowel necrose, and the intestines expel the magnets by peristalsis.

PATIENT CARE: The patient is observed for evidence of dehiscence. Stools are examined for unusual amounts of bleeding and for the passage of the magnetic ring.

portal-systemic a. Any of the venous connections between the portal circulation and the main systemic circulation. These veins provide alternative routes by which venous blood normally shunted through the liver can reach the inferior vena cave and then the heart. Veins in the portal circulation have no valves; thus blood can travel backwards in the portal system if the pressure becomes greater than in the systemic system.

precapillary a. Anastomosis between small arteries just before they become capillaries.

side-to-side a. Anastomosis between two structures lying or positioned beside each other.

terminoterminal a. Anastomosis between the peripheral end of an artery and the central end of the corresponding vein and between the distal end of the artery and the terminal end of the vein.

ureteroureteral a. Anastomosis between two parts of the same ureter.

uterotubal a. Anastomosis between the uterus and fallopian tube.

anatomic, anatomical (ăn″ă-tŏm′ĭk, -tŏm′ĭ-kăl) [Gr. *anatome,* dissection] Rel. to the anatomy of an organism.

anatomist (ă-năt′ō-mĭst) A specialist in the field of anatomy.

anatomy (ă-năt′ō-mē) [Gr. *anatome,* dissection] **1.** The structure of an organism. **2.** The branch of science dealing with the structure of organisms.

applied a. **1.** The detailed study of body structures in order to determine how the body's construction influences its optimal performance characteristics and its susceptibility to disease. **2.** The study of the body's construction as a means of guiding endoscopy, surgery, or other forms of invasive therapy.

comparative a. The comparison of similar body structures as they are found both in embryos and in the adult forms of different animals. Comparative anatomy is used to explore the hypothesis that through natural selection organisms evolved from one another.

descriptive a. Description of individual parts of the body. SYN: *systematic anatomy*.

developmental a. The study of the development of an organism's body structures from the moment of fertilization of the egg, through the embryonic period, the fetal period, birth, childhood, adolescence, and adulthood.

gross a. The study of body structures that are visible with the naked eye, including muscles, tendons, bones, nerves, blood vessels, and viscera. SYN: *macroscopic anatomy*.

macroscopic a. Gross a.

microscopic a. Study of structure by use of a microscope. SYN: *histology*.

morbid a. Pathological a.

pathological a. Study of the structure of abnormal, diseased, or injured tissue. SYN: *morbid anatomy*.

radiological a. Anatomical study based on the radiological appearance of tissues and organs.

sectional a. Study of anatomy from transverse, sagittal, coronal, or oblique sections.

surface a. Study of form and markings of the surface of the body, esp. as they relate to underlying structures.

systematic a. Descriptive a.

topographic a. Study of the structure and form of a portion of the body

with particular emphasis on the relationships of the parts to each other.

anatoxin (ăn″ă-tŏks′ĭn) [Gr. *ana,* backward, + *toxikon,* poison] **1.** Toxoid. **2.** A powerful nerve toxin produced by certain blue-green algae. **anatoxic** (-tŏks′ĭk), *adj.*

anatricrotism (ăn″ă-trĭk′rō-tĭzm) [Gr. *ana,* up, + *tresis,* three, + *krotos,* stroke] The existence of three beats on the ascending line of a sphygmogram. **anatricrotic** (-trī-krŏt′ĭk), *adj.*

anatriptic (ăn″ă-trĭp′tĭk) [″ + *tripsis,* friction] **1.** Pert. to anatripsis. **2.** An agent applied by rubbing.

anatropia (ăn″ă-trō′pē-ă) [″ + *trope,* a turning] Tendency of eyeballs to turn upward. SYN: *anaphoria*.

anaxon(e) (ăn-ăk′sŏn) [Gr. *an-,* not, + *axon,* axis] A nerve cell, as of the retina, having no axon.

ANC *absolute neutrophil count; Army Nurse Corps.*

anchor (ăng′ker) [Gr. *ankyra,* anchor] **1.** Any structure that provides stability for a prosthetic dental appliance such as a crown, bridge, or denture. The anchor may be a metal or ceramic implant; a cast restoration, such as a crown; or a natural tooth. **2.** In emergency medicine, to tie or attach a rope or sling so it will not move and can support the weight of the rescuers, basket, and patient. **3.** A tree, rock, door casing, or other strong stable device that will not move when a rescuer and patient's weight are attached to it. **4.** In cell biology, a scaffold within the cell or its membranes, on which enzymes or other important molecules are suspended.

anchorage (āng′kĕr-ĭj) **1.** Surgical fixation, as of prolapsed abdominal organs. **2.** The fixation of a prosthesis to a fixed support structure or anchor.

anchoring error A mistake made in reasoning in which a judgment is made that depends excessively on preconceptions, bias, or an initial point of reference. For example, a patient on a hospital neurology service is found unconscious. Her caregivers assume (are committed or anchored to the idea) that, like many other patients cared for on the neurology service, she may have suffered a stroke. She is sent for an imaging study of the brain to rule out stroke. Other common and potentially deadly causes of coma, e.g., a dangerously low blood glucose level, are overlooked during her initial assessment.

ancillary (ăn′sĭl-lār″ē) [L. *ancillaris,* handmaid] **1.** Subordinate, secondary. **2.** Auxiliary, supplementary.

anconal, anconeal (ăn′kō-năl, ăn-kō′nē-ăl) Pert. to the elbow.

anconeus (ăn-kō′nē-ŭs) [Gr. *ankon,* elbow] The short extensor muscle of the forearm, located on the back of the elbow. It arises from the back portion of the lateral epicondyle of the humerus, and its fibers insert on the side of the olecranon and upper fourth of the shaft of the ulna. It extends the forearm and stabilizes the ulna in pronation of the wrist.

ancrod (ăn′krod) An enzyme purified from the venom of a Malayan pit viper and used as an anticoagulant.

Ancylostoma (ăn″sĭl-ŏs′tō-mă) [Gr. *ankylos,* crooked, + *stoma,* mouth] A genus of nematodes of the family Ancylostomatidae whose members are intestinal parasites and include the hookworms.

A. braziliense Species of hookworm that infests dogs and cats and may cause cutaneous larva migrans in humans. SEE: *larva migrans, cutaneous*.

A. caninum Species of hookworm that infests dogs and cats and may cause cutaneous larva migrans in humans. SEE: *larva migrans, cutaneous*.

A. duodenale Species of hookworm that commonly infests humans, causing ancylostomiasis; widely found in the Caribbean, South America, Africa, and Asia. SEE: *Necator americanus*.

Ancylostomatidae (ăn″sĭ-lŏs″tō-măt′ĭ-dē) A family of nematodes belonging to the suborder Strongylata. It includes the genera *Ancylostoma* and *Necator,* common hookworms of humans.

ancylostomiasis, ankylostomiasis (ăn″sĭ-lŏs-tō-mī′ă-sĭs, ăng″kĭ-lō-stō-mī′ă-sĭs) [Gr. *ankylos,* crooked, + *stoma,* mouth, + *-iasis,* condition] Hookworm disease or infestation. It often produces iron-deficiency anemia because of the blood lost to the parasite from the gastrointestinal tract. SEE: *hookworm*.

ancyroid (ăn′sĭ-royd) [Gr. *ankyra,* anchor, + *eidos,* form, shape] Shaped like the fluke of an anchor.

Andersen's disease (ăn″dĕr-sŏnz) [Dorothy H. Andersen, U.S. pediatrician, 1901–1963] Glycogen storage disease, type IV. SEE: *glycogen storage disease*.

Andersen syndrome, Andersen-Tawil syndrome (ăn′dĕr-sĕn) An autosomal dominant channelopathy in which abnormal potassium release by cardiac or somatic cells results in a triad of symptoms, including life-threatening ventricular irritability. Affected patients are prone to periodic paralysis, prolonged QT syndrome with cardiac dysrhythmias, and subtle facial findings (e.g., broad forehead with narrow maxilla or chin).

-andr [Gr. *aner, andros,* man (i.e., an adult male)] A combining form used in pharmacology to designate an androgen.

andragogy (ăn′drŭ-gō-jē, gŏj-) [″ + *(ped)agogy*] The study of adult education and how it differs from the education of children.

andro (ăn′drō) The colloquial name for "androstenedione."

andro- [Gr. *andros,* man] Combining form meaning *man, male,* or *masculine.*

androgalactozemia (ăn″drō-găl-ăk″tō-zē′mē-ă) [″ + *gala,* milk, + *zemia,* loss] Oozing of milk from a man's breast.

androgen (ăn′drō-jĕn) [Gr. *andros,* man, + *gennan,* to produce] A substance producing or stimulating the development of male characteristics (masculinization), such as the hormones testosterone and androsterone.

androgenetic (ăn″drō-jĕ-nĕ′tĭk) [Gr. *andros,* man, + *gennan,* to produce] Caused by, or pertaining to, male hormones.

androgenic (ăn″drō-jĕn′ĭk) Causing masculinization. SYN: *andromimetic.*

androgyne (ăn′dră-jīn″) [″ + *gyne,* woman] A female pseudohermaphrodite.

androgynoid (ăn-drŏj′ĭ-noyd) [″ + ″ + *eidos,* form, shape] A person possessing female gonads (ovaries) but secondary sex characteristics of a male (a female pseudohermaphrodite). Term is less commonly used for a person possessing male gonads (testes) but secondary sex characteristics of a female (a male pseudohermaphrodite).

androgynous (ăn-drŏj′ĭ-nŭs) [″ + *gyne,* woman] **1.** Resembling or pert. to an androgynoid. **2.** Without definite sexual characteristics.

androgynus (ăn-drŏj′ĭ-nŭs) A female pseudohermaphrodite. SYN: *androgyne.*

android (ăn′droyd) [″ + *eidos,* form, shape] Resembling a male; manlike.

andrology (ăn-drŏ′lō-gē) [Gr. *andros,* man, + *logos,* word, reason] The scientific study of men's health; particularly, the study of the ways in which male hormones affect men's aging, body structure, psychology, and sexual performance.

andromimetic (ăn″drō-mĭ-mĕt′ĭk) [″ + *mimetikos,* imitative] Androgenic.

andromorphous (ăn″drō-mor′fŭs) [″ + *morphe,* form] Resembling a male in physical structure and appearance.

andropause (ăn′drō-pawz″) [Gr. *andros,* man, + *pausis,* cessation] The psychological and physiological changes caused in aging men by the gradual decrease in male hormones. Andropause is thought by some researchers to be a male equivalent of menopause. Its signs and symptoms include bone loss, loss of lean body mass, depression, fatigue, and diminished sexual interest and decreased sexual potency. It is treated with testosterone.

androphobia (ăn″drō-fō′bē-ă) [″ + *phobos,* fear] Morbid fear of the male sex.

androstane (ăn′drō-stān) A steroid hydrocarbon, $C_{19}H_{32}$, that is the precursor of androgenic hormones.

androstenedione (ăn-drō-stēn″dī′ōn, -stēn′dē-ōn″) A precursor of testosterone used orally by some athletes to enhance performance or increase body bulk.

androsterone (ăn″drō-stĕr′ōn, ăn-drŏs′tĕr-ōn) $C_{19}H_{30}O_2$; an androgenic steroid found in the urine. It is a metabolite of testosterone and androstenedione. It has been synthesized. As one of the androgens (male sex hormones), androsterone contributes to the characteristic changes of growth and development of the genitals and axillary and pubic hair, deepening of the voice, and development of the sweat glands in the male.

-ane In chemistry, a suffix indicating a saturated hydrocarbon.

anechoic (ăn″ĕ-kō′ĭk) Sonolucent.

anejaculation (ăn″ē-jăk″yū-lā′shun) [L. *an-,* not, without, + *ejaculare,* to throw out] The inability to release semen. Spinal cord injury is a frequent cause.

anemia (ă-nē′mē-ă) [Gr. *an-,* not, + *haima,* blood] A reduction in the mass of circulating red blood cells. Generally, people are considered anemic when their hemoglobin levels are more than two standard deviations below the mean level in their hospital's laboratory. The diagnosis of anemia is influenced by variables such as the patient's age (neonates are anemic at levels of hemoglobin that would be considered polycythemic in some adults), gender (men have higher hemoglobin levels than women), pregnancy status (hemodilution in pregnancy lowers measured hemoglobin), residential altitude, and ethnic or racial background.

Symptomatic anemia exists when hemoglobin content is less than that required to meet the oxygen-carrying demands of the body. If anemia develops slowly, however, there may be no functional impairment even though the hemoglobin is less than 7 g/100 ml of blood.

Anemia is not a disease but rather a symptom of other illnesses. Commonly, it is classified on the basis of mean corpuscular volume as microcytic (80), normocytic (80–94), and macrocytic (>94); on the basis of mean corpuscular hemoglobin as hypochromic (27), normochromic (27–32), and hyperchromic (>32); and on the basis of etiological factors.

ETIOLOGY: Anemia may be caused by bleeding (e.g., from the gastrointestinal tract or the uterus); vitamin or mineral deficiencies (esp. vitamin B_{12}, folate, or iron deficiencies); decreases in red blood cell production (e.g., bone marrow suppression in kidney failure or

bone marrow failure in myelodysplastic syndromes); increases in red blood cell destruction (e.g., hemolysis due to sickle cell anemia); or increases in red blood cell sequestration by the spleen (e.g., portal hypertension) or toxic drugs (e.g., cancer chemotherapy).

SYMPTOMS: Anemic patients may experience weakness, fatigue, lightheadedness, breathlessness, palpitations, angina pectoris, and headache. Signs of anemia may include a rapid pulse or rapid breathing if blood loss occurs rapidly. Chronically anemic persons may have pale skin, mucous membranes, or nailbeds; fissures at the corners of the mouth; among other signs.

TREATMENT: Treatment of anemia must be specific for the cause. The prognosis for recovery from anemia is excellent if the underlying cause is treatable.

Anemia due to excessive blood loss: For acute blood loss, immediate measures should be taken to stop the bleeding, to restore blood volume by transfusion, and to combat shock. Chronic blood loss usually produces iron-deficiency anemia.

Anemia due to excessive blood cell destruction: The specific hemolytic disorder should be treated.

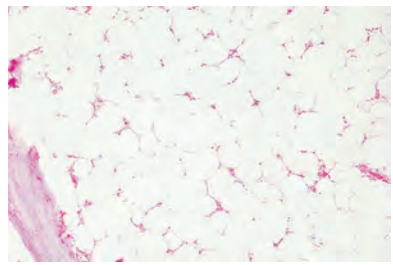
Anemia due to decreased blood cell formation: For deficiency states, replacement therapy is used to combat the specific deficiency (e.g., iron, vitamin B_{12}, folic acid, ascorbic acid). For bone marrow disorders, if anemia is due to a toxic state, removal of the toxic agent may result in spontaneous recovery.

anemia due to renal failure, cancer chemotherapy, HIV, and other chronic diseases: Erythropoietin injections are helpful.

PATIENT CARE: The patient is evaluated for signs and symptoms, and the results of laboratory studies are reviewed for evidence of inadequate erythropoiesis or premature erythrocyte destruction. Prescribed diagnostic studies are scheduled and carried out. *Rest*: The patient is evaluated for fatigue; care and activities are planned and regular rest periods are scheduled. *Mouth care*: The patient's mouth is inspected daily for glossitis, mouth lesions, or ulcers. A sponge stick is recommended for oral care, and alkaline mouthwashes are suggested if mouth ulcers are present. A dental consultation may be required. *Diet*: The patient is encouraged to eat small portions at frequent intervals. Mouth care is provided before meals. The nurse or a nutritionist provides counseling based on type of anemia. *Medications*: Health care professionals teach the patient about medication actions, desired effects, adverse reactions, and correct dosing and administration. *Patient education*: The cause of the anemia and the rationale for prescribed treatment are explained to the patient and family. Teaching should cover the prescribed rest and activity regimen, diet, prevention of infection including the need for frequent temperature checks, and the continuing need for periodic blood testing and medical evaluation. SEE: *Nursing Diagnoses Appendix.*

achlorhydric a. A hypochromic, microcytic anemia associated with a lack of free hydrochloric acid in gastric juice.

aplastic a. Anemia caused by deficient red cell production due to bone marrow disorders. SEE: illus.; *marrow* for illus. of normal marrow.



APLASTIC ANEMIA

Normal blood-forming cells are absent (×200)

ETIOLOGY: Idiopathic cases range from 40% to 70% and are most common in adolescents and young adults. Exposure to chemical and antineoplastic agents and ionizing radiation can result in aplastic anemia and chronic renal failure; and infiltration of the bone marrow by cells that are not normally present there can interfere with normal blood production. Examples are metastatic carcinoma and miliary tuberculosis. A congenital form has been described.

TREATMENT: Most patients can be treated effectively with bone marrow transplantation or immunosuppressive drugs.

PATIENT CARE: The patient and family are educated about the cause and treatment of the illness. Measures to prevent infection are explained, and the importance of adequate rest is emphasized. In the acute phase, prescribed treatment is carried out, the side effects of drugs and transfusions are explained, and a restful environment is ensured. If the patient's platelet count is low (less than 20,000/cu mm), the following steps are taken to prevent hemorrhage: avoiding parenteral injections, suggesting the use of an electric razor, humidifying oxygen to prevent dry mucous membranes, and promoting regular bowel movements with stool softeners and di-

etary measures. Pressure is applied to all venipuncture sites until bleeding has stopped, and bleeding is detected early by checking for occult blood in urine and stools and by assessing the skin for petechiae and ecchymoses. Standard precautions and careful handwashing (and protective isolation if necessary) are used, a diet high in vitamins and protein is provided, and meticulous oral and perianal care are provided. The patient is assessed for life-threatening hemorrhage, infection, adverse effects of drug therapy, or blood transfusion reactions. Throat, urine, and blood cultures are done regularly. SEE: *protective isolation*.

autoimmune hemolytic a. ABBR: AIHA. Anemia caused by antibodies produced by the patient's own immune system that destroy red blood cells. They are classified by the thermal properties of the antibody involved; the "warm" form is most common and may be associated with viral infections. Drug-induced hemolytic anemias are clinically indistinguishable from AIHA; for that reason, they are classified with this disorder.

congenital hemolytic a. A group of inherited chronic diseases marked by disintegration of red blood cells, jaundice, splenomegaly, and gallstones. Hereditary spherocytosis is the most common of these hemolytic diseases. Other congenital hemolytic anemias include congenital elliptocytosis, hereditary stomatocytosis, and hemolytic anemias due to enzymatic defects of the red cell, of which G-6-PD and pyruvate kinase deficiency are the most important. SYN: *hemolytic icterus; hemolytic jaundice*. SEE: *glucose-6-phosphate dehydrogenase*.

congenital hypoplastic a. A rare but severe normochromic macrocytic anemia of neonates and infants in which vitamin B_{12} and folate levels are normal or elevated and reticulocytosis is inadequately low. SYN: *Diamond-Blackfan anemia.*

TREATMENT: The anemia may respond to corticosteroid therapy or may require repeated transfusions or transplantation.

Cooley's a. Thalassemia major.

deficiency a. Condition resulting from lack of an essential ingredient, such as iron or vitamins, in the diet or the inability of the intestine to absorb them. SYN: *nutritional anemia*.

Diamond-Blackfan a. Congenital hypoplastic anemia.

erythroblastic a. Anemia resulting from inheritance of a recessive trait responsible for interference with hemoglobin synthesis. SYN: *thalassemia major*.

folic acid deficiency a. Anemia resulting from a deficiency of folic acid. It is a cause of red blood cell enlargement (megaloblastic anemia) and is common in patients who are experiencing nutritional deficiencies (e.g., alcoholics, patients with malabsorption) and during hemolysis or pregnancy. Folate deficiency during pregnancy increases the risk of thrombocytopenia, hemorrhage, infection, and fetal neural tube defects.

PATIENT CARE: Fluid and electrolyte balance is monitored, particularly in the patient with severe diarrhea. The patient can obtain daily folic acid requirements by including an item from each food group in every meal; a list of foods rich in folic acid (green leafy vegetables, asparagus, broccoli, liver, organ meats, milk, eggs, yeast, wheat germ, kidney beans, beef, potatoes, dried peas and beans, whole-grain cereals, nuts, bananas, cantaloupe, lemons, and strawberries) is provided. The rationale for replacement therapy is explained, and the patient is advised not to stop treatment until test results return to normal. Periods of rest and correct oral hygiene are encouraged.

hemolytic a. Anemia as the result of the destruction of red blood cells (RBCs) by drugs, artificial heart valves, toxins, snake venoms, infections, and antibodies. Drugs may either destroy the RBC membrane directly or may stimulate production of autoantibodies that lyse (kill) the RBCs. Children may develop hemolytic anemia in response to destruction of RBCs by viral and bacterial organisms. Artificial valves cause physical damage to the RBC membrane during the circulation of blood through the heart. SEE: *hemolytic uremic syndrome*.

hyperchromic a. Anemia in which mean corpuscular hemoglobin concentration (MCHC) is greater than normal. The red blood cells are darker staining than normal.

hypochromic a. Anemia in which hemoglobin is deficient and mean corpuscular hemoglobin concentration is less than normal.

hypoplastic a. Term that has been used to describe aplastic anemia. If anemia due to failure of formation of red blood cells is meant, pure red blood cell aplasia is the term of choice.

iron-deficiency a. Anemia resulting from a greater demand on stored iron than can be supplied. The red blood cell count may sometimes be normal, but there will be insufficient hemoglobin. Erythrocytes will be pale (hypochromia) and have abnormal shapes (poikilocytosis). This condition is present in about 8% of men and 14% of women aged 3 to 74 years in U.S.

ETIOLOGY: The condition is caused by inadequate iron intake, malabsorption of iron, blood loss, pregnancy and

lactation, intravascular hemolysis, or a combination of these factors.

SYMPTOMS: Chronically anemic patients often complain of fatigue and dyspnea on exertion. Iron deficiency resulting from rapid bleeding may produce palpitations, orthostatic dizziness, or syncope.

DIAGNOSIS: Laboratory studies reveal decreased iron levels in the blood, with elevated iron-binding capacity, and a diminished transferrin saturation. Ferritin levels are low. The bone marrow does not show stainable iron.

ADDITIONAL DIAGNOSTIC STUDIES: Adult nonmenstruating patients with iron-deficiency anemia should be evaluated to rule out a source of bleeding in the gastrointestinal tract.

TREATMENT: Dietary iron intake is supplemented with oral ferrous sulfate or ferrous gluconate (with vitamin C to increase iron absorption). When underlying lesions are found in the gastrointestinal tract (e.g. ulcers, esophagitis, cancer of the colon), they are treated with medications, endoscopy, or surgery.

⚠ Parents should be warned to secure iron preparations from children, as three to four tablets could result in serious poisoning.

macrocytic a. Anemia marked by abnormally large erythrocytes.

Mediterranean a. SEE: *thalassemia*.

megaloblastic a. Anemia in which megaloblasts are found in the blood. SYN: *Zuelzer-Ogden syndrome*.

microcytic a. Anemia marked by abnormally small red blood cells.

milk a. In a young child, iron-deficiency anemia caused by consistent consumption of milk in amounts greater than 1 qt daily. This excessive milk intake displaces iron-rich foods in the diet.

a. of the newborn Hemoglobin levels less than 14 g/dl in term newborns. Common causes include peripartum bleeding, hemolytic disease of the newborn, twin-to-twin transfusion (15% to 30% of all monochorionic twins with abnormalities of placental blood vessels), and impaired red cell manufacture caused by glucose-6-phosphate dehydrogenase deficiency.

normochromic a. Anemia in which the red blood cells contain the normal amount of hemoglobin.

normocytic a. Anemia in which the size and hemoglobin content of red blood cells remain normal.

nutritional a. Deficiency a.

pernicious a. A chronic, macrocytic anemia marked by achlorhydria. It occurs most often in 40- to 80-year-old northern Europeans with fair skin but has been reported in other races and ethnic groups. It is rare in blacks and Asians.

ETIOLOGY: Pernicious anemia is an autoimmune disease. The parietal cells of the stomach lining fail to secrete enough intrinsic factor to ensure intestinal absorption of vitamin B_{12}, the extrinsic factor. This is due to atrophy of the glandular mucosa of the fundus of the stomach and is associated with absence of hydrochloric acid.

SYMPTOMS: Symptoms include weakness, sore tongue, paresthesias (tingling and numbness) of extremities, and gastrointestinal symptoms such as diarrhea, nausea, vomiting, and pain; in severe anemia, there may be signs of cardiac failure.

TREATMENT: Vitamin B_{12} is given parenterally or, in patients who respond, intranasally or orally.

physiological a. of pregnancy Pseudoanemia of pregnancy due to an increase of plasma that exceeds the production of red blood cells. SEE: *pseudoanemia of pregnancy*.

a. of prematurity Anemia that gradually develops in the first months of life in an infant born before the 37th week of gestation. It is caused by insufficient production of erythropoietin. Treatment may include red blood cell transfusions (to increase iron stores) and/or recombinant human erythropoietin.

pure red cell aplasia a. Anemia due to decreased production of red cells.

runner's a. Mild hemolysis with hematuria, hemoglobinemia, and hemoglobinuria produced by strenuous exercise, including running. The anemia may be caused by: 1) the destruction of red blood cells during repeated striking of the ground by the runner's feet; 2) plasma volume expansion; and 3) intestinal blood loss. Blood may be lost in the feces, presumably due to transient ischemia of the gut during vigorous exercise.

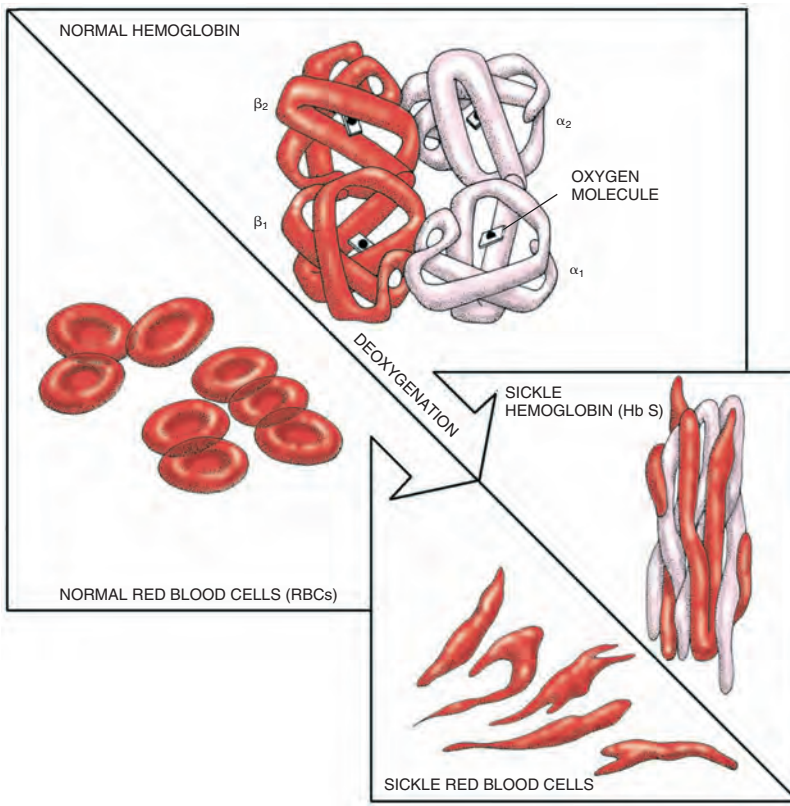
septic a. Anemia due to severe infection.

sickle cell a. An inherited disorder transmitted as an autosomal recessive trait that causes an abnormality of the globin genes in hemoglobin. The frequency of the genetic defect responsible for this chronic anemia disorder is highest among African-American, native African, and Mediterranean populations. The disease also affects people from the Caribbean and Central and South America. Approximately 75,000 people in the U.S. have sickle cell anemia. The illness affects one of every 500 African-American babies. Roughly 8% of the African-American population carries the sickle cell trait. Sickle cell anemia during pregnancy increases the risk of crisis, pre-eclampsia, urinary tract infec-

tion, congestive heart failure, and pulmonary infarction. Use of supplemental oxygen during labor is recommended. SEE: *hemoglobin S disease;* illus.*; Nursing Diagnoses Appendix.*

ETIOLOGY: When both parental genes carry the same defect, the person is homozygous for hemoglobin S, i.e., HbSS, and manifests the disorder. When exposed to a decrease in oxygen, hemoglobin S becomes viscous. This causes the red cells to become crescent-shaped (sickled), rigid, sticky, and fragile, increasing red-cell destruction (hemolysis). When sickled red blood cells clump together, circulation through the capillaries is impeded, causing obstruction, tissue hypoxia, and further sickling. In infants younger than 5 months old, high levels of fetal hemoglobin inhibit the reaction of the hemoglobin S molecule to decreased oxygen.

SYMPTOMS: The shortened life span of the abnormal red cells (10–20 days) results in a chronic anemia; pallor, weakness, and fatigue are common. Jaundice may result from hemolysis of red cells. Crisis may occur as a result of sickling, thrombi formation, vascular occlusion, tissue hypoxia, and infarction. People with sickle cell anemia are at increased risk of bacterial infections relative to the general population. Specific risks include osteomyelitis, meningitis, pneumonia, and sepsis from agents such as *Streptococcus pneumoniae, Mycoplasma,* and *Chlamydia*. Sickle cell patients with fever, cough, and/or regional pain should begin antibiotic therapy immediately after cultures for blood and urine and diagnostic x-rays are obtained. Sickle cell anemia also increases the risk for ischemic organ and tissue damage. Intensely painful episodes (called "crises") affecting the extremities, back, chest, and abdomen can last from hours to weeks and are the most frequent cause of hospitalization. Crises can be triggered by hypoxemia, infection, dehydration, and worsening anemia. Sickle cell crisis should be suspected in the sickle cell pa-



SICKLE CELL ANEMIA

Structure of hemoglobin A and hemoglobin S and their effect on erythrocytes

tient with pale lips, tongue, palms, or nail beds; lethargy; listlessness; difficulty awakening; irritability; severe pain; or temperature over 104°F (37.8°C) lasting at least 2 days. Life-threatening complications may arise from damage to specific internal organs, including splenic infarcts, myocardial infarction, acute chest syndrome, liver injury, aplastic anemia, and multiorgan dysfunction syndrome. SEE: *sickle cell crisis*.

TREATMENT: Supportive therapy includes supplemental iron and blood transfusion. Administration of hydroxyurea stimulates the production of hemoglobin F and decreases the need for blood transfusions and painful crises. Prophylactic daily doses of penicillin have demonstrated effectiveness in reducing the incidence of acute bacterial infections in children. Life-threatening complications require aggressive transfusion therapy or exchange transfusion, hydration, oxygen therapy, and the administration of high doses of pain relievers. Bone marrow transplantation, when a matched donor is available, can cure sickle cell anemia.

PATIENT CARE: During a crisis, patients are often admitted to the hospital to treat pain and stop the sickling process. Adequate pain control is vital. Morphine is the opioid of choice to manage pain because it has flexible dosing forms, proven effectiveness, and predictable side effects. It should be administered using patient-controlled analgesia, continuous low-dose intravenous infusions, or sustained release pain relievers to maintain consistent blood levels. Supplemental short-acting analgesics may be needed for breakthrough pain. Side effects of narcotic pain relievers should be treated with concurrent administration of antihistamines, antiemetics, stool softeners, or laxatives. When administering pain relievers, care providers should assess pain using a visual analog scale to evaluate the effectiveness of the treatment. Other standard pain reduction techniques, such as keeping patients warm, applying warm compresses to painful areas, and keeping patients properly positioned, relaxed, or distracted may be helpful. Advise patients and families never to use cold applications for pain relief, as this treatment only aggravates sickling. If transfusions are required, packed RBCs (leukocyte-depleted and matched for minor antigens) are administered, and the patient is monitored for transfusion reactions. Scheduled deep breathing exercises or incentive spirometry helps to prevent atelectasis, pneumonia, and acute chest syndrome. During remission, the patient can prevent some exacerbations with regular medical checkups; the use of medications such as hydroxyurea; consideration of bone marrow transplantation; and avoiding hypoxia (e.g., in aircraft or high altitudes), excessive exercise, dehydration, vasoconstricting drugs, and exposure to severe cold. The child must avoid restrictive clothing, strenuous exercise and body-contact sports but can still enjoy most activities. Additional fluid should be consumed in hot weather to help in preventing dehydration. Patients and families should be advised to seek care at the onset of fevers or symptoms suggestive of infectious diseases. Annual influenza vaccination and periodic pneumococcal vaccination may prevent these common infectious diseases. Afefected families should be referred for genetic counseling regarding risks to future children and for psychological counseling related to feelings of guilt. Screening of asymptomatic family members may determine whether some family members are heterozygous carriers of the sickling gene. Families affected by sickle cell anemia may gain considerable support in their communities or from national associations such as the American Sickle Cell Anemia Association, www.ascaa.org.

splenic a. Enlargement of the spleen due to portal or splenic hypertension with accompanying anemia, leukopenia, thrombocytopenia, and gastric hemorrhage. SEE: *Banti's syndrome; congestive splenomegaly*.

transfusion-dependent a. Anemia for which the only effective therapy is repeated blood transfusions.

anemic (ă-nē′mĭk) Pert. to anemia; deficient in red blood cells, in hemoglobin, or in volume of blood.

anemometer (ă-nĕm″ŏm′ĕ-tĕr) In pulmonary function studies, a device for measuring the rate of air flow through a tube. The rate at which air flows into or out of the lung may be measured by using a calibrated anemometer.

anemophobia (ăn″ĕ-mō-fō′bē-ă) [Gr. *anemos,* wind, + *phobos,* fear] Morbid fear of drafts or of the wind.

anencephalus (ăn″ĕn-sĕf′ă-lŭs) [Gr. *an-,* not, + *enkephalos,* the brain] Congenital absence of the brain and cranial vault, with the cerebral hemispheres missing or reduced to small masses. This condition is incompatible with life. SEE: *neural tube defect*.

anephric (ă-nĕf′rĭk, ā″) Without kidneys.

anephrogenesis (ă-nĕf″rō-jĕn′ĕ-sĭs) [Gr. *a-,* not, + *nephros,* kidney, + *genesis,* generation, birth] Congenital absence of the kidneys.

anergasia (ăn″ĕr-gā′sē-ă) [Gr. *an-,* not + *ergon,* work] Functional inactivity, or an organic psychosis resulting from a structural lesion of the central nervous system.

anergia (ăn-ĕr′jē-ă) [″ + *ergon,* work] Inactivity; lack of energy.

anergy (ăn′ĕr-jē) **1.** Impairment in cell-mediated immune responsiveness to stimulation by an antigen. **2.** Lack of energy. **anergic** (ăn-ĕr′jĭk), *adj.*

aneroid (ăn′ĕr-ŏyd) [Gr. *a-,* not, + *neron,* water, + *eidos,* form, shape] Operating without fluid, such as an aneroid barometer that uses atmospheric pressure instead of a liquid such as mercury.

anerythroplasia (ăn″ĕ-rĭth″rō-plā′zē-ă) [Gr. *an-,* not, + *erythros,* red, + *plasis,* a molding] Absence of red blood cell formation in the bone marrow. **anerythroplastic** (-plăs′tĭk), *adj.*

anerythropsia (ăn″ĕ-rĭ-thrŏp′sē-ă) [″ + ″ + *opsis,* vision] Inability to distinguish clearly the color red.

anesthecinesia, anesthekinesia (ăn-ĕs-thē″sĭn-ē′zē-ă, -kĭ-nē′zē-ă) [″ + *aisthesis,* sensation, + *kinesis,* movement] Sensory and motor paralysis.

anesthesia (ăn″ĕs-thē′zhă) [″ + *aisthesis,* sensation] **1.** Partial or complete loss of sensation, with or without loss of consciousness, as a result of disease, injury, or administration of an anesthetic agent, usually by injection or inhalation.

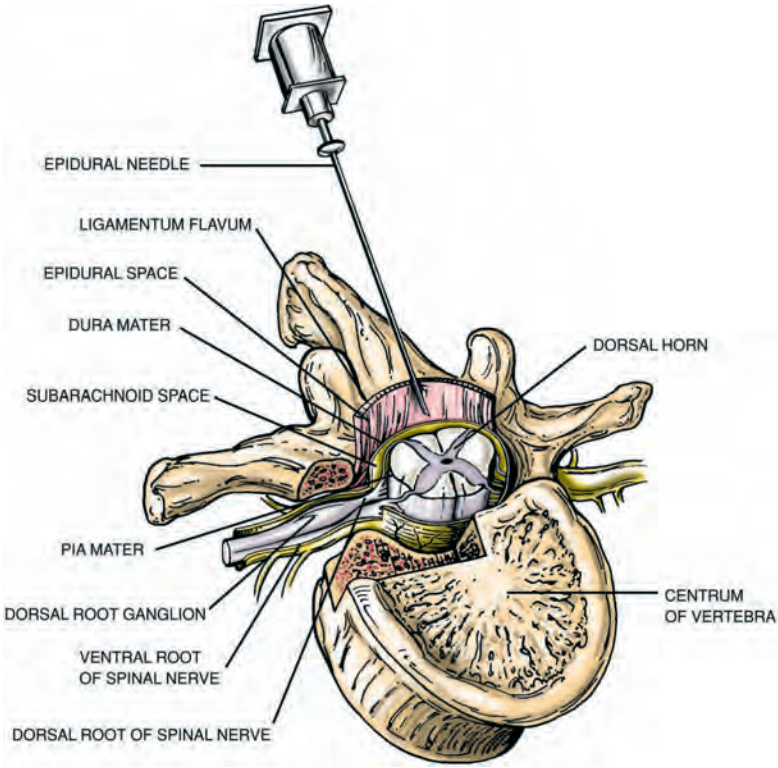
PATIENT CARE: *Preoperative:* Before induction of anesthesia, hearing aids, dentures, wristwatches, and jewelry are removed. The anesthesiologist or nurse-anesthetist interviews and examines the patient briefly, assessing general respiratory and cardiovascular health. The patient is questioned regarding compliance with prescribed preoperative fasting. The American Society of Anesthesiologists Guidelines recommend minimum fasting as follows: 2 hours for clear liquids, 4 hours for breast milk, 6 hours for formula, nonhuman milk, or a light meal (tea and toast), and 8 hours for a regular meal (easily remembered as "2-4-6-8"). These guidelines may be modified by individual surgeons for particular patients and their conditions. Baseline vital signs are assessed and recorded. An ECG, CBC, serum chemistries, and urinalysis are ordered for many general surgeries unless results of recent tests are available. Allergies, previous surgeries, and any untoward responses to anesthetic agents are reviewed, along with any special patient restrictions. If a menstruating female is using a tampon, it is removed and replaced with a perineal pad. Depending on the patient's health status and the planned procedure, nasal oxygen, monitoring electrodes, and graduated compression stockings are applied. An intravenous route is established, and, after determining that the proper informed consent form has been signed, induction relaxation medication is administered.

Postoperative: During emergence from general anesthesia, the patient's airway is protected and vital signs monitored. Level of consciousness, status of protective reflexes, motor activity, and emotional state are evaluated. The patient is reoriented to person, place, and time; this information is repeated as often as necessary. For patients who have received ketamine, a quiet area with minimal stimulation is provided. Children may be disoriented, hallucinatory, or physically agitated as they emerge from general anesthesia. A security toy and the presence of parents may help them maintain orientation and composure. The temperatures of elderly patients should be monitored, heat loss prevented, and, as necessary, active rewarming provided. The mental status and level of consciousness of each patient should be carefully observed for changes. Patients' eyeglasses and hearing aids are returned to them as soon as possible. Before nerve block anesthesia, an intravenous infusion is established to ensure hydration. The patient is protected with side rails and other safety measures, and the anesthetized body part is protected from prolonged pressure. For regional anesthesia, sympathetic blockade is assessed by monitoring sensory levels along with vital signs (the block will wear off from head to toe, except for the sacrum and perineum, which wear off last). In obstetrics, maternal hypotension results in diminished placental perfusion and potential fetal compromise; therefore, hydration and vital signs must be closely monitored. Outcomes indicating returned sympathetic innervation include stable vital signs and temperature, ability to vasoconstrict, perianal pinprick sensations ("anal wink"), plantar flexion of the foot against resistance, and ability to sense whether the great toe is flexed or extended. The patient must tolerate oral fluids (unless restricted) and urinate before discharge. If the patient is at risk for postanesthesia headache, oral or intravenous hydration is administered, and the patient is encouraged to remain flat in bed. Prescribed analgesics are administered, and comfort measures, breathing exercises, abdominal support, and position changes are provided.

2. The science and practice of anesthesiology.

audio a. Anesthesia produced by sound; used by dentists to inhibit pain perception.

basal a. A level of unconsciousness just above the level of complete surgical anesthesia. The patient does not respond to verbal stimuli but does react to



EPIDURAL ANESTHESIA

Injection of epidural needle into epidural space

noxious stimuli (e.g., a pinprick). It may be combined with local or regional anesthesia in some forms of surgery.

block a. A regional anesthetic injected into a nerve (intraneurally) or immediately around it (paraneurally). SYN: *conduction anesthesia; neural anesthesia*.

bulbar a. Anesthesia produced by a lesion of the pons.

caudal a. Anesthesia produced by insertion of a needle into the sacrococcygeal notch and injection of a local anesthetic into the epidural space.

central a. Pathological anesthesia due to a lesion of the central nervous system.

closed a. A method of inhalation anesthesia in which exhaled gases are rebreathed. This requires appropriate treatment of the exhaled gas to absorb the expired carbon dioxide and to replenish the oxygen and the anesthetic.

conduction a. Block a.

crossed a. Anesthesia of the side opposite to the site of a central nervous system lesion.

dissociative a. A type of anesthesia marked by catalepsy, amnesia, and marked analgesia. The patient experiences a strong feeling of dissociation from the environment.

a. dolorosa Pain in an anesthetized zone, as in thalamic lesions.

electric a. Anesthesia induced with electric current.

electronic dental a. ABBR: EDA. In dentistry, the use of low levels of electric current to block pain signals en route to the brain. The patient controls the current through a hand-held control. The current creates no discomfort and, unlike local anesthesia, leaves no numbness to wear off once the dental work is completed. SEE: *patient-controlled analgesia*.

endotracheal a. Anesthesia in which gases are administered via a tube inserted into the trachea.

epidural a. Anesthesia produced by injection of a local anesthetic into the peridural space of the spinal cord. SYN: *peridural anesthesia*. SEE: illus.

ethylene a. Ethylene given as a combination of oxygen 20%, cyclopropane 10%, and ethylene 70%. Because it is a

rather weak anesthetic, and volatile and inflammable, it is rarely, if ever, used.

general a. Anesthesia that produces complete loss of consciousness. General anesthesia is a medically controlled coma. Patients under general anesthesia do not respond to words or touch and cannot breathe spontaneously or protect their airway.

hypotensive a. Anesthesia during which the blood pressure is lowered.

hypothermic a. General anesthesia during which the body temperature is lowered.

hysterical a. Bodily anesthesia occurring in conversion disorders.

ice a. Cryoanesthesia.

inadequate a. Anesthesia in which the patient is not comfortably sedated or relieved of pain. Common findings are spontaneous eye opening, grimacing, swallowing, or sweating. Vital signs may reveal unexpected hypertension or tachycardia.

infiltration a. Local anesthesia produced by an injection of an anesthetic directly into the tissues.

inhalation a. General anesthesia produced by the inhalation of vapor or gaseous anesthetics (e.g., ether, nitrous oxide, and methoxyflurane).

insufflation a. Instillation of gaseous anesthetics into the inhaled air.

intratracheal a. Anesthesia administered through a catheter advanced through the upper airway and vocal cords into the trachea.

local a. The pharmacological inhibition of nerve impulses in a body part. It is typically used to facilitate treatment of a small lesion or laceration or to perform minor surgery. Commonly used agents include lidocaine, bupivacaine, or novocaine. All local anesthetic agents work by decreasing the flow of sodium ions into nerve cells, blocking the action potential of the cells. SEE: *block anesthesia; infiltration anesthesia*.

mixed a. General anesthesia produced by more than one drug, such as propofol for induction, followed by an inhaled drug for maintenance of anesthesia.

neural a. Block a.

open a. Application, usually by dropping, of a volatile anesthetic agent onto gauze held over the nose and mouth.

paravertebral a. Injection of a local anesthetic at the roots of spinal nerves.

peridural a. Epidural a.

peripheral a. Local anesthesia produced when a nerve is blocked with an appropriate agent.

primary a. The first stage of general anesthesia, before unconsciousness.

pudendal a. Local anesthesia used primarily in obstetrics (e.g., to facilitate pelvic surgery or childbirth). The pudendal nerve on each side, near the spinous process of the ischium, is blocked.

rectal a. General anesthesia produced by introduction of an anesthetic agent into the rectum, used esp. in managing pediatric patients.

regional a. Nerve or field blocking, causing loss of sensation in a dermatome innervated by a specific nerve. SEE: *block anesthesia; infiltration anesthesia*.

saddle block a. Anesthesia produced by introducing the anesthetic agent into the fourth lumbar interspace to anesthetize the perineum and the buttocks.

segmental a. Anesthesia due to a pathological or surgically induced lesion of a nerve root.

sexual a. Loss of genital sensation, with accompanying secondary sexual dysfunction.

spinal a. **1.** Anesthesia resulting from disease or injury to conduction pathways of the spinal cord. **2.** Anesthesia produced by injection of anesthetic into the subarachnoid space of the spinal cord.

SIDE EFFECTS: Common adverse reactions to spinal anesthesia include backache, bradycardia, headache, lowered blood pressure, and urinary retention. SYN: *subarachnoid block*. SEE: illus.

splanchnic a. Anesthesia produced by injection of an anesthetic into the splanchnic ganglion.

stages of a. The distinct series of steps through which anesthesia progresses. The first stage of pharmacologically induced general anesthesia includes preliminary excitement until voluntary control is lost. Because hearing is the last sense to be lost, the conversation of operating room staff should be guarded during this stage. The second stage consists of loss of voluntary control. In the third stage there is entire relaxation, no muscular rigidity, and deep regular breathing.

surgical a. Depth of anesthesia at which relaxation of muscles and loss of sensation and consciousness are adequate for the performance of surgery.

tactile a. Loss of sense of touch.

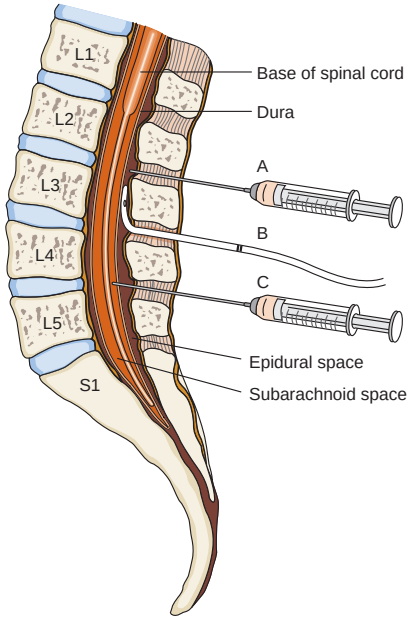
topical a. Local anesthesia induced by application of an anesthetic directly onto the surface of the area to be anesthetized.

traumatic a. Loss of sensation resulting from nerve injury.

tumescent a. The injection of large volumes of diluted lidocaine, bicarbonate, and epinephrine subcutaneously for use in local anesthesia. This procedure is most often used before liposuction to limit blood loss and pain.

twilight a. State of light anesthesia. SEE: *twilight sleep*.

anesthesiologist (ăn″ĕs-thē″zē-ŏl′ō-jĭst)



INJECTION OF SPINAL ANESTHESIOLOGY

(A) Epidural anesthesia, (B) epidural catheter, (C) spinal anesthesia

A physician specializing in anesthesiology.

anesthesiology (ăn″ĕs-thē″zē-ŏl′ō-jē) [″ + ″ + *logos,* word, reason] The branch of medicine concerned with the control of acute or chronic pain; the use of sedative, analgesic, hypnotic, antiemetic, respiratory, and cardiovascular drugs; preoperative assessment, intraoperative patient management, and postoperative care; and autonomic, neuromuscular, cardiac, and respiratory physiology.

anesthetic (ăn″ĕs-thĕt′ĭk) **1.** Pert. to or producing anesthesia. **2.** An agent that produces anesthesia; subdivided into inhaled, intravenous, general, or local, according to its action and administration. SEE: *anesthesia*.

anesthetist (ă-nĕs′thĕ-tĭst) One who administers anesthetics, esp. for general anesthesia; may be an anesthesiologist or specially trained nurse.

anesthetization (ă-nĕs″thĕ-tĭ-zā′shŭn) Induction of anesthesia.

anesthetize (ă-nĕs′thĕ-tīz) To induce anesthesia.

anetoderma (ăn″ĕt-ō-dĕr′mă) [Gr. *anetos,* relaxed, + *derma,* skin] Localized laxity of the skin with protruding, saclike areas. These lesions are due to loss of normal skin elasticity. They may be excised. SYN: *macular atrophy*.

aneuploidy (ăn″ū-ploy′dē) [Gr. *an-,* not, + *eu,* well, + *ploos,* fold, + *eidos,* form, shape] Condition of having an abnormal number of chromosomes for the species indicated. **aneuploid** (ăn′ū-ployd), *adj.*

aneuploidy screening The testing of embryos for evidence of sex-linked diseases and structural chromosomal defects before their implantation in the uterus during assisted reproduction. Aneuploidy screening is one means of decreasing the risk of genetic diseases in implanted embryos.

aneurysm (ăn′ū-rĭzm) [Gr. *aneurysma,* a widening] Localized abnormal dilatation of a blood vessel, usually an artery, due to a congenital defect or weakness in the wall of the vessel.

ETIOLOGY: As people age, the combined effects of high blood pressure and atherosclerotic weakening of arteries produce most aneurysms in the aorta. Congenital malformations of arteries in the circle of Willis are relatively common causes of aneurysms in the brain. Aneurysms in the chest or peripheral arteries are sometimes caused by blunt trauma or by bacterial or mycotic infection.

abdominal aortic a. ABBR: AAA. A localized dilatation (saccular, fusiform, or dissecting) of the wall of the abdominal aorta (the portion of the descending aorta that passes from the aortic hiatus of the diaphragm into the abdomen, descending ventral to the vertebral col-

umn, and ending at the fourth lumbar vertebra, where it divides into the two common iliac arteries). It is generally found to involve the renal arteries and frequently the iliac arteries. Occasionally the dilatation can extend upward through the diaphragm.

The patient is usually asymptomatic, and diagnosis is made accidentally during a routine physical examination or abdominal x-ray or during screening of the elderly hypertensive male. Serial ultrasounds confirm the diagnosis and determine the size, shape, and location of the aneurysm. Small, asymptomatic aneurysms may be followed over time, rather than repaired (see below). Computed tomography, magnetic resonance imaging, or aortography may assist in confirming the diagnosis and the condition of proximal and distal vessels.

SYMPTOMS: Symptoms, when present, include generalized abdominal pain, low back pain unaffected by movement, and sensations of gastric or abdominal fullness. Sudden severe lumbar or abdominal pain radiating to the flank and groin, esp. if associated with tachycardia and hypotension, may indicate enlargement or imminent rupture. Signs can include a pulsating mass in the periumbilical area and a systolic bruit over the aorta.

TREATMENT: Untreated abdominal aortic aneurysms gradually enlarge and in some instances rupture. The likelihood of rupture increases for aneurysms that are larger than 5.5 cm. Surgical repair is recommended for all aneurysms larger than 6 cm. If an aneurysm is tender and known to be enlarging rapidly (no matter what its size), surgery is strongly recommended. Surgical therapy consists of replacing the aneurysmal segment with a synthetic fabric (Dacron) graft. Immediate surgery is indicated for a ruptured aortic abdominal aneurysm. An alternative treatment to traditional laparotomy is to insert a bypass graft percutaneously into the aorta.

PATIENT CARE: In acute situations, arterial blood gas values and cardiac rhythm are monitored, and a pulmonary artery line is inserted to monitor hemodynamics. The patient is observed for signs of rupture, which may be fatal. These include acute blood loss and shock; increasing pulse and respiratory rates; cool, clammy skin; restlessness; and decreased sensorium. Aggressive palpation of the abdomen for a mass is avoided if abdominal aortic aneurysm has been diagnosed or is suspected because deep palpation may rarely precipitate rupture.

Prescribed medications are administered to manage contributory factors such as hypertension and hypercholesterolemia; a beta-adrenergic blocking agent may be prescribed to reduce the risk of expansion and rupture. The patient is instructed in their use and taught about adverse effects that should be reported. In acute aortic rupture, admission to the intensive care unit is arranged, a blood sample is obtained for typing and cross-matching, and a large-bore (14G) venous catheter is inserted to facilitate blood replacement. The patient is prepared for and informed about elective surgery if indicated or emergency surgery if rupture occurs. The patient will require an intravenous line via a large-bore catheter, a urinary catheter, and an arterial line and pulmonary artery catheter to monitor fluid and hemodynamic balance. Additionally, cardiac monitor electrodes will be placed, and a nasogastric tube inserted. During surgery the patient will be intubated and mechanically ventilated, and such therapies will most likely still be in place postoperatively in the ICU.

Desired outcomes include the patient's ability to express anxiety, use support systems, and perform stress reduction techniques that assist with coping; demonstrated abatement of physical signs of anxiety; avoidance of activities that increase the risk of rupture; understanding of and cooperation with the prescribed treatment regimen; ability to identify indications of rupture and to institute emergency measures; maintenance of normal fluid and blood volume in acute situations; and recovery from elective or emergency surgery with no complications. Generally postoperative patients are assisted to ambulate by the second day after surgery. Pain management and psychological support are extremely important during the acute postoperative period.

PREVENTION: Because of the relatively high incidence of AAA in men over age 60 (esp. smokers or men with intermittent claudication), screening for AAA is recommended for these people.

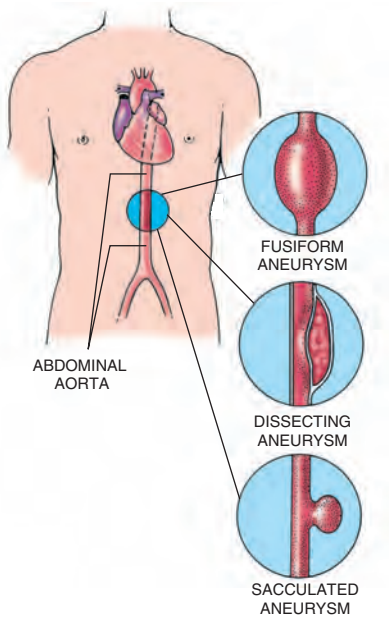
aortic a. An aneurysm affecting any part of the aorta from the aortic valve to the iliac arteries. The dilated artery is usually asymptomatic, detected as an incidental finding during imaging. SEE: illus.

arteriovenous a. An aneurysm of congenital or traumatic origin in which an artery and vein become connected. Symptoms may include pain, expansive pulsation, and bruits or, occasionally, high-output heart failure.

atherosclerotic a. Aneurysm due to degeneration or weakening of the arterial wall caused by atherosclerosis.

Bérard's a. SEE: *Bérard's aneurysm*.

berry a. A small saccular congenital aneurysm of a cerebral vessel. It communicates with the vessel by a small opening. Rupture of this type of aneurysm may cause subarachnoid hemorrhage, a devastating form of stroke.



AORTIC ANEURYSMS

Aneurysms may affect any part of the aorta

cerebral a. Aneurysm of a blood vessel in the brain.

Charcot-Bouchard a. SEE: *Charcot-Bouchard aneurysm*.

cirsoid a. A dilatation of a network of vessels commonly occurring on the scalp. The mass may form a pulsating subcutaneous tumor. SYN: *racemose aneurysm*.

compound a. Aneurysm in which some of the layers of the vessel are ruptured and others dilated.

dissecting a. Aneurysm in which the blood makes its way between the layers of a blood vessel wall, separating them; a result of necrosis of the medial portion of the arterial wall. SEE: *aortic aneurysm* for illus.

fusiform a. Aneurysm in which all the walls of a blood vessel dilate more or less equally, creating a tubular swelling. SEE: *aortic aneurysm* for illus.

mycotic a. Aneurysm due to bacterial infection.

racemose a. Cirsoid a.

sacculated a. Aneurysm in which there is weakness on one side of the vessel; usually due to trauma. It is attached to the artery by a narrow neck. SEE: *aortic aneurysm* for illus.

varicose a. Aneurysm forming a blood-filled sac between an artery and a vein.

venous a. Localized expansion and weakening of the wall of a vein. **aneurysmal** (ăn″ū-rĭz′măl), *adj.*

aneurysmectomy (ăn″ū-rĭz-měk′tō-mē) [″ + *ektome,* excision] Surgical removal of the sac of an aneurysm.

aneurysmoplasty (ăn″ū-rĭz′mō-plăs″tē) [″ + *plassein,* to form] Surgical repair of an aneurysm.

aneurysmorrhaphy (ăn″ū-rĭz-mor′ă-fē) [″ + *rhaphe,* seam, ridge] Surgical closure of the sac of an aneurysm in conjunction with additional maneuvers such as bypass grafting.

aneurysmotomy (ăn″ū-rĭz-mŏt′ō-mē) [″ + *tome,* incision] Incision of the sac of an aneurysm.

ANF *American Nurses' Foundation.*

angel dust SEE: *phencyclidine hydrochloride*.

Angelica sinensis (ăn-jĕl′ĭ-kă sī-nĕn′sĭs) [NL., Chinese angelic (plant)] The scientific name for dong quai.

Angelman syndrome (ān′jĕl-măn, ăn′) [Harry Angelman, Brit. pediatrician, 1915–1996] A rare genetic condition marked by severe mental retardation, microcephaly, and paroxysms of laughter. It is due to an abnormal chromosome 15 of maternal origin. SEE: *Prader-Willi syndrome*.

angel's trumpet [*Datura ruaveolens*] A flowering shrub native to the southeastern U.S. Portions of the plant are used for hallucinogenic effects. The flowers are made into a stew or tea, and the leaves are eaten. The flowers contain large quantities of the alkaloids atropine, hyoscyamine, and hyoscine. Ingestion of the plant produces intense thirst, visual disturbances, flushing, central nervous system hyperexcitability, sensory flooding, delirium, and paranoia. This is followed by hyperthermia, tachycardia, hypertension, visual hallucinations, disturbed consciousness, clonus, and subsequent convulsions. If the condition is untreated, death may occur.

TREATMENT: Treatment consists of gastric lavage, followed by 1 to 4 mg of intravenous physostigmine sulfate. This dosage should reverse the acute delirious state in 1 to 2 hr, but it may need to be repeated several times.

Angelucci's syndrome (ăn″jĕ-loo′chēz) [Arnaldo Angelucci, It. ophthalmologist, 1854–1934] Psychological excitement, palpitations, and vasomotor disturbances associated with vernal conjunctivitis.

angel's wing Winged scapula.

angi- (ăn′jē) [Gr. *angeion,* vessel] SEE: *angio-*.

angiasthenia (ăn″jē-ăs-thē′nē-ă) [″ + *a-,* not, + *sthenos,* strength] Loss of vascular tone.

angiectomy (ăn″jē-ĕk′tō-mē) [″ + *ektome,* excision] Excision or resection of a blood vessel.

angiectopia (ăn″jē-ĕk′tō′pē-ă) [″ + *ek-*

topos, out of place] Displacement of a vessel.

angiemphraxis (ăn″jē-ĕm-frăk′sĭs) [″ + *emphraxis,* stoppage] Obstruction of a vessel.

angiitis (ăn″jē-ī′tĭs) [″ + *itis,* inflammation] Inflammation of blood vessels. SYN: *vasculitis*.

angina (ăn-jī′nă, ăn′jĭ-nă) [L. *angina,* quinsy, from *angere,* to choke] **1.** Angina pectoris. **2.** Acute sore throat. **anginal** (ăn′jĭ-nal), *adj.*

abdominal a. Abdominal pain that occurs after meals, caused by insufficient blood flow to the mesenteric arteries. This symptom typically occurs in patients with extensive atherosclerotic vascular disease and is often associated with significant weight loss. SYN: *intestinal angina*.

a. decubitus Attacks of angina pectoris occurring while a person is in a recumbent position.

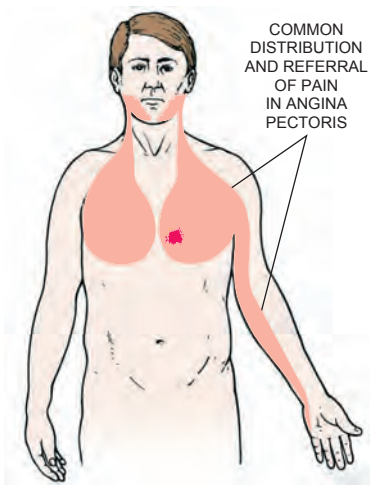
a. of effort Angina pectoris with onset during exercise. SYN: *exertional angina*.

exertional a. Angina of effort.

intestinal a. Abdominal a.

Ludwig's a. SEE: *Ludwig's angina*.

a. pectoris An oppressive pain or pressure in the chest caused by inadequate blood flow and oxygenation to heart muscle. It is usually produced by atherosclerosis of the coronary arteries and in Western cultures is one of the most common emergent complaints bringing adult patients to medical attention. It typically occurs after (or during) events that increase the heart's need for oxygen (e.g., increased physical activity, a large meal, exposure to cold weather, or increased psychological stress). SEE: illus.; table.



ANGINA PECTORIS

SYMPTOMS: Patients typically describe a pain or pressure located behind the sternum that may have a "tight," burning, squeezing, or binding quality; the sensation may radiate into the neck, jaw, shoulders, or arms and be associated with difficulty breathing, nausea or vomiting, sweating, anxiety, or fear. The pain is not usually described by patients as "sharp" or "stabbing" and is usually not worsened by deep breathing, coughing, swallowing, or twisting or turning the muscles of the trunk, shoulders, or arms. Women, diabetics, and the elderly may present with atypical symptoms, such as shortness of breath without pain.

TREATMENT: In health care settings, oxygen, nitroglycerin, and aspirin are provided, and the patient is placed at rest. Morphine sulfate is given for pain that does not resolve after about 15 minutes of treatment with that regimen. Beta blocking drugs (e.g., propranolol, metoprolol, and atenolol) are used to slow the heart rate and decrease blood pressure. They provide the mainstay for chronic treatment of coronary insufficiency and are indispensable when treating unstable angina or acute myocardial infarction. At home, patients usually rest and use short-acting nitroglycerin. Patients with chronic or recurring angina pectoris may get symptomatic relief from long-acting nitrates or calcium channel blockers.

PATIENT CARE: The pattern of pain, including OPQRST (onset, provocation, quality, region, radiation, referral, severity, and time), is monitored and documented. Cardiopulmonary status is evaluated for evidence of tachypnea, dyspnea, diaphoresis, pulmonary crackles (rales), bradycardia or tachycardia, altered pulse strength, the appearance of a third or fourth heart sound or mid- to late-systolic murmurs over the apex on auscultation, pallor, hypotension or hypertension, gastrointestinal distress, or nausea and vomiting. The 12-lead electrocardiogram is monitored for ST-segment elevation or depression, T-wave inversion, and cardiac dysrhythmias. When the patient is stable, a stress test (with or without contrast medium) is performed to demonstrate the heart's response to exercise. The health care provider checks blood pressure and cardiac rhythm during and following the test and encourages the patient to describe any and all feelings experienced. Prescribed medication such as sublingual nitroglycerin if the patient remains hypertensive or normotensive and high concentration oxygen are administered, and the patient's response is noted. A health care provider should remain with the patient and provide emotional support throughout the epi-

Stages of Angina Pectoris

Class	Description
I	Ordinary physical activity, such as walking or climbing stairs, does not cause angina. Angina occurs with strenuous, rapid, or prolonged exertion at work or recreation.
II	Slight limitation of ordinary activity. Angina occurs on walking or climbing stairs rapidly, walking uphill, walking or stair climbing after meals, in cold, or in wind, under emotional stress, only during the few hours after awakening, or walking more than two level blocks and climbing more than one flight of stairs at a normal pace and in normal conditions.
III	Marked limitation of ordinary physical activity. Angina occurs on walking one to two level blocks and climbing one flight of stairs in normal conditions at a normal pace.
IV	Inability to carry on any physical activity without discomfort—angina symptoms may be present at rest.

SOURCE: Campeau, L: Grading of Angina Pectoris [letter]. Circulation 54(3), 522. Copyright 1976, American Heart Association.

sode. Desired treatment outcomes include reducing myocardial oxygen demand and increasing myocardial oxygen supply. The patient is taught the use of the prescribed form of nitroglycerin for anginal attacks and the importance of seeking medical attention if prescribed dosing does not provide relief. Based on individual needs, the patient should be encouraged and assisted to stop smoking, maintain ideal body weight, lower cholesterol by eating a lower fat diet, keep blood glucose under control if diabetic, limit salt intake, and engage in some form of exercise, such as walking, gardening, or swimming regularly for 45 minutes to an hour every day. The patient also is taught about prescribed beta-adrenergic or calcium channel blockers, clot busters (thrombolytic drugs), cardiac catheterization, and needed interventions to ensure understanding of these procedures should they become necessary.

Four major forms of angina are identified:

1. stable: predictable frequency and duration of pain that is relieved by nitrates and rest;
2. unstable: pain is more easily induced and increases in frequency and duration;
3. variant: occurs from unpredictable coronary artery spasm; and
4. microvascular: impairment of vasodilator reserve causes angina-like chest pain even though the patient's coronary arteries are normal. Severe and prolonged anginal pain is suggestive of a myocardial infarction. SEE: *Nursing Diagnoses Appendix.*

preinfarction a. Angina pectoris occurring in the days or weeks before a myocardial infarction. The symptoms may be unrecognized by patients without a history of coronary artery disease.

Prinzmetal's a. [Myron Prinzmetal, U.S. cardiologist, 1908-1987] Variant angina

silent a. Unrecognized angina pectoris (i.e., coronary insufficiency that presents with symptoms other than chest pain or pressure). The patient may experience dyspnea on exertion, heartburn, nausea, arm pain, or other atypical symptoms. Silent angina pectoris occurs most often in older adults, in women, in postoperative patients who are heavily medicated, or in patients with diabetic neuropathy.

stable a. Angina that occurs with exercise and is predictable; usually promptly relieved by rest or nitroglycerin.

unstable a. Angina that has changed to a more frequent and more severe form. It can occur during rest and may be an indication of impending myocardial infarction. Unstable angina is a medical emergency.

variant a. Chest pain that results from the spasm of coronary arteries rather than from exertion or other increased demands on the heart. The pain typically occurs at rest. During coronary catheterization the spasm is usually found near an atherosclerotic plaque, often in the right coronary artery. Infusions of ergonovine may provoke it. On the electrocardiogram, the diagnostic hallmark is elevation of the ST segments during episodes of resting pain. Treatments include nitrates and calcium channel blocking drugs. Beta-blocking drugs, frequently used as first-line therapy in typical angina pectoris, are often ineffective in this form of angina. SYN: *Prinzmetal's angina.*

Vincent's a. Necrotizing ulcerative gingivitis.

anginal equivalent The occasional idiosyncratic signs and symptoms that patients may experience during coronary ischemia or myocardial infarction. Al-

though the most common of these are breathlessness, isolated arm, neck, jaw, or shoulder pain, sweating, syncope, or nausea and vomiting, patients may also have anxiety, elevated heart rate, or palpitations. Older patients may show changes in mental status. Older patients and women are more likely than men to have atypical signs and symptoms of coronary ischemia.

anginoid (ăn′jĭ-noyd) [″ + Gr. *eidos,* form, shape] Resembling angina, esp. angina pectoris.

anginophobia (ăn″jĭ-nō-fō′bē-ă) [″ + Gr. *phobos,* fear] Morbid fear of an attack of angina pectoris.

anginose, anginous (ăn′jĭ-nōs, -nŭs) [L. *angina,* quinsy] Pert. to or resembling angina.

angio-, angi- (ăn′jē-ō) [Gr. *angeion,* vessel] Combining forms denoting *lymph* or *blood vessels*.

angioataxia (ăn″jē-ō-ă-tăk′sē-ă) [″ + *ataktos,* out of order] Variability in arterial tonus.

angioblast (ăn′jē-ō-blăst) [″ + *blastos,* germ] **1.** The earliest tissue arising from the mesenchymal cells of the embryo, from which blood vessels develop. **2.** A cell that participates in vessel formation.

angioblastoma (ăn″jē-ō-blăs-tō′mă) [″ + ″ + *oma,* tumor] Hemangioblastoma.

angiocardiogram (ăn″jē-ō-kăr′dē-ŏ-grăm) [″ + *kardia,* heart, + *gramma,* something written] The image of the heart and great blood vessels obtained by angiocardiography.

angiocardiography (ăn″jē-ō-kăr″dē-ŏg′ră-fē) [″ + ″ + *graphein,* to write] Serial imaging, usually cineradiography, of the heart and great blood vessels after intravascular or intracardiac injection of a water-soluble contrast medium.

angiocardiopathy (ăn″jē-ō-kăr″dē-ŏp′ă-thē) [″ + ″ + *pathos,* disease, suffering] Disease of the blood vessels of the heart.

angiocarditis (ăn″jē-ō-kăr-dī′tĭs) [″ + ″ + *itis,* inflammation] Inflammation of the heart and large blood vessels.

angiocavernous (ăn″jē-ō-kăv′ĕr-nŭs) [″ + L. *caverna,* cavern] Rel. to angioma cavernosum.

angiocholecystitis (ăn″jē-ō-kō″lĕ-sĭs-tī′tĭs) [″ + *chole,* bile, + *kystis,* bladder, + *itis,* inflammation] Inflammation of the gallbladder and bile vessels.

angiocholitis (ăn″jē-ō-kō-lī′tĭs) [″ + ″ + *itis,* inflammation] Inflammation of the biliary vessels. SYN: *cholangitis*.

angiodysplasia (ăn″jē-ō-dĭs-plā′zē-ă) Vascular ectasis in the mucosa of the intestine, usually the cecum, an occasional cause of lower gastrointestinal bleeding. Lesions increase with advancing age and can cause occult or obvious blood loss. SYN: *arteriovenous malformation*.

angioedema (ăn″jē-ō-ĕ-dē′mă) [″ + *oidema,* swelling] A condition marked by the development of edematous areas of skin, mucous membranes, or internal organs. It is frequently associated with urticaria (hives). It is benign when limited to the skin but can cause respiratory distress when present in the mouth, pharynx, or larynx. It is usually the result of a type I hypersensitivity reaction. Histamine released during an immunoglobin E antibody reaction to ingested allergens such as food or drugs causes vasodilation and increased vascular permeability, producing the characteristic nonpitting, nondependent swelling that distinguishes it from regular edema. The nonallergic forms of angioedema are hereditary angioedema, which is caused by a complement deficiency, and anaphylactoid reactions. SYN: *angioneurotic edema*. SEE: *urticaria*.

TREATMENT: Antihistamines are used first for immediate relief. Epinephrine is used if swelling of the upper airways compromises breathing.

hereditary a. ABBR: HAE. A rare autosomal dominant disease marked by episodic bouts of subcutaneous and submucosal edema, esp. of the gastrointestinal tract or the upper airways. It is caused by the hereditary lack of a protein (C1 INH) that inactivates complement or by the malfunction of this protein. Physical trauma or psychological stress may precipitate attacks. The symptoms usually worsen after puberty. Anabolic steroids are typically used to treat HAE.

angioendothelioma (ăn″jē-ō-ĕn″dō-thē″lē-ō′mă) *pl.* **angioendotheliomas, -mata** [″ + *endon,* within, + *thele,* nipple, + *oma,* tumor] A tumor consisting of endothelial cells, commonly occurring as single or multiple tumors of bone.

angiofibroma (ăn″jē-ō-fī-brō′mă) *pl.* **angiofibromas, -mata** [″ + L. *fibra,* fiber, + Gr. *oma,* tumor] A tumor consisting of vascular and fibrous tissue.

angiogenesis (ăn″jē-ō-jĕn′ĕ-sĭs) [″ + *genesis,* generation, birth] Development of blood vessels. **angiogenic** (-jĕn′ĭk), *adj.*

angiogenic growth factors A group of polypeptides that stimulate the formation of new blood vessels. They include agents like vascular endothelial growth factor (VEGF) and blood vessel fibroblastic growth factor (bFGF). These factors are active in healing wounds, chronic inflammatory conditions, retrolental fibroplasia, and malignant tumors, which require new blood vessels for continued growth.

angioglioma (ăn″jē-ō-glī-ō′mă) [Gr. *an-*

geion, vessel, + *glia,* glue, + *oma,* tumor] A tumor consisting of vascular and glial cells.

angiogram (ăn′jē-ō-grăm) [″ + ″] A radiographic record of the size, shape, and location of the heart and blood vessels after introduction of a radiopaque contrast medium. A catheter is usually inserted into a peripheral vessel and guided to the affected area by use of the Seldinger technique. The recording can be either serial film or digital imaging.

aortic a. An angiogram of the aorta; used in diagnosing aneurysms or tumors that contact and deform the aorta.

cardiac a. An angiogram of the coronary arteries, as well as the cardiac ventricles and valves.

cerebral a. An angiogram of blood vessels of the brain.

angiograph (ăn′jē-ō-grăf″) [″ + *graphein,* to write] A variety of sphygmograph.

angiography (ăn″jē-ŏg′ră-fē) **1.** A description of blood vessels and lymphatics. **2.** Diagnostic or therapeutic radiography of the heart and blood vessels using a radiopaque contrast medium. Types include magnetic resonance angiography, interventional radiology, and computed tomography. **3.** Recording of arterial pulse movements by use of a sphygmograph.

aortic a. Angiography of the aorta and its branches.

cardiac a. Angiography of the heart and coronary arteries.

cerebral a. Angiography of the vascular system of the brain.

coronary a. Angiography of the coronary arteries, to determine any pathological obstructions to blood flow to the heart muscle. SEE: illus.

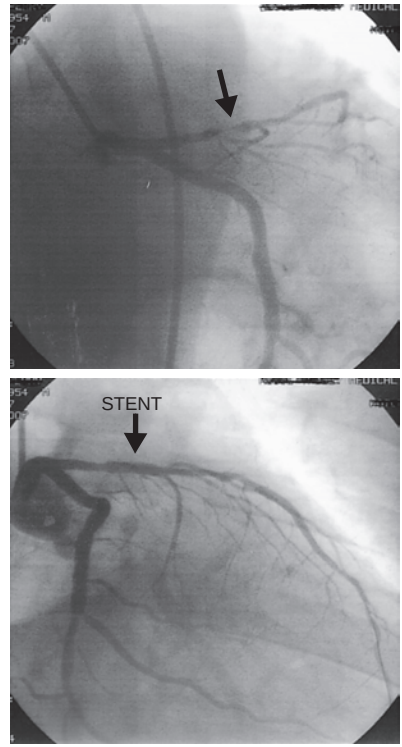
digital subtraction a. Use of a computer technique to investigate arterial blood circulation. A reference image is obtained by fluoroscopy. Then a contrast medium is injected intravenously. Another image is produced from the fluoroscopic image, after which the computer technique "subtracts" the image produced by surrounding tissues. The third image is an enhanced view of the arteries.

pulmonary a. Angiography of the pulmonary vessels (e.g., in the diagnosis of pulmonary embolism).

selective a. Angiography in which a catheter is introduced directly into the vessel to be visualized.

angiohyalinosis (ăn″jē-ō-hī″ă-lĭn-ō′sĭs) [Gr. *angeion,* vessel, + *hyalos,* glass, + *osis,* condition] Hyaline degeneration of blood vessel walls.

angiohypertonia (ăn″jē-ō-hī″pĕr-tō′nē-ă) [″ + *hyper,* over, + *tonos,* act of stretching, tension] Spasm of blood vessels, esp. arteries. SEE: *angiospasm; vasospasm*.



CORONARY ANGIOGRAPHY

A. tight stenosis; B. artery reopened with a stent

angiohypotonia (ăn″jē-ō-hī″pō-tō′nē-ă) [″ + *hypo,* under, + *tonos,* act of stretching, tension] Angioparalysis; angioparesis; vascular dilatation.

angioid (ăn′jē-oyd) [″ + *eidos,* form, shape] Resembling a blood vessel.

angioid streaks Dark, wavy, anastomosing striae lying beneath retinal vessels.

angiokeratoma (ăn″jē-ō-kĕr″ă-tō′mă) [″ + *keras,* horn, + *oma,* tumor] A skin disorder occurring chiefly on the feet and legs, marked by formation of telangiectases or warty growths accompanied by thickening of the epidermis along the course of dilated capillaries.

angiokinetic (ăn″jē-ō-kĭ-nĕt′ĭk) [″ + *kinesis,* movement] Pert. to constriction and dilation of blood vessels. SYN: *vasomotor*.

angioleukitis (ăn″jē-ō-loo-kī′tĭs) [″ + *leukos,* white, + *itis,* inflammation] Inflammation of lymphatics.

angiolipoma (ăn′jē-ō-lĭp-ō′mă) [″ + *lipos,* fat, + *oma,* tumor] A tumor consisting of vascular and fatty cells.

angiolith (ăn′jē-ō-lĭth″) [″ + *lithos,* stone] A calcified deposit in the wall of a blood vessel.

angiology (ăn″jē-ŏl′ō-jē) [″ + *logos,* word, reason] The study of blood vessels and lymphatics.

angiolymphitis (ăn″jē-ō-lĭm-fī′tĭs) [″ + L. *lympha,* lymph, + *itis,* inflammation] Lymphangiitis.

angiolysis (ăn″jē-ŏl′ĭ-sĭs) [″ + *lysis,* dissolution] Obliteration of blood vessels, as in the umbilical cord when it is tied just after birth.

angioma (ăn″jē-ō′mă) [″ + *oma,* tumor] A form of tumor, usually benign, consisting principally of blood vessels (hemangioma) or lymph vessels (lymphangioma). It is considered to represent remnants of fetal tissue misplaced or undergoing disordered development. SEE: *choristoma; epithelioma; hamartoma; nevus*. **angiomatous** (-ō′mă-tŭs), *adj.*

capillary a. Congenital, superficial hemangioma appearing as an irregularly shaped, red discoloration of otherwise normal skin; due to overgrowth of capillaries. SYN: *angioma simplex*.

a. cavernosum Congenital hemangioma appearing as an elevated dark red benign tumor, ranging in size from a few millimeters to several centimeters. It may pulsate. It commonly involves the subcutaneous or submucous tissue and consists of blood-filled vascular spaces. Small ones may disappear without therapy.

cherry a. A benign, dome-shaped cherry-red papule on the trunk, esp. in persons over age 30, measuring about 0.5 mm to 6.0 mm. It consists of a compressible mass of blood vessels. SYN: *ruby spot; senile angioma*.

senile a. Cherry angioma.

serpiginous a. A skin disorder marked by the appearance of small red vascular dots arranged in rings; due to proliferation of capillaries.

a. simplex Capillary a.

spider a. Spider nevus.

stellate a. Skin lesion in which numerous telangiectatic vessels radiate from a central point; commonly associated with liver disease, hypertension, or pregnancy. SYN: *spider nevus*.

telangiectatic a. Angioma composed of abnormally dilated blood vessels.

a. venosum racemosum Swelling associated with severe varicosities of superficial veins.

angiomalacia (ăn″jē-ō-mă-lā′sē-ă) [Gr. *angeion,* vessel, + *malakia,* softness] Softening of blood vessel walls.

angiomatosis (ăn″jē-ō-mă-tō′sĭs) [″ + *oma,* tumor, + *osis,* condition] Condition of having multiple angiomas.

bacillary a. An acute infectious disease caused by *Bartonella quintana* or *B. henselae*. It is characterized by skin lesions that may vary from small papules to pyogenic granulomas or pedunculated masses. These occur anywhere on the skin and may involve mucous membranes. If the lesions ulcerate, they can extend to and destroy underlying bone. In addition, the organisms are disseminated to the liver, spleen, bone marrow, and lymph nodes. In the liver there may be painful, multiple, cystic, blood-filled spaces (peliosis hepatitis). Most patients with this disease are immunocompromised or infected with human immunodeficiency virus (HIV). In the untreated immunocompetent patient, recovery may be prolonged but is usually complete. In the untreated immunocompromised patient, death is the likely outcome. When the organisms are disseminated, treatment for several months with oral doxycycline or oral erythromycin will be of benefit in altering the course of the disease. Culture of the organism provides diagnosis. SEE: *cat scratch disease; trench fever*.

angiomegaly (ăn″jē-ō-mĕg′ă-lē) [″ + *megas,* large] Enlargement of blood vessels, esp. in the eyelid.

angiomyocardiac (ăn″jē-ō-mī″ō-kăr′dē-ăk) [″ + *mys,* muscle, + *kardia,* heart] Pert. to blood vessels and cardiac muscle.

angiomyolipoma (ăn″jē-ō-mī″ō-lĭ-pō′mă) [″ + ″ + *lipos,* fat, + *oma,* tumor] A benign tumor containing vascular, fatty, and muscular tissue.

angiomyoma (ăn″jē-ō-mī-ō′mă) [″ + ″ + *oma,* tumor] A tumor composed of blood vessels and muscle tissue. SYN: *myoma telangiectodes*.

angiomyoneuroma (ăn″jē-ō-mī″ō-nū-rō′mă) [″ + ″ + *neuron,* nerve, + *oma,* tumor] A painful, benign tumor of the arteriovenous anastomoses of the skin. SYN: *glomangioma*.

angiomyosarcoma (ăn″jē-ō-mī″ō-săr-kō′mă) [″ + ″ + *sarx,* flesh, + *oma,* tumor] A malignant tumor composed of blood vessels, muscle tissue, and connective tissue.

angioneurectomy (ăn″jē-ō-nū-rĕk′tō-mē) [″ + *neuron,* nerve, + *ektome,* excision] Excision of vessels and nerves.

angioneuromyoma (ăn″jē-ō-nū″rō′mī-ō′mă) Angiomyoneuroma.

angioneurotomy (ăn″jē-ō-nū-rŏt′ō-mē) [″ + ″ + *tome,* incision] Cutting of vessels and nerves.

angionoma (ăn″jē-ō-nō′mă) [Gr. *angeion,* vessel, + *nome,* ulcer] Ulceration of a vessel.

angioparalysis (ăn″jē-ō-pă-răl′ĭ-sĭs) [″ + *paralyein,* loosen, dissolve] Vasomotor relaxation of blood vessel tone.

angiopathology (ăn″jē-ō-pă-thŏl′ō-jē) [″ + *pathos,* disease, suffering, + *logos,* word, reason] Morbid changes in diseases of the blood vessels.

angiopathy (ăn-jē-ŏp′ă-thē) Any disease of blood or lymph vessels. SYN: *angiosis*.

amyloid a. An abnormality of cere-

bral blood vessels in which amyloid is deposited in the walls of small arteries and arterioles. It may occur in persons with chronic infectious and inflammatory disorders or B-cell lymphoma, and is a common contributor to intracerebral hemorrhage or Alzheimer's disease in older persons.

angiophacomatosis, angiophakomatosis (ăn″jē-ō-făk″ō-mă-tō′sis) [″ + *phakos,* lens, + *oma,* tumor, + *osis,* condition] Hippel's disease.

angioplasty (ăn′jē-ō-plăs″tē) [″ + ″] Any endovascular procedure that reopens narrowed blood vessels and restores forward blood flow. Most often angioplasties are performed on coronary, carotid, or peripheral arteries occluded by atherosclerosis. Some common angioplasty techniques include the following: *atherectomy,* which opens occluded, scarred, or calcified vessels by removing atherosclerotic plaques with rapidly rotating drills; *balloon angioplasty,* which uses the inflation of high-pressure balloons within blocked arteries to force them open; *laser and radiofrequency angioplasties,* which vaporize or ablate atherosclerotic plaques; *endovascular stents,* which hold vessels open with expandable lattices inserted across the narrowed section of the artery SEE: illus.; *percutaneous transluminal coronary a.*

facilitated a. The treatment of acute myocardial infarction with small doses of clot-busting and antiplatelet drugs, followed immediately (within 1 hr) by balloon angioplasty.

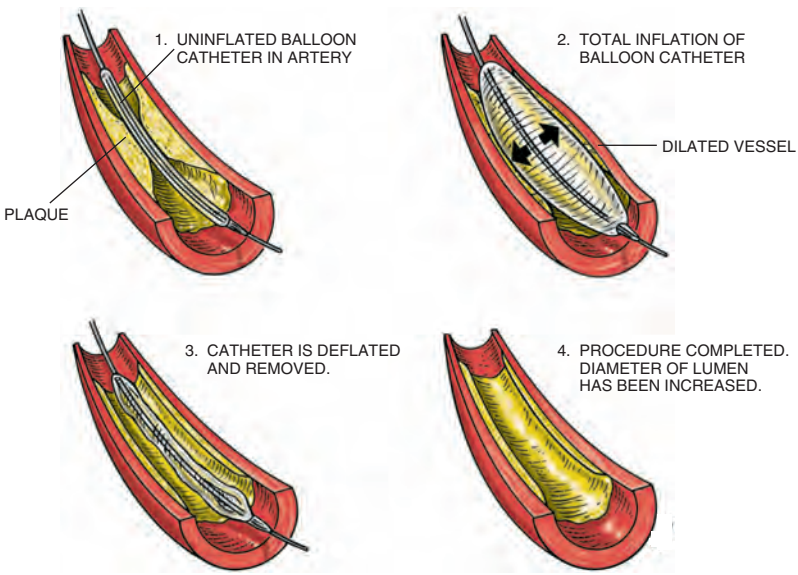
laser-assisted a. The use of laser energy to vaporize an atherosclerotic plaque in a diseased coronary or peripheral blood vessel. SEE: *percutaneous transluminal coronary a.*

percutaneous transluminal coronary a. ABBR: PTCA. A percutaneous method of treating localized coronary artery narrowing without sternotomy. A special double-lumen catheter, designed so that a cylindrical balloon surrounds a portion of the vessel, is inserted through the skin into the right femoral artery. Repeated inflation and deflation of the balloon with pressure between 9 and 15 atmospheres (approximately 135 to 225 psi) dilates the narrowed vessel.

In the U.S. alone, hundreds of thousands of coronary angioplasties are performed each year. Modifications in this technique may be used to open blocked arteries in many regions of the circulation (e.g., renal, iliac, or femoral arteries).

PATIENT CARE: *Preoperative*: Angiography is used to confirm the presence and location of arterial occlusions. The cardiologist's explanation of the procedure is reinforced. The patient is encouraged to state feelings and concerns, and misconceptions are clarified. The patient is prepared physically for the procedure according to the surgeon's orders. Baseline data needed for comparison with postoperative assessment data are gathered.

Postoperative: Vital signs, cardiac rate and rhythm, and neurovascular status distal to the catheter insertion



ARTERIAL BALLOON ANGIOPLASTY

site are monitored. A Doppler stethoscope should be used if peripheral pulses are difficult to palpate. The catheter site is inspected periodically for hematoma formation, ecchymosis, or hemorrhage. The dressing is marked, and the health care provider is notified of any rapid progression. If bleeding occurs, direct pressure is applied to the catheter site. The patient should keep the punctured leg straight and limit head elevation to no more than 15° to prevent hip flexion and potential catheter migration. The patient is assessed for chest pain, which may indicate vasospasm or reocclusion of the ballooned vessel. Intravenous fluids are administered as prescribed to promote excretion of contrast medium. The patient is assessed for signs and symptoms of fluid overload, i.e., dyspnea, pulmonary crackles, distended neck veins, tachycardia, bounding pulse, hypertension, gallop rhythms. Pharmacological therapy is continued as prescribed (IV nitroglycerin, heparin). Catheter removal is explained to the patient, and direct pressure is applied to the insertion site for 30 min, followed by a pressure dressing. Vital signs continue to be monitored until it is certain that no occult hemorrhage is occurring. Discharge instructions are provided to the patient and family regarding the scheduled return visit with the cardiologist, follow-up exercise, stress testing or angiography, and any exercise prescriptions or activity restrictions (usually patients can walk 24 hr after the procedure and return to work in 2 weeks). The importance of drug regimens, including desired effects and potential adverse reactions, is reinforced.

rescue a. The use of angioplasty to open coronary arteries that remain occluded after intravenous thrombolytic therapy for acute myocardial infarction.

angiopoiesis (ăn″jē-ō-poy-ē′sĭs) [″ + *poiein,* to make] The formation of blood vessels. **angiopoietic** (-poy-ĕt′ĭk), *adj.*

angiopoietin (ăn″jē-ō-poy-ē′tĭn; -poy′ĕ-tĭn) [Gr.*angeion,* body cavity or vessel + *poiesis,* making] One of several genes (or the proteins they encode) that stimulate new blood vessel formation. The proteins encoded by angiopoietin are found in healthy cardiac endothelium and in diseased tissues such as arthritic joints and malignant tumors.

angiopressure (ăn′jē-ō-prĕsh″ŭr) Pressure applied to a blood vessel to arrest hemorrhage.

angiorrhaphy (ăn″jē-or′ă-fē) [″ + *rhaphe,* seam, ridge] Suture of a vessel, esp. a blood vessel.

angiorrhexis (ăn″jē-or-ĕk′sĭs) [″ + *rhexis,* rupture] Rupture of a vessel, esp. a blood vessel.

angiosarcoma (ăn″jē-ō-săr-kō′mă) [″ + *sarx,* flesh, + *oma,* tumor] Malignant neoplasm originating from blood vessels. SYN: *hemangiosarcoma*.

angiosclerosis (ăn″jē-ō-sklĕ-rō′sĭs) [″ + *sklerosis,* hardening] Hardening of the walls of the vascular system.

angioscotoma (ăn″jē-ō-skō-tō′mă) [″ + *skotoma,* darkness] The defect produced in the visual field by the shadows of the retinal blood vessels.

angiosis (ăn″jē-ō′sĭs) [Gr. *angeion,* vessel, + *osis,* condition] Any disease of blood vessels or lymph vessels. SYN: *angiopathy*.

angiospasm (ăn′jē-ō-spăzm) [″ + *spasmos,* a convulsion] Spasmodic contraction of blood vessels; may cause cramping of muscles or intermittent claudication. **angiospastic** (ăn″jē-ō-spăs′tĭk), *adj.*

angiostatin (ăn″jē-ō-stăt′ĭn) A protein fragment of plasminogen that inhibits the growth of blood vessels, possibly by blocking the enzyme ATP synthase on the endothelium. It may shrink malignant tumors by decreasing their blood supply.

angiostenosis (ăn″jē-ō-stĕ-nō′sĭs) [″ + *stenoein,* to make narrow, + *osis,* condition] Narrowing of a vessel, esp. a blood vessel.

angiosteosis (ăn″jē-ŏs″tē-ō′sĭs) [″ + *osteon,* bone, + *osis,* condition] Calcification of a vessel.

angiostomy (ăn″jē-ŏs′tō-mē) [″ + *stoma,* mouth] An operation that makes an artificial fistulous opening into a blood vessel.

angiostrongyliasis (ăn″jē-ō-strŏn″jĭ-lī′ă-sĭs) [″ + Gr. *strongylos*, compact + ″] Infection with *Angiostrongylus* species, a parasite commonly known as the rat lungworm.

Angiostrongylus (ăn″jē-ō-strŏn′jĭ-lŭs) [Gr. *angeion,* vessel, + *strongylos,* round] A genus of roundworms that can cause eosinophilic meningitis in humans; commonly called *rat lungworm*. Species include *A. cantonensis* and *A. costaricensis*.

angiostrophy (ăn″jē-ŏs′trō-fē) [″ + *strophe,* twist] The former procedure of twisting of the cut end of a blood vessel to arrest bleeding.

angiotelectasis (ăn″jē-ō-tĕl-ĕk′tă-sĭs) [″ + *telos,* end, + *ektasis,* stretching out] Dilatation of terminal arterioles.

angiotensin (ăn″jē-ō-tĕn′sĭn) A vasopressor produced when renin is released from the kidney. Renin is formed by the juxtaglomerular apparatus of the kidney. SEE: *apparatus, juxtaglomerular*.

a. I Physiologically inactive form of angiotensin; converted to angiotensin II in the lungs.

a. II Physiologically active form of angiotensin; a powerful vasopressor and

stimulator of aldosterone production and secretion.

a. amide A vasoconstricting compound of angiotensin.

angiotensin-converting enzyme inhibitor ABBR: ACE inhibitor. Any of the therapeutic agents that inhibit conversion of angiotensin I to angiotensin II. ACE inhibitors are used to treat hypertension and heart failure and to protect kidney function in patients with diabetes mellitus.

angiotensinogen (ăn″jē-ō-tĕn-sĭn′ō-jĕn) A serum globulin fraction formed in the liver; converted to angiotensin as a result of hydrolysis by renin.

angiotherapy (ăn″jē-ō-thĕr′ă-pē) [Gr. *angeion,* vessel, + *therapeia,* treatment] Treatment applied directly into a catheterized blood vessel. Angiotherapy is used, e.g., to dissolve thrombi within arteries or veins or to infuse drugs directly into the blood supply of a tumor.

angiotribe (ăn′jē-ŏ-trīb″) [″ + Gr. *tribein,* to crush] A forceps designed for application of a strong, crushing force to a tissue containing an artery. This is done to control hemorrhage.

angle (ăng′gl) [L. *angulus*] **1.** The figure or space outlined by the diverging of two lines from a common point or by the meeting of two planes. **2.** A projecting or sharp corner.

A a. The orientation of the patella relative to the tibial tubercle. The angle is formed by the intersection of a line bisecting the long axis of the patella and a passed through the tibial tubercle to the apex of the inferior pole of the patella.

acromial a. The angle formed by the junction of the lateral and posterior borders of the acromion.

acute a. An angle less than 90°.

alpha a. The angle formed by intersection of the visual line with the optic axis.

alveolar a. The angle between the horizontal plane and a line drawn through the base of the nasal spine and the middle point of the alveolus of the upper jaw.

anterior chamber a. The angle between the cornea and iris at the periphery of the anterior chamber of the eye.

biorbital a. The angle formed by the meeting of the axes of the orbits.

cardiophrenic a. The medial inferior corner of the pulmonary cavity bordered by the heart and diaphragm.

carrying a. The angle in the sagittal plane made at the elbow by extending the long axis of the forearm and the upper arm. This obtuse angle is more pronounced in women than in men.

caudal a. In radiology, angulation of the central ray toward the patient's feet.

cavity a. The angle formed by two or more walls of a cavity preparation in restorative dentistry.

cephalic a. In radiology, angulation of the central ray toward the patient's head.

cephalometric a. The angle formed by intersecting anthropometric lines. It is used in studies of the skull and for the diagnosis of malocclusions of dental, skeletal, and dentoskeletal origin.

cerebellopontine a. The angle formed by the junction of the cerebellum and the pons. SYN: *pontine angle*.

cervicofemoral a. The measured angle between the femoral neck and shaft on plain radiographs. The cervicofemoral angle is normally 35° in infancy; with maturation of the skeleton it increases to 45°. The cervicofemoral angle plus the angle of inclination should equal 180°.

a. of convergence The angle between the visual axis and the median line when an object is looked at.

costal a. The meeting point of the lower border of the false ribs with the axis of the sternum.

costophrenic a. The lateral inferior corner of the pulmonary cavity bordered by the ribs and diaphragm.

costovertebral a. The angle formed on each side of the trunk by the junction of the last rib with the lumbar vertebrae.

craniofacial a. The angle formed by the basifacial and basicranial axes at the midpoint of the sphenoethmoidal suture.

facial a. The angle made by lines from the nasal spine and external auditory meatus meeting between the upper middle incisor teeth.

flat a. The angle between two lines that join at an angle of almost 180°.

gamma a. The angle between the line of vision and the optic axis.

gonial a. Angle of jaw.

Hilgenreiner's epiphyseal a. The angle formed by a line drawn through the triradiate and a line drawn through the physes of the femoral head. This angle is normally 25°. Coxa vara is marked by angles greater than 25°; coxa valga by angles less than 25°.

a. of incidence The angle between a ray striking a surface and a line drawn perpendicular to the surface at the point of incidence.

a. of jaw The angle formed where the vertical back edge of the ramus of the mandible meets the horizontal edge along the bottom. SYN: *gonial angle; angle of mandible*.

a. of mandible Angle of jaw.

metafacial a. The angle between the base of the skull and the pterygoid process.

obtuse a. An angle greater than 90°.

occipital a. The angle formed at the

opisthion by the intersection of lines from the basion and from the lower border of the orbit.

ophryospinal a. The angle formed at the anterior nasal spine by the intersection of lines drawn from the auricular point and the glabella.

parietal a. The angle formed by the meeting of a line drawn tangent to the maximum curve of the zygomatic arch and a line drawn tangent to the end of the maximum frontal diameter of the skull. If these lines are parallel, the angle is zero; if they diverge, a negative angle is formed.

pontine a. Cerebellopontine a.

prophy a. In dentistry, a wheel containing pieces of wire. It is used for cleaning metal surfaces.

pubic a. The angle formed by the junction of the rami of the pubic bones.

Q a. The acute angle formed by a line from the anterior superior iliac spine of the pelvis through the center of the patella and a line from the tibial tubercle through the patella. The angle describes the tracking of the patella in the trochlear groove of the femur. The normal angle is around 15 degrees. It is usually greater in females.

a. of refraction The angle formed by a refracted ray of light with a line perpendicular to the surface at the refraction point.

right a. An angle of 90°.

sacrolumbar a. The angle formed by articulation of the last lumbar vertebra and the sacrum.

sacrovertebral a. The angle formed by the base of the sacrum and the fifth lumbar vertebra.

sphenoid a. The angle formed at the top of the sella turcica by the intersection of lines drawn from the nasal point and the tip of the rostrum of the sphenoid.

sternal a. The angle formed by the junction of the manubrium and the body of the sternum.

a. of Treitz Sharp curve at the duodenojejunal junction.

venous a. The angle formed by the junction of the internal jugular and subclavian veins.

visual a. SEE: *visual angle*.

Angle's classification (ăng′glz) Classification of malocclusion.

angor (ăng′gor) [L., strangling] Violent distress, as in angina pectoris.

angor animi (ăng′gor ăn′ĭ-mē) [″ + L. *animus,* soul] The feeling that one is dying, as may occur in connection with angina pectoris.

angstrom unit (ŏng′strŭm) [Anders J. Ångström, Swedish physicist, 1814–1874] ABBR: A. SYMB: Å. U. An internationally adopted unit of length equal to 10^{-10} m, or 0.1 nm; used esp. to measure radiation wavelengths, including light energy.

anguidine (ăng′wĭ-dēn) Diacetoxyscirpenol.

angular (ăng′gū-lăr) [L.] Having corners or angles.

angulation (ăng″ū-lā′shŭn) **1.** Abnormal formation of angles by tubular structures such as the intestines, blood vessels, or ureter. **2.** In radiology, the direction of the primary beam in relation to the film and the object being imaged. **3.** The angular relationship formed at a joint between two long bones.

horizontal a. The position of the dental x-ray tube head in the horizontal plane. To avoid errors in x-ray interpretation, the central ray is directed perpendicular to the curve of the dental arch and film. Correct horizontal angulation produces a radiograph with "open" contacts. Incorrect horizontal angulation produces a radiograph with "overlapped" contacts.

vertical a. The position of the dental x-ray tube head in the vertical plane, measured in degrees. The central ray is directed perpendicular to the film and the tooth when using the paralleling imaging technique. When using the bisecting angle technique, the central ray is directed perpendicular to the bisector. Errors in calculating the vertical angulation produce elongated or foreshortened images.

anhedonia (ăn″hē-dō′nē-ă) [Gr. *an-,* not, + *hedone,* pleasure] Lack of pleasure in acts that are normally pleasurable. SEE: *hedonism*. **anhedonic** (-dŏn′ĭk), *adj.*

anhidrosis (ăn″hī-drō′sĭs) [″ + *hidros,* sweat] Diminished or complete absence of secretion of sweat. It may be generalized or localized, temporary or permanent, disease related or congenital. SYN: *anidrosis*.

TREATMENT: Treatment consists of therapy for the cause or accompanying conditions. The patient should wear soft, nonirritating clothing and use bland, soothing skin ointments and lubricants. Air conditioning provides comfort in most instances.

anhidrotic (ăn″hī-drŏt′ĭk) **1.** Inhibiting or preventing perspiration. **2.** An agent that inhibits or prevents perspiration. SYN: *anidrotic; antihidrotic; antiperspirant; antisudorific*.

anhydrase (ăn″hī′drās) [″ + *hydor,* water, + *-ase,* enzyme] An enzyme that promotes the removal of water from a chemical compound.

anhydride (ăn-hī′drīd) [Gr. *an-,* not, + *hydor,* water] A compound formed by removal of water from a substance, esp. from an acid.

anhydrochloric (ăn-hī-drō-klō′rĭk) [″ + ″ + *chloros,* green] Lacking hydrochloric acid.

1,5 anhydroglucitol (ăn-hī″drō-gloo′sĭ-tŏl) [″ + ″ + ″ + *-itol,* a suffix for names of alcohols with more than one hydroxyl group] ABBR: 1,5 AG. A serum marker of hyperglycemia whose reabsorption by the kidney tubules is competitively inhibited by glucose excretion in the urine. High blood sugars, accompanied by urinary excretion of glucose, decrease 1,5 AG levels. Assays for 1,5 AG can be used to monitor long-term glucose control in patients with diabetes mellitus.

anhydrous (ăn-hī′drŭs) [″ + *hydor,* water] Lacking water.

anianthinopsy (ăn-ē-ăn′thĭn-ŏp″sē) [″ + *ianthinos,* violet, + *opsis,* vision] Inability to recognize violet or purple.

anicteric (ăn″ĭk-tĕr′ĭk) [″ + *ikteros,* jaundice] Without jaundice.

anidrosis (ăn-ĭ-drō′sĭs) Anhidrosis.

anidrotic (ăn-ĭ-drŏt′ĭk) Anhidrotic.

aniline (ăn′ĭ-lĭn) [Arabic *an-nil,* the indigo plant] The simplest aromatic amine, C_6H_7N; an oily liquid derived from benzene. It is used in the manufacture of medical and industrial dyes. Aniline has antipyretic action but is too toxic to use as a medicine.

anilingus (ā″nĭ-lĭn′gŭs) [L. *anus* + *lingere,* to lick] Oral stimulation of the anus with the tongue or lips. SEE: *cunnilingus*.

anilism (ăn′ĭl-ĭzm) [Arabic *an-nil,* the indigo plant, + Gr. *-ismos,* condition] Chronic aniline poisoning. Findings include intermittent heart block, muscular weakness, cyanosis, and dizziness or vertigo.

anima (ăn′ĭ-mă) [L., soul] **1.** Soul. **2.** According to Carl Jung, an individual's inner self as distinguished from the external personality (persona). **3.** Jung's term for the feminine inner personality present in men. SEE: *animus*.

animal (ăn′ĭ-măl) [L. *animalis,* living] **1.** A living organism that requires oxygen and organic foods, is incapable of photosynthesis, has limited growth, and is capable of voluntary movement and sensation. **2.** Any animal other than humans. **3.** Pert. to or from an animal.

cold-blooded a. An animal whose body temperature varies according to the temperature of the environment.

control a. In medical research involving the use of animals, an animal that is not treated, but is housed and cared for under the same conditions as the treated animal(s). SEE: *control* (2).

warm-blooded a. An animal whose body temperature remains constant regardless of the temperature of the environment; as opposed to a *cold-blooded animal*. SYN: *endotherm*.

animation (ăn-ĭ-mā′shŭn) [L. *animus,* soul] State of being alive or active.

suspended a. Temporary cessation of vital functions with loss of consciousness; state of apparent death.

animatism (ăn′ĭ-mă-tĭzm) The belief that everything in nature, animate and inanimate, contains a spirit or soul.

animi agitatio (ăn′ĭ-mē ă-jĭ-tā′shē-ŏ) [″ + *agitare,* to turn over] Mental agitation.

animism (ăn′ĭ-mĭzm) Attribution of spiritual qualities and mental capabilities to inanimate objects.

animus (ăn′ĭ-mŭs) [L., breath, mind, soul] **1.** An animating or energizing motive or intention. **2.** A feeling of bitter hostility; a grudge. **3.** According to Carl Jung, the masculine inner personality present in women. SEE: *anima*.

anion (ăn′ī-ŏn) [Gr. *ana,* up, + *ion,* going] An ion carrying a negative charge; the opposite of cation. An anion is attracted by, and travels to, the anode (positive pole). Examples are acid radicals and corresponding radicals of their salts. SEE: *electrolyte; ion*. **anionic** (ăn″ī-ŏn′ĭk), *adj.*

aniridia (ăn″ĭ-rĭd′ē-ă) [Gr. *an-,* not, + *iris,* rainbow, iris] Congenital absence of all or part of the iris. SYN: *irideremia*.

anisakiasis (ăn″ĭ-să-kī′ă-sĭs) Disease of the gastrointestinal tract accompanied by intestinal colic, fever, and abscesses; caused by eating uncooked fish containing larval nematodes of the family Anisakidae.

Anisakis simplex (ăn-ĭ-să′kĭs sĭm′plĕks) [NL] An intestinal parasite that typically infests crustaceans, fish, or sea mammals. It may cause human disease (anisakiasis) when the flesh of these animals is consumed without adequate cooking or freezing or is used in raw dishes such as sashimi or sushi. This intestinal roundworm is colloquially referred to as the herring worm.

anise (ăn′ĭs) An annual herb, *Pimpinella anisum,* cultivated for its licorice-flavored seeds; used as a culinary herb, an aromatic, and a digestive aid.

aniseikonia (ăn-ĭs-ī-kō′nē-ă) [Gr. *anisos,* unequal, + *eikon,* image] A condition in which the size and shape of the ocular image of one eye differ from those of the other. SYN: *anisoiconia*.

anismus (ăn′ĭs-mŭs) Excessive contraction of external sphincter of rectum.

aniso- (ăn-ī′sō) [Gr. *anisos,* unequal] Combining form meaning *unequal, asymmetrical,* or *dissimilar.*

anisoaccommodation (ăn-ī″sō-ă-kŏm″ă-dā′shŭn) [″ + L. *accommodare,* to suit] Difference in the ability of the eyes to accommodate. SEE: *accommodation*.

anisochromatic (ăn-ī″sō-krō-măt′ĭk) [″ + *chroma,* color] Not of uniform color.

anisocoria (ăn-ī″sō-kō′rē-ă) [″ + *kore,* pupil] Inequality of the size of the pupils; may be congenital or associated with aneurysms, head trauma, diseases

of the nervous system, brain lesion, paresis, or locomotor ataxia.

anisocytosis (ăn-ī″sō-sī-tō′sĭs) [″ + *kytos,* cell, + *osis,* condition] Condition in which there is excessive inequality in the size of cells, esp. erythrocytes.

anisophoria (ăn″ī-sō-fō′rē-ă) [″ + *phoros,* bearing] Eye muscle imbalance so that the horizontal visual plane of one eye is different from that of the other.

ankle (ăng′kl) [AS. *ancleow*] **1.** The joint between the leg and foot; the articulation of the tibia, fibula, and talus. The ankle is a hinge joint. **2.** In popular usage, the region of this joint, including the tarsus and lower end of the leg. SEE: *foot* for illus.

ankle clonus Repetitive extension-flexion movement of the ankle muscles, associated with increased muscle tonus; a common symptom of corticospinal disease.

a.c. reflex A reflex elicited by quick, vigorous dorsiflexion of the foot while the knee is held in a flexed position, resulting in repeated clonic movement of the foot as long as it is maintained in dorsiflexion. In women with pregnancy-induced hypertension, this reflects hyperirritability of the central nervous system and increased risk for eclamptic convulsions.

ankylo-, ankyl- (ăng′kĭ-lō) [Gr. *ankylos,* crooked] Combining forms meaning *crooked, bent,* or *a fusion or growing together of parts.*

ankyloblepharon (ăng″kĭ-lō-blĕf′ăr-ŏn) [″ + *blepharon,* eyelid] Blepharosynechia.

ankylochilia (ăng″kĭ-lō-kī′lē-a) [″ + *cheilos,* lip] Adhesion of the upper and lower lips.

ankylodactylia (ăng-kĭ-lō-dăk-tĭl′ē-a) [″ + *daktylos,* finger] Adhesion of two or more fingers or toes.

ankyloglossia (ăng″kĭ-lō-glŏs′sē-ă) [″ + *glossa,* tongue] Abnormal shortness of the frenulum of the tongue. SYN: *lingua frenata; tongue-tie*.

ankylopoietic (ăng″kĭ-lō-poy-ĕt′ĭk) [Gr. *ankyle,* stiff joint, + *poiein,* to form] **1.** Indicating the presence of ankylosis. **2.** Causing ankylosis.

ankyloproctia (ăng″kĭ-lō-prŏk′shē-ă) [Gr. *ankylos,* crooked, + *proktos,* anus] Stricture or imperforation of the anus.

ankylosed (ăng′kĭ-lōsd″) **1.** Fixed; stiffened; held by adhesions. **2.** Affected with ankylosis.

ankylosis (ăng″kĭ-lō′sĭs) [Gr. *ankyle,* stiff joint, + *osis,* condition] Immobility of a joint. The condition may be congenital (sometimes hereditary), or it may be the result of disease, trauma, surgery, or contractures resulting from immobility.

PATIENT CARE: Immobility-induced contractures that can result in ankylosis can be prevented by putting joints through their normal range of motion passively whenever they cannot be exercised actively. If a nonsurgical ankylosis is present, the joint is maintained in a functional position, splints are used for patients with spastic muscles, passive range-of-motion exercises to affected joints are initiated, and appropriate physical therapy is prescribed. Orthopedic intervention may be required. If an ankylosis is surgically created, the joint is immobilized until the bone has healed (usually in 6 to 12 weeks), and correct body alignment is maintained. SEE: *ankylosing spondylitis*.

artificial a. The surgical fixation of a joint.

bony a. The abnormal union of the bones of a joint. SYN: *true ankylosis*.

dental a. A condition marked by the loss of tooth movement due to the fusion of the root cementum with the adjacent alveolar bone.

extracapsular a. Ankylosis caused by rigidity of parts outside a joint.

false a. Fibrous a.

fibrous a. Ankylosis due to the formation of fibrous bands within a joint. SYN: *false ankylosis; ligamentous ankylosis*.

intracapsular a. Ankylosis due to undue rigidity of structures within a joint.

ligamentous a. Fibrous a.

true a. Bony a.

Ankylostoma (ăng″kĭ-lŏs′tō-mă) Ancylostoma.

ankylostomiasis (ăng″kĭ-lō-stō-mī′ă-sĭs) SEE: *ancylostomiasis*.

ankylotia (ăng″kĭ-lō′shē-ă) [Gr. *ankylos,* crooked, + *ot-,* ear] Stricture or imperforation of the external auditory meatus of the ear.

ankylotome (ăng′kĭl-ō-tōm, ăng-kĭl′ō-tōm) [″ + *tome,* incision] An instrument for cutting the frenulum of the tongue in tongue-tie.

ankylurethria (ăng″kĭl-ū-rē′thrē-ă) [″ + *ourethra,* urethra] Stricture or imperforation of the urethra.

ankyrin A structural protein in red blood cells that binds cell membrane transport molecules to spectrin.

anlage (ŏn′lŏg″ă) [Ger., a laying on] In an embryo, an accumulation of cells destined to form a specific part of the organism; the beginning of an organized tissue, organ, or part. SYN: *primordium*.

ANNA *American Nephrology Nurses' Association.*

anneal (an-nēl′) [AS. *anaelan,* to burn] To soften a material, such as glass, metal, or wax, by heating and cooling to remove internal stresses and to make it more easily adapted or swaged, as in preparation of materials for restorative dentistry.

annectant, annectent (ă-nĕk′tĕnt) [L.

annectens, tying or binding to] Linking; connecting.

Annelida (ă-nĕl′ĭ-dă) The phylum that includes earthworms, leeches, and other segmented worms. Some annelids are intermediate hosts for parasitic worms. Leeches are ectoparasites. The medicinal leech, *Hirudo medicinalis,* is the source of an anticoagulant that is used to treat myocardial infarction and other conditions caused by blood clots.

annexitis (ă-nĕks-ī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of the adnexa uteri. SYN: *adnexitis*.

annular (ăn′ū-lăr) [L. *annulus,* ring] Circular; ring-shaped (e.g., annular ligament of the elbow).

annuloplasty (ăn′ū-lō-plăs′tē) **1.** Surgical repair of a ring-shaped structure (e.g., a heart valve, an intervertebral disk). **2.** An annuloplastic device used to repair a ring-shaped structure. **annuloplastic,** *adj.*

annulorrhaphy (ăn″ū-lor′ă-fē) [″ + Gr. *rhaphe,* seam, ridge] Closure of a hernial ring by suture.

annulus (ăn′ū-lŭs) *pl.* **annuli** [L.] A ring-shaped structure; a ring. Also spelled *anulus*.

anococcygeal (ā″nō-kŏk-sĭ′jē-al) [L. *anus,* anus, + Gr. *kokkyx,* coccyx] Rel. to both the anus and coccyx. SEE: *anococcygeal body; anococcygeal ligament*.

anococcygeal body The muscle and fibrous tissue lying between the coccyx and the anus.

anodal opening contraction SEE: under *contraction*.

anode (ăn′ōd) [Gr. *ana,* up, + *hodos,* way] **1.** The positive pole of an electrical source. **2.** In radiography, the target of the x-ray tube. SEE: *cathode*. **anodal** (ăn-ō′dăl), *adj.*

anoderm (ā′nō-dĕrm″) The thin, pale, shiny squamous epithelium covering the lower half (below the pectinate line) of the anal canal. This epithelium is hairless and has no glands. SEE: *anal canal*.

anodmia (ăn-ŏd′mē-ă) [Gr. *an-,* not, + *odme,* stench] Anosmia.

anodontia (ăn″ŏ-dŏn′shē-ă) [″ + *odous,* tooth] Congenital absence of the teeth. SYN: *edentia*.

anodyne (ăn′ō-dīn) [″ + *odyne,* pain] A drug that relieves pain. SYN: *analgesic*(2).

anodynia (ăn″ō-dĭn′ē-ă) Cessation or absence of pain.

anogenital (ā″nō-jĕn′ĭ-tăl) Concerning the anal and genital areas.

anoikis (ăn-ŏy′ē-kĭs) Programmed cell death (apoptosis) occurring in epithelial cells. It is associated with loss of the normal ability to establish contacts between the cell and the extracellular matrix. SEE: *apoptosis*.

anomalad (ă-nŏm′ă-lăd) [″ + Gr. *-ad,* a suffix for words of Greek origin denoting a group or unit of a number] A closely related group of developmental disorders or congenital findings, specifically ones that have a common or unifying cause.

anomaloscope (ă-nŏm′ă-lō-skōp″) [Gr. *anomalos,* irregular, + *skopein,* to examine] A device used to assess color perception (color blindness). The patient is asked to adjust red and green lights to match another color, e.g., a yellow light.

anomalous (ă-nŏm′ă-lŭs) [Gr. *anomalos,* uneven] Irregular; deviating from or contrary to normal.

anomalous perception **1.** An infrequently used synonym for extrasensory perception. **2.** The subjective experience of one of the five senses when another sense is stimulated, e.g., the sensing of poetry as color, or sound as taste.

anomaly (ă-nŏm′ă-lē) [Gr. *anomalia,* irregularity] Deviation from normal.

congenital a. Intrauterine development of an organ or structure that is abnormal in form, structure, or position. SEE: *defect, birth*.

anomia (ă-nō′mē-ă) [Gr. *a-,* not, + *onoma,* name] Inability to remember names of objects.

anomie (ăn′ŏ-mē) [Fr. from Gr. *anomia,* lawlessness] A term coined by the French sociologist Emile Durkheim (1858–1917) to indicate a condition similar to alienation. The individual feels there has been a disintegration of his or her norms and values. Durkheim felt such individuals were prone to take their lives because of the anxiety, isolation, and alienation that they experience.

anonychia (ăn-ō-nĭk′ē-ă) [Gr. *an-,* not, + *onyx,* nail] Absence of the nails.

anonymous (ă-nŏn′ĭ-mŭs) [Gr. *anonymos,* nameless] **1.** Unidentified or unnamed. **2.** Shielded from the view of others; private.

anonymous testing Confidential testing for the presence of a disease or condition, e.g., for hepatitis or pregnancy.

anoperineal (ā″nō-pĕr-ĭ-nē′ăl) Rel. to both the anus and perineum.

Anopheles (ă-nŏf′ĕ-lēz) [Gr. *anopheles,* harmful, useless] A genus of mosquitoes belonging to the family Culicidae, order Diptera. It is a vector of many infectious diseases, including malaria, dengue, and filariasis.

anophoria (ā″nō-for′ē-ă) Hyperphoria.

anophthalmia (ăn-ŏf-thăl′mē-ă) [Gr. *an-,* not, + *ophthalmos,* eye] Congenital absence of one or both eyes. SYN: *anopia*(1).

anopia (an-ō′pē-ă) [″ + *ops,* eye] **1.** Anophthalmia. **2.** Hyperphoria.

anoplasty (ā′nō-plăs″tē) [L. *anus,* anus, + Gr. *plassein,* to form] Reconstructive surgery of the anus.

Anoplura (an-ō-ploo′ră) [Gr. *anoplos,*

unarmed, + *oura,* tail] An order of insects composed of the sucking lice. SEE: *louse; pediculosis*.

anopsia (ăn-ŏp′sē-ă) [Gr. *an-,* not, + *opsis,* sight] **1.** Hyperphoria. **2.** Inability to use the vision, as occurs in strabismus, cataract, or refractive errors or in those confined in the dark.

anorchia (ăn-or′kē-ă) Anorchidism.

anorchidism, anorchism (ăn-or′kĭ-dĭzm″, ăn-or′kĭzm) [″ + *orchis,* testicle, + *-ismos,* condition] Congenital absence of one or both testes. SYN: *anorchia*.

anorectal (ā-nō-rĕk′tăl) Pert. to both the anus and rectum.

anorectic, anorectous (ăn-ō-rĕk′tĭc, -tŭs) [Gr. *anorektos,* without appetite for] Having no appetite.

anorexia (ăn-ō-rĕk′sē-ă) [Gr. *an-,* not, + *orexis,* appetite] Loss of appetite. Anorexia is seen in depression, malaise, the onset of fevers and illnesses, disorders of the alimentary tract (esp. the stomach), and alcoholism and drug addiction (esp. cocaine). Many medicines and medical procedures have the undesired side effect of causing the suppression of appetite. **anorexic** (-rĕk′sĭk), *adj.*

PATIENT CARE: Oral hygiene is provided before and after eating. The patient's food preferences are determined, and only preferred foods are offered. Small, frequent meals or smaller meals with between-meal and bedtime nutritional snacks are provided. The patient area is kept free of odors, and a quiet atmosphere is provided for meals. Family and friends are encouraged to bring favorite home-cooked meals and to join the patient for meals. Mealtime conversation should focus on pleasant topics and should not involve the patient's food intake. Actual intake is documented, indicating food types, amounts ingested, and approximate caloric and nutrient intake.

holy a. Anorexia mirabilis.

a. mirabilis A culture-bound illness found principally among devout women who forgo food to achieve purification of the soul. In Western nations this kind of anorexia is considered an eating disorder. SYN: *holy anorexia*.

a. nervosa An eating disorder marked by weight loss, emaciation, a disturbance in body image, and a fear of weight gain that results in self-imposed starvation. Patients with the disorder lose weight either by excessive dieting, compulsive exercising, self-induced vomiting, or laxative or diuretic abuse to purge themselves of calories they have ingested. The illness is typically found in industrialized nations and usually begins in the teenaged years. Young women are 10 to 20 times more likely than men to suffer from the disorder. Weight loss of greater than 15% of body weight is typical, often with significant metabolic consequences. These may include severe electrolyte disturbances, hypoproteinemia with associated edema, and endocrine dysfunction. Immune disturbances, anemia, and secondary cardiac arrhythmias may occur. In women, amenorrhea is also characteristically accompanied by infertility and loss of libido. Repeated vomiting can cause esophageal erosion, ulceration, tears, and bleeding, as well as dental caries and tooth and gum erosion. The disease often resists therapy.

Diagnosis is made by the following criteria: Intense fear of becoming obese. This does not diminish as weight loss progresses. The patient claims to feel fat even when emaciated. A loss of 25% of original weight may occur. No known physical illness accounts for the weight loss. There is a refusal to maintain body weight over a minimal normal weight for age and height.

Psychiatric therapy in a hospital is usually required if the patient refuses to eat. The patient may need to be fed parenterally. SEE: *bulimia; Nursing Diagnoses Appendix.*

PATIENT CARE: The nurse, nutritionist, and physician monitor the patient's vital signs and electrolyte balance; daily fluid intake and output; food types, amounts, and approximate nutrient intake; and laboratory values. The patient is weighed daily or weekly as prescribed. As necessary, the patient's body orifices, underarm area, and hair are checked for hidden weight before weighing. Small, frequent meals and nutritionally complete fluids are provided; the patient may accept the latter more readily. If tube feeding or parenteral nutrition is required, the procedure is explained to the patient and family. Edema or bloating, if present, is also explained, and the patient is reassured of its temporary nature. The patient's activities are strictly monitored as a precaution against vomiting, catharsis, or excessive exercise. The patient is taught that improved nutrition can correct abnormal laboratory findings. Arguments about food or related subjects are avoided. The patient is encouraged to recognize and express feelings; assertive behavior is supported. Assistance is offered to the family and close friends in dealing with their feelings about the patient and the patient's behavior, and they are instructed not to discuss food or weight with the patient. Individual, group, and family psychotherapy or behavior modification therapy are employed. The patient and family are encouraged to continue professional counseling on an outpatient basis, and are referred to local and national support and information organizations such as the Anorexia Nervosa

and Related Eating Disorders Organization. Stable weight and eating patterns, the ability to express feelings, and the establishment of healthier patient-family relationships are indicators of successful intervention.

anorexiant (ăn-ō-rĕks′ē-ănt) An appetite suppressor. Examples include amphetamines, fenfluramine, phentermine, and related drugs.

anorexic (ăn-ō-rĕk′sĭk) **1.** Of or relating to anorexia; anorectic. **2.** One who is affected with anorexia.

anorexigenic (ăn″ō-rĕk″sĭ-jĕn′ĭk) [″ + ″ + *gennan,* to produce] Causing loss of appetite.

anorgasmic (ăn″ŏr-găz′-mĭk) **1.** Unable to experience orgasm. **2.** Never having experienced orgasm.

anorgasmy (ăn-or-găz′mē) [″ + *orgasmos,* swelling] Failure to reach orgasm during sexual intercourse or masturbation.

anorthopia (ăn″or-thō′pē-ă) [″ + ″ + *ops,* eye] **1.** Vision in which straight lines do not appear straight; symmetry and parallelism not properly perceived. **2.** Strabismus.

anoscope (ā′nō-skōp) [L. *anus,* anus, + Gr. *skopein,* to examine] Speculum for examining the anus and lower rectum.

anosigmoidoscopy (ā″nō-sĭg″moy-dŏs′kō-pē) [″ + Gr. *sigmoeides,* shaped like Greek S, + *skopein,* to examine] Proctosigmoidoscopy.

anosmatic (ăn-ŏz-măt′ĭk) [Gr. *an-,* not, + *osme,* smell] Lacking the sense of smell.

anosmia (ăn-ŏz′mē-ă) Loss of the sense of smell. SYN: *anodmia*.

anosmic, anosmous (ăn-ŏz′mĭk, -mŭs) **1.** Lacking the sense of smell. **2.** Odorless.

anosognosia (ăn-ō-sŏg-nō′zē-ă) [″ + ″ + *gnosis,* knowledge] The apparent denial or unawareness of one's own neurological defect.

visual a. A neurological syndrome in which patients who cannot see deny that they are blind. An excuse such as "I lost my glasses" may be offered. The lesion is in the visual association areas of the cortex of the brain. SYN: *Anton's syndrome*.

anospinal (ā″nō-spī′năl) [L. *anus* + *spina,* thorn] Pert. to the anus and spinal cord or to the center in the spinal cord that controls the contraction of the anal sphincter.

anostosis (ăn-ŏs-tō′sĭs) [Gr. *an-,* not, + *osteon,* bone, + *osis,* condition] A defective formation or development of bone; failure to ossify.

anotia (ăn-ō′shē-ă) [″ + *ours,* ear] Congenital malformation with absence of the ears.

anotropia (ăn″ō-trō′pē-ă) [Gr. *ana,* up, + *trope,* a turning] Tendency of the eyes to turn upward and away from the visual axis.

ANOVA *analysis of variance.* SEE: *analysis of variance*.

anovaginal (ā″nō-văj′ĭ-năl) Pert. to the anus and vagina.

anovarism (ăn-ō′văr-ĭzm) [Gr. *an-,* not, + LL. *ovarium,* ovary, + Gr. *-ismos,* condition] Absence of ovaries.

anovesical (ā″nō-vĕs′ĭ-kl) [L. *anus,* anus, + *vesica,* bladder] Rel. to both the anus and urinary bladder.

anovular, anovulatory (ăn-ŏv′ū-lăr, ăn-ŏv′ū-lă-tō″rē) [Gr. *an-,* not, + LL. *ovarium,* ovary] Without ovulation.

anovulation (ăn″ō″vū-lā′shŭn) [″ +″] Failure to ovulate. Ovulation failures occur commonly during the reproductive cycle of women, beginning in puberty when ovulation is irregular, and recurring after pregnancy and during menopause. Diseases causing anovulation include Stein-Leventhal syndrome (polycystic ovary syndrome), among others. SEE: *ovulation*.

hyperandrogenic a. Failure to ovulate as a result of excessive levels of male hormones. Polycystic ovary syndrome (Stein-Leventhal syndrome) is the most common form of hyperandrogenic anovulation.

anoxemia (ăn-ŏk-sē′mē-ă) [″ + *oxygen* + Gr. *haima,* blood] Insufficient oxygenation of the blood. SEE: *hypoxemia; respiration*.

anoxia (ăn-ŏk′sē-ă) [″ + *oxygen*] Absence of oxygen. This term is often used incorrectly to indicate hypoxia. **anoxic** (ăn-ŏks′ĭk), *adj.*

anoxygenic (ăn″ŏk″sē-jĕn′ĭk) [″ + ″ + ″] **1.** Not reliant on oxygen for the electrons used in photosynthesis. **2.** Not productive of oxygen during photosynthesis.

ANP *advanced nurse practitioner*.

ANS *autonomic nervous system*.

ansa (ăn′să) *pl.* **ansae** [L., a handle] In anatomy, any structure in the form of a loop or arc.

a. cervicalis A nerve loop in the neck formed by fibers from the first three cervical nerves. Formerly called *ansa hypoglossi.*

a. lenticularis Tortuous fiber tract from the globus pallidus, extending around the internal capsule, to the ventral thalamic nucleus.

a. nervorum spinalium Connecting loops of nerve fibers between the anterior spinal nerves.

a. peduncularis Complex fiber tract from the anterior temporal lobe, extending around the internal capsule to the mediodorsal thalamic nucleus.

a. sacralis Nerve loop connecting the sympathetic trunk with the coccygeal ganglion.

a. subclavia Nerve loop that passes anterior and inferior to the subclavian

artery, connecting the middle and inferior cervical sympathetic ganglia.

ANSER system A group of questionnaires for evaluating developmental dysfunction in children.

ANSI *American National Standards Institute.*

ansiform (ăn′sĭ-form) [L. *ansa,* a handle, + *forma,* shape] Shaped like a loop or an arc.

ant Small social insect of the order Hymenoptera and family Formicidae, distributed worldwide. Ants live in highly organized colonies whose members specialize in performing specific tasks. Because some ants secrete formic acid, their sting can be hazardous.

fire a. An aggressive, stinging species that often forms large colonies. Its sting may cause itchy, painful rashes and, in some cases, anaphylactic shock.

ant- SEE: *anti-*.

ant. *anterior* (in anatomy).

Antabuse (ăn′tă-būs″) Proprietary name for disulfiram; administered orally in treatment of alcoholism. Drinking alcohol after taking this drug causes severe reactions, including nausea and vomiting, and may endanger the life of the patient. SEE: *Poisons and Poisoning Appendix.*

antacid (ănt-ăs′ĭd) [Gr. *anti,* against, + L. *acidum,* acid] An agent that neutralizes acidity, esp. in the stomach and duodenum. Examples are aluminum hydroxide and magnesium oxide.

antagonism (ăn-tăg′ō-nĭzm″) [Gr. *antagonizesthai,* to struggle against] Mutual opposition or contrary action, as between muscles or medicines.

microbial a. The inhibition of one bacterial organism by another. Through microbial antagonism, the normal bacterial flora of the body provides some defense against disease-causing organisms. SEE: *opportunistic infection*.

antagonist (ăn-tăg′ă-nĭst) Something that blocks, undoes, or produces the opposite effect of an action.

dental a. The tooth in the opposite arch against which a tooth occludes.

drug a. A drug that prevents receptor stimulation. An antagonist drug has an affinity for a cell receptor and, by binding to it, prevents the cell from responding to an agonist.

endothelin-receptor a. A medicine that lowers blood pressure by opposing the vasoconstricting effects of endothelins.

leukotriene-receptor a. Any of several medications (e.g., zafirlukast and montelukast) that block the inflammatory effects of leukotrienes and are used to treat patients with asthma. These medications help to reduce the dependence of asthmatic patients on corticosteroids and beta-agonist inhalers.

muscular a. A muscle that opposes the action of the prime mover and produces a smooth movement by balancing the opposite forces.

narcotic a. A drug that prevents or reverses the action of a narcotic. SEE: *nalorphine hydrochloride*.

serotonin a. Any of a class of medications used to treat or prevent nausea and vomiting. Examples are ondansetron (Zofran) and granisetron (Kytril).

antalkaline (ănt-ăl′kă-līn, -lĭn) [″ + *alkaline*] An agent that neutralizes alkalinity.

antaphrodisiac (ănt″ăf-rō-dĭz′ē-ăk) [″ + *aphrodisiakos,* sexual] An agent that depresses sexual desire. SYN: *anaphrodisiac*.

antasthenic (ănt″ăs-thĕn′ĭk) [″ + *astheneia,* weakness] Relieving weakness; strengthening, invigorating.

antatrophic (ănt″ă-trō′fĭk) [″ + *atrophia,* atrophy] Preventing or curing atrophy.

ante- [L.] Prefix meaning *before.*

antebrachium (ăn″tē-brā′kē-ŭm) [L. *ante,* before, + *brachium,* arm] The forearm. **antebrachial** (-ăl), *adj.*

antecedent (ăn″tē-sē′dĕnt) [L. *antecedere,* to precede] Something that comes before something else; a precursor.

plasma thromboplastin a. ABBR: PTA. Blood coagulation factor XI. SYN: *Christmas factor*. SEE: *coagulation factor*.

ante cibum (ăn′tē sē′bŭm) [L.] ABBR: a.c. Used in prescription writing to indicate *before meals.*

antecubital (ăn″tē-kū′bĭ-tăl) [″ + *cubitum,* elbow] In front of the elbow; at the bend of the elbow.

antecurvature (ăn″tē-kŭr′vă-tŭr″) [″ + *curvatura,* bend] Bending forward abnormally. SEE: *anteflexion*.

antefebrile (an″tē-fē′brĭl, -fē′brĭl″, -fĕb′rĭl) [L. *ante,* before, + *febris,* fever] Before the development of fever. SYN: *antepyretic*.

anteflect (ăn′tē-flĕkt) [″ + *flectere,* to bend] To bend or cause to bend forward.

anteflexion (ăn″tē-flĕk′shŭn) The abnormal bending forward of part of an organ, esp. of the uterus at its body and neck. SEE: *anteversion*.

antegrade (ăn′tē-grād) Moving forward or in the same direction as the flow.

antemortem (ăn′tē-mor′tĕm) [L.] Before death.

antemortem statement Declaration made by an individual immediately preceding death. SYN: *deathbed statement*.

antenatal (ăn″tē-nā′tăl) [″ + *natus,* born] Before birth. SYN: *prenatal*.

antepartal, antepartum (ăn″tē-păr′tăl, -tŭm) [L.] Period of pregnancy between conception and onset of labor, used with reference to the mother.

antepyretic (ăn″tē-pī-rĕt′ik) [L. *ante,* be-

fore, + Gr. *pyretos,* fever] Before the development of fever. SYN: *antefebrile*.

anterior (ăn-tēr′ē-ŏr, ăn-tĭr′ē-ŏr) [L.] Before or in front of; in anatomical nomenclature, refers to the ventral or abdominal side of the body.

anterior drawer test **1.** *Knee:* A test for anterior cruciate ligament rupture. It is positive if anterior glide of the tibia is increased. **2.** *Ankle:* A test for stability of the anterior talofibular ligament of the ankle. It is positive if movement is increased as the examiner grasps the heel with one hand and the distal tibia with the other and draws the heel forward. SYN: *anterior drawer sign*.

anterior horn cell SEE: under *cell*.

antero- [L.] Prefix denoting *anterior, front, before.*

anterograde (ăn′tĕr-ō-grād″) [″ + *gradior,* to step] Moving to the front; in a forward direction.

anteroinferior (ăn″tĕr-ō-ĭn-fē′rē-or) [″ + *inferior,* below] In front and below.

anterolateral (ăn″tĕr-ō-lăt′ĕr-ăl) [″ + *latus,* side] In front and to one side.

anteromedial (ăn″tĕr-ō-mē′dē-ăl) [″ + *medius,* middle] In front and toward the center.

anteroposterior (ăn″tĕr-ō-pŏs-tē′rē-or, ăn″tĕr-ō-pō′stĭr-ē-or) [″ + *posterior,* rear] ABBR: AP. From front to rear.

anterosuperior (ăn″tĕr-ō-soo-pē′rē-ŏr) [″ + *superior,* above] In anatomy, in front and above.

anteversion (ăn″tē-vĕr′zhŭn) [″ + *vertere,* to turn] **1.** A tipping forward of an organ as a whole, without bending. SEE: *anteflexion*. **2.** Excessive anterior angulation of the neck of the femur (i.e., femoral neck anteversion), leading to excessive internal rotation of the femur. The normal value for femoral neck anteversion is approx. 15°. Any increase in this anterior angulation is called femoral anteversion.

anteverted (ăn″tē-vĕrt′ĕd) Tipped forward.

anthelix (ănt′hē-lĭks, ăn′thē-lĭks) [Gr. *anti,* against, + *helix,* coil] Antihelix.

anthelmintic, anthelminthic, antihelmintic (ănt″hĕl-mĭn′tĭk, -thĭk) [″ + *helmins,* worm] An agent that treats or destroys parasitic worms. SYN: *helminthagogue; vermicide*.

Anthemis (ăn′thĕm-ĭs) **1.** A genus of aromatic flowering plants. **2.** Chamomile; dried blossoms of *Anthemis nobilis;* a bitter tonic, analgesic, and antispasmodic, used for various medicinal purposes (e.g., as a calming tea, an astringent, a bitter tonic, and a cosmetic hair rinse).

anthemorrhagic (ănt″hĕm-ō-răj′ĭk) [″ + *haima,* blood, + *rhegnynai,* to burst forth] Antihemorrhagic.

anthocyanin (ăn″thō-sī′ă-nĭn) [Gr. *anthos,* flower, + *kyanos,* dark blue] Any one of several water-soluble pigments found in berries, grapes, and other fruits and vegetables as they ripen. All of them are antioxidants. SEE: *antioxidant*.

anthophobia (ăn″thō-fō′bē-ă) [″ + *phobos,* fear] Morbid dislike or fear of flowers.

anthrac-, anthraco- [Gr. *anthrax,* coal, carbuncle] Prefix meaning *coal, carbon,* or *carbuncle*.

anthracene (ăn′thră-sēn) $C_{14}H_{10}$; a hydrocarbon obtained from distilling coal tar. It is used in manufacturing dyes.

anthracoid (an′thră-koyd) [″ + *eidos,* form, shape] Resembling or pert. to anthrax.

anthracosilicosis (ăn″thră-kō-sĭl″ĭ-kō′sĭs) [″ + L. *silex,* flint, + Gr. *osis,* condition] A form of pneumoconiosis in which carbon and silica deposits accumulate in the lungs due to coal dust inhalation. SYN: *coal worker's pneumoconiosis*. SEE: *anthracosis; silicosis*.

anthracosis (ăn-thră-kō′sĭs) [″ + *osis,* condition] Accumulation of carbon deposits in the lungs due to inhalation of smoke or coal dust. SYN: *black lung*.

anthracycline (ăn-thră-sī′klēn) Any of several antibiotic-based drugs that block DNA synthesis in tumors. They are used to treat solid organ cancers (e.g., breast cancer) and leukemias. Examples include daunorubicin, doxorubicin, and mitoxantrone.

anthralin (ăn′thră-lĭn) A synthetic hydrocarbon refined from anthracine. It is used in ointment form for treating various skin diseases (e.g., fungal infections and eczema).

anthrax (ăn′thrăks) [Gr., coal, carbuncle] An acute infectious disease caused by contact with, ingestion of, or inhalation of the spores of *Bacillus anthracis,* a large, spore-forming bacterial rod. People who work with contaminated textiles or animal products usually contract it from skin contact with animal hair, hides, or waste (the most common form of the disease, accounting for 95% of cases), but the bacilli may cause a fatal pneumonia if they are inhaled. SEE: illus.

ANTHRAX

Cutaneous anthrax: note the black, necrotic centers of the lesions

IMMUNIZATION: The anthrax bacillus has been prepared in aerosol form for use in biological warfare. As a result, some American troops have been vaccinated against the disease during their military training with one of several evolving vaccines. The effectiveness of the vaccine in disease prevention remains uncertain. Vaccination is also given to patients affected by active anthrax to prevent relapses. SEE: *biological warfare; Standard Precautions Appendix.*

DIAGNOSIS: Diagnosis is made by isolating *B. anthracis* from blood, sputum, or skin lesion cultures.

SYMPTOMS: Signs and symptoms usually occur within 1 to 7 days after exposure, but can take up to 60 days. Early treatment helps to reduce fatalities. Cutaneous anthrax presents with small, pruritic lesions similar to insect bites that progress to large painless boils ("malignant pustules"), vesicles, or skin ulcers with necrotic centers and surrounding brawny edema, usually on an exposed body surface, such as the skin of the hand. Mortality is about 20% from untreated cutaneous anthrax and is less than 1% when treated with an antibiotic (penicillin, doxycycline, ciprofloxacin). GI anthrax involves acute inflammation of the intestinal tract from ingestion of anthrax spores. Symptoms include nausea and vomiting, decreased appetite and fever, progressing to abdominal pain, vomiting blood, and severe to bloody diarrhea. Antibiotic therapy limits mortality to from 25% to 60%. Inhalation anthrax (also called pulmonary anthrax or "Woolsorter's disease") is marked by flulike symptoms progressing to fevers, sweats, cough, weakness, and rapidly developing respiratory failure, septic shock, and/or meningitis. Infection of the lungs may be suggested by the rapid onset of respiratory symptoms and chest x-ray or CT findings that may include widening of the mediastinum with hemorrhagic lymph nodes, hilar fullness, and pleural effusion. The disease is often fatal even with the appropriate antibiotic therapy.

TREATMENT: Persons exposed to anthrax (e.g., after its dissemination by bioterrorists) should receive a 60- to 100-day course of preventive therapy with ciprofloxacin, doxycycline, or penicillin G procaine. Individuals who have active infection with anthrax should receive two of the following antibiotics for a 60-day period: aminoglycosides, penicillin G (or amoxicillin), chloramphenicol, ciprofloxacin, doxycycline, imipenem or meropenem, rifampin, tetracycline, or vancomycin. Patients with pleural effusion benefit from drainage of the effusion with a chest tube.

PATIENT CARE: Health supervision is provided to at-risk employees, along with prompt medical care of all lesions. Terminal disinfection of textile mills contaminated with *B. anthracis* is supervised, using vaporized formaldehyde or other recommended treatment. All cases of anthrax (in livestock or people) are reported to local health authorities. Isolation procedures (mask, gown, gloves, hand hygiene, and incineration of contaminated materials) are maintained to protect against drainage secretions for the duration of illness in inhalation, GI, and cutaneous anthrax. For patients with inhalation anthrax, vital signs are monitored and respiratory support is provided. For patients with cutaneous anthrax, lesions are kept clean and covered with sterile dressings. Prescribed antibiotics are administered and the patient is assessed for desired and adverse effects. Frequent oral hygiene and skin care are provided. Oral fluid intake and frequent small, nutritious meals are encouraged.

anthropo- [Gr. *anthropos,* man] Prefix denoting relationship to *human beings* or *human life*.

anthropobiology (ăn″thrō-pō-bī-ŏl′ō-jē) [″ + *bios,* life, + *logos,* word, reason] Study of the biology of humans and the great apes.

anthropoid (ăn′thrō-poyd) [″ + *eidos,* form, shape] **1.** Resembling humans. **2.** An ape.

anthropological baseline An imaginary line that passes from the lower border of the orbit to the superior margin of the external auditory meatus.

anthropology (ăn″thrō-pŏl′ō-jē) [″ + *logos,* word, reason] The scientific study of human origins, including the development of physical, human cultural, religious, and social attributes.

physical a. The branch of anthropology concerned with physical measurement of human beings (as living subjects or skeletal remains).

anthropometer (ăn″thrō-pŏm′ĕ-tĕr) [″ + *metron,* measure] A device for measuring the human body and its parts.

anthropometry (ăn-thrō-pŏm′ĕt-rē) The science of measuring the human body, including craniometry, osteometry, skin fold evaluation for subcutaneous fat estimation, and height and weight measurements; usually performed by an anthropologist. **anthropometric** (-pō-mĕt′rĭk), *adj.*

anthropomorphism (ăn″thrō-pō-mor′fĭzm) [″ + *morphe,* form, + *-ismos,* condition] Attributing human qualities to nonhuman organisms or objects.

anthropophilic (ăn″thrō-pō-fĭl′ĭk) [″ + *philein,* to love] Preferring humans. It is used of parasites that prefer a human host to another animal.

anthropozoonosis (ăn″thrō-pō-zō″ō-

nō′sĭs) [″ + *zoon,* animal, + *nosis,* disease] An infectious disease acquired by humans from vertebrate hosts of the causative agents. Examples are rabies and trichinosis.

anti-, ant- [Gr.] Prefixes meaning *against, opposing, counteracting.*

antiadrenergic (ăn″tē-ă-drĕn-ĕr′jĭk) [″ + ″] **1.** Preventing or counteracting adrenergic action. **2.** An agent (e.g., a beta blocker) that counteracts adrenergic effects.

antiagglutinin (ăn″tē-ă-gloo′tĭ-nĭn) A specific antibody opposing the action of an agglutinin.

antiaggregant, platelet (ăn″tī-ăg′rĕ-gănt) A medicine, such as aspirin, that prevents platelets from forming blood clots.

antiamebic (ăn″tē-ă-mē′bĭk) [″ + *amoibe,* change] A medicine used to prevent or treat amebiasis.

antianaphylaxis (ăn″tē-ăn-ă-fĭ-lăks′ĭs) [″ + *ana,* away from, + *phylaxis,* protection] Desensitization.

antiandrogen (ăn″tē-ăn′drō-jĕn) [″ +″] A substance that inhibits or prevents the actions of male hormones.

antianemic (ăn″tē-ă-nē′mĭk) Preventing or curing anemia.

antianginal (ăn″tĭ-ăn′jĭ-năl) [Gr. *anti-,* against, + *angeion,* vessel] **1.** Preventing or relieving angina pectoris. **2.** Any agent used to relieve angina pectoris. Drugs in this class include the long- and short-acting nitrates, e.g., nitroglycerin.

antiangiogenesis (ăn″tē-ăn″jē-ō-jĕn′ĕ-sĭs) The blocking of the formation of new blood vessels, esp. the blood vessels that grow under the influence of malignant tumors. Numerous agents have such activity, including angiostatin, endostatin, tetracyclines, and paclitaxel, among others. They are useful in the treatment of cancer. SEE: *angiogenesis.*

antiantibody (ăn″tē-ăn′tĭ-bŏd-ē) [″ + ″] An antibody that blocks the binding site of another antibody. Blocking the site inhibits antibody-antigen binding because the antigen must compete with the antiantibody for the receptor site.

antiantitoxin (ăn″tē-ăn″tĭ-tŏk′sin) [″ + *antitoxin*] An antibody that acts against an antitoxin, which is an antibody that binds with and destroys a bacterial toxin. SEE: *antibody; antitoxin.*

antiarrhythmic (ăn″tē-ă-rĭth′mĭk) [″ + *a-,* not, + *rhythmos,* rhythm] A drug or physical force that acts to control or prevent cardiac arrhythmias.

antiarthritic (ăn″tē-ăr-thrĭt′ĭk) [″ + *arthritikos,* gouty] Relieving arthritis.

antiasthmatic (ănt″ăz-măt′ĭk) [″ + Gr. *asthma,* panting] **1.** Preventing or relieving asthma. **2.** An agent that prevents or relieves an asthma attack.

antibacterial (ăn″tĭ-băk-tē′rē-ăl) **1.** Destroying or stopping the growth of bacteria. **2.** An agent that destroys or stops the growth of bacteria.

antibiogram (ăn″tĭ-bī′ō-grăm″) [″ + ″ + Gr. *gramma,* something written] A record of the susceptibility of specific pathogenic bacteria to antibiotics. Such susceptibility varies from hospital to hospital, state to state, and country to country. Antibiograms are constructed from cultural and other data accumulated in clinical laboratories. They help clinicians decide which antibiotics to use when treating suspected infections and help public health agencies track the antibiotic resistance of microorganisms over time.

antibiosis (an″tĭ-bī-ō′sĭs) [″ + *bios,* life] An association or relationship between two organisms in which one is harmful to the other.

antibiotic (ăn″tĭ-bī-ŏt′ĭk) **1.** Destructive to life. **2.** Pert. to antibiosis. **3.** A natural or synthetic substance that destroys microorganisms or inhibits their growth. Antibiotics are used extensively to treat infectious diseases in plants, animals, and humans. SEE: *antimicrobial drug; bacterium.*

bactericidal a. An antibiotic that kills microorganisms.

bacteriostatic a. An antibiotic that inhibits the growth of microorganisms.

beta-lactam a. Any of the antimicrobial drugs, such as penicillins or cephalosporins, that kill germs by interfering with the synthesis of bacterial cell walls. SYN: *beta-lactam.*

broad-spectrum a. An antibiotic that is effective against a wide variety of microorganisms.

narrow-spectrum a. An antibiotic that is specifically effective against a limited group of microorganisms.

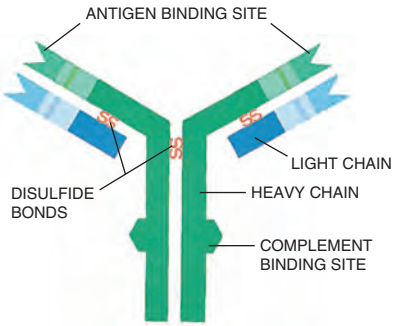
antibiotic-impregnated polymethacrylate beads Vehicles for delivering high-concentration antibiotic therapy to a specific area. The antibiotic-impregnated beads are implanted in open wounds with loss of tissue substance, such as open fractures.

antibiotic resistance The ability of microorganisms to survive in the presence of antibiotics. Chance mutations have provided some bacteria with genes for enzymes that destroy antibiotics such as penicillins, cephalosporins, or aminoglycosides. Other mutations have changed the structure of bacterial cell walls formerly penetrable by antibiotics or have created new enzymes for cellular functions previously blocked by drugs. SEE: *vancomycin-resistant enterococci; resistance transfer factor; methicillin-resistant Staphylococcus aureus.*

The indiscriminate use of antibiotics provides the selection pressure that creates ever more resistant strains. The most effective, and frequently ig-

nored, measure to reduce the spread of many organisms is scrupulous hand hygiene after contact with patients.

antibody (ăn′tĭ-bŏd″ē) ABBR: Ab. A substance produced by B lymphocytes in response to a unique antigen. Each Ab molecule combines with a specific antigen to destroy or control it. All antibodies, except natural antibodies (e.g., antibodies to different blood types), are made by B cells stimulated by a foreign antigen, typically a foreign protein, polysaccharide, or nucleic acid. SYN: *immunoglobulin*. SEE: illus.; *antigen; autoantibody; cytokine; isoantibody*.



ANTIBODY

Schematic structure of immunoglobulin G antibody

Antibodies neutralize or destroy antigens in several ways. They can initiate lysis of the antigen by activating the complement system, neutralizing toxins released by bacteria, coating (opsonizing) the antigen or forming a complex to stimulate phagocytosis, promoting antigen clumping (agglutination), or preventing the antigen from adhering to host cells.

An antibody molecule consists of four polypeptide chains (two light and two heavy), which are joined by disulfide bonds. The heavy chains form the complement-binding site, and the light and heavy chains form the site that binds the antigen.

anti-DNase B a. An antibody formed during infection with group A beta-hemolytic streptococci. It is used, retrospectively, to help diagnose recent streptococcal infections.

antiendomysial a. An antibody that cross-reacts with smooth muscle collagen and the gluten in wheat, found in the serum of people with celiac sprue and some related autoimmune diseases.

antiganglioside a. An antibody formed against the chemical components of nerves, found in the serum of people with Guillain-Barré syndrome.

antigliadin a. An antibody formed against the gluten in wheat, found in the serum of people with celiac sprue.

antineutrophil cytoplasmic a. ABBR: ANCA. An autoantibody found in the blood of patients with certain forms of vasculitis (e.g., Wegener's granulomatosis) esp. when it affects small blood vessels.

antinuclear a. ABBR: ANA. A group of autoantibodies that react against normal components of the cell nucleus. These antibodies are present in a variety of immunologic diseases, including systemic lupus erythematosus, progressive systemic sclerosis, Sjögren's syndrome, scleroderma, polymyositis, and dermatomyositis, and in some patients taking hydralazine, procainamide, or isoniazid. In addition, ANA is present in some normal people. Tests for ANAs are used in the diagnosis and management of autoimmune diseases.

antiphospholipid a. Antibodies against the phospholipids contained in cell membranes. They are occasionally responsible for catastrophic coagulation disorders, which result in cerebral infarction (stroke), placental infarction (with loss of pregnancy), or blood clotting in other organs.

anti-proliferating cell nuclear antigen (PCNA) a. ABBR: anti-PCNA. An antibody found in the blood of patients with diseases in which cells replicate rapidly. Such conditions include autoimmune and inflammatory diseases and malignancies.

antireceptor a. An antibody that reacts with the antigen receptor on a cell rather than with an antigen itself.

anti-scl-70 a. Anti-topoisomerase I antibody.

antithyroperoxidase a. ABBR: TPOAb. A serum marker of autoimmune thyroid destruction (i.e., of Grave's disease or Hashimoto's thyroiditis).

antititin a. An antibody that reacts with striated muscle cells. It is found principally in people with myasthenia gravis who also have thymoma.

anti-topoisomerase I a. An autoantibody found in the serum of patients with progressive systemic sclerosis, silicosis, and systemic lupus erythematosus. Higher levels of the antibody correlate with worsening kidney, lung, and skin disease.

blocking a. An antibody that prevents an antigen from binding with a cellular receptor.

cross-reacting a. An antibody that reacts with antigens other than its specific antigen because they contain binding sites that are structurally similar to its specific antigen. SEE: *antigenic determinant*.

cytotoxic a. An antibody that lyses

cells by binding to a cellular antigen and activating complement or killer cells.

direct fluorescent a. ABBR: DFA. A fluorescent antibody test performed on sputum to detect microorganisms that invade the respiratory tract (e.g., legionella, mycoplasma, or anthrax). SYN: *direct immunofluorescence test*.

fluorescent a. ABBR: FA. An antibody that has been stained or marked by a fluorescent material. The fluorescent antibody technique permits rapid diagnosis of various infections.

immune a. An antibody produced by immunization or as a result of transfusion of incompatible blood.

maternal a. An antibody produced by the mother and transferred to the fetus in utero or during breastfeeding.

monoclonal a. SEE: *monoclonal antibody*.

natural a. An antibody present in a person without known exposure to the specific antigen, such as an anti-A antibody in a person with B blood type.

p504s a. Alpha-methylacyl-CoA racemase.

polyclonal a. An antibody that reacts with many different antigens.

protective a. An antibody produced in response to an infectious disease. SEE: *immunity*.

warm a. Warm autoagglutinin.

antibody combining site The particular area on an antibody molecule to which part of an antigen links, creating an antigen-antibody reaction. SEE: *antibody; antigen; antigenic determinant*.

antibody-dependent cellular cytotoxicity ABBR: ADCC. The process by which phagocytes and natural killer cells bind with receptors on antibodies to destroy the antigens to which the antibodies are bound. SEE: *natural killer cell*.

antibody-mediated rejection Rejection of a transplanted organ resulting from the action of antibodies against antigens found on the endothelial surface of blood vessels.

antibody therapy The creation of antibodies that target specific antigens; used to treat immunological deficiencies, some cancers, and organ transplant rejection. The antibodies are given by injection. SEE: *monoclonal antibody*.

antibromic (ăn″tī-brō′mĭk) [Gr. *anti,* against, + *bromos,* smell] **1.** Deodorizing. **2.** A deodorant.

antiburn scar garment (ăn″tē-bŭrn′ skăr gahr′mĕnt) A carefully fitted garment of material with calibrated stretch characteristics worn to provide uniform pressure over burn graft sites in order to reduce scarring during healing.

anticarcinogenic (ăn″tī-kăr″sĭ-nō-jĕn′ĭk) **1.** Tending to delay or prevent tumor formation. **2.** A substance or action that prevents or delays tumor formation.

anticariogenic (ăn″tī-kā″rē-ō-jĕn′ĭk) A substance or action that interferes with the development of dental caries.

anticarious (ăn″tĭ-kā′rē-ŭs) [″ + *caries,* decay] Preventing decay of teeth.

anticholinergic (ăn″tĭ-kō″lĭn-ĕr′jĭk) **1.** Impeding the impulses of cholinergic, esp. parasympathetic, nerve fibers. **2.** An agent that blocks parasympathetic nerve impulses. The side effects, which include dry mouth and blurred vision, are seen in phenothiazine and tricyclic antidepressant drug therapy. SYN: *parasympatholytic*.

anticholinesterase (ăn″tĭ-kō-lĭn-ĕs′tĕr-ās) A chemical (e.g., an enzyme or drug) that opposes the action of cholinesterase.

anticipate (ăn-tĭs′ĭ-pāt) [L. *ante,* before, + *capere,* to take] **1.** To occur prior to the usual time of onset of a particular illness or disease, said of an event, sign, or symptom. **2.** In nursing and medicine, to prepare for other than the routine or fully expected.

anticipation, genetic a. (ăn-tĭs″ĭ-pā′shŭn) In inherited illnesses, the expression of a trait at earlier and earlier ages as it is passed from one generation to the next. Some studies suggest this effect results from enhanced surveillance of offspring as opposed to earlier disease onset.

anticipatory grief Mental anguish caused by the impending loss of a body part, a function, or a loved one.

anticipatory guidance SEE: under *guidance*.

anticlinal (ăn″tĭ-klī′năl) [″ + ″] Inclined in opposite directions, as the facing sides of a valley.

anticoagulant (ăn″tĭ-kō-ăg′ū-lănt) [″ + L. *coagulans,* forming clots] **1.** Delaying or preventing blood coagulation. **2.** An agent that prevents or delays blood coagulation. Common anticoagulants include heparin, sodium citrate, and warfarin sodium. SEE: illus.

ANTICOAGULATION

Bruising and bleeding — common side effects of anticoagulation.

warfarin sodium a. SEE: *warfarin sodium*.

anticoagulant therapy The use of drugs (e.g., heparin, low-molecular-weight heparin, or warfarin) that inhibit or interrupt coagulation, inhibit or deactivate thrombin, prevent conversion of fibrinogen to fibrin, and inhibit blood clot formation. It is used to prevent or treat disorders, such as pulmonary embolism, that result from vascular thrombosis. SEE: *heparin; thrombosis; warfarin sodium*.

Anticoagulant therapy increases the risk of bleeding.

PATIENT CARE: The patient is observed closely for desired and adverse effects of anticoagulation therapy. This includes assessing the results of laboratory tests (protime, INR, aPTT) specific to the anticoagulant drug being used to regulate dosing and assessing the patient for signs or symptoms of bleeding. Patients requiring long-term use of anticoagulant therapy (usually warfarin) should wear a medic-alert device or carry a card to identify increased bleeding risk. The patient and family are taught the importance of correct dosing and follow-up testing. Patients should inspect themselves regularly for bleeding gums, bruising, petechiae, nosebleed, tarry stools, and blood in urine or vomitus and report such bleeding to the prescribing physician. Patients should avoid OTC products containing aspirin or other salicylates and should discuss other prescribed drugs (or herbal remedies, such as ginkgo biloba) with the prescriber or pharmacist to be sure these will not interfere with their anticoagulant therapy. Patients should use a soft toothbrush and shave with an electric razor. They need to read labels of food and nutritional products and learn about foods and drinks containing vitamin K in order to maintain consistent intake levels and thus avoid altering the desired anticoagulant effect.

anticodon (ăn″tĭ-kō′dŏn) [″ + ″] A triplet of nucleotide bases on transfer RNA that complements the corresponding codon on messenger RNA.

anticonvulsant (ăn″tĭ-kŏn-vŭl′sănt) [″ + L. *convulsio,* pulling together] **1.** Preventing or relieving convulsions. **2.** An agent that prevents or relieves convulsions.

anti-cyclic citrullinated peptide antibodies ABBR: anti-CCP. Antibodies found in the serum of patients with rheumatoid arthritis, but not in patients with other joint or soft tissue diseases.

anticytotoxin (ăn″tī-sī″tō-tŏk′sĭn) Something that opposes the action of a cytotoxin. SEE: *cytotoxin*.

antidepressant (ăn″tĭ-dē-prĕs′sănt) Any medicine or other mode of therapy that acts to prevent, cure, or alleviate mental depression.

tricyclic and tetracyclic a. A class of antidepressant agents whose chemical structure has three (or four) fused rings. These drugs block the reuptake of norepinephrine and serotonin at nerve endings.

antidiabetic (ăn″tĭ-dī″ă-bĕt′ĭk) **1.** Preventing or treating diabetes. **2.** An agent that prevents or treats diabetes. SEE: *oral hypoglycemic agent*.

antidiarrheal (ăn″tĭ-dī-ă-rē′ăl) A substance used to prevent or treat diarrhea.

antidiuretic (ăn″tĭ-dī-ū-rĕt′ĭk) [″ + *dia,* intensive, + *ouresis,* urination] **1.** Lessening urine formation. **2.** A drug that decreases urine formation.

antidote (ăn′tĭ-dōt″) [Gr. *antidoton,* given against] A substance that neutralizes poisons or their effects. **antidotal** (ăn″tĭ-dōt′ĭl), *adj.*

chemical a. An antidote that reacts with the poison to produce a harmless chemical compound. For example, table salt precipitates silver nitrate and forms the much less toxic silver chloride. Chemical antidotes should be used sparingly and, after their use, should be removed from the stomach by gastric lavage because they may produce serious results if allowed to remain there.

mechanical a. An antidote such as activated charcoal that prevents gastrointestinal absorption of a poison.

physiologic a. An antidote that produces physiological effects opposite to the effects of the poison; e.g., sedatives are given for convulsants and stimulants are given for hypnotics. These should not be given without a physician's instructions.

universal a. An antidote once used in poisoning where the specific antidote was unknown or not available, consisting of two parts activated charcoal, one part tannic acid, and one part magnesium oxide.

The idea that there is a "universal antidote" for poisonings is flawed.

antidromic (ăn″tĭ-drŏm′ĭk) [Gr. *anti,* against, + *dromos,* running] Denoting nerve impulses traveling in the opposite direction from normal.

antiembolism (ăn″tē-ĕm′bō-lĭzm) [″ + ″] A misnomer for "antithrombotic," as in "antiembolism stockings."

antiemetic (ăn″tĭ-ē-mĕt′ĭk) [″ + *emetikos,* inclined to vomit] **1.** Preventing or relieving nausea and vomiting. **2.** An agent that prevents or relieves nausea and vomiting.

antienzyme (an″tĭ-ĕn′zīm) A substance that opposes the action of an enzyme.

antiepileptic (ăn″tĭ-ĕp″ĭ-lĕp′tĭk) **1.** Op-

posing epilepsy. **2.** Any procedure or therapy that combats epilepsy.

antiestrogen (ăn″tī-ēs′trō-jĕn) A substance that blocks or modifies the action of estrogen.

antifebrile (ăn″tī-fē′brĭl, -fē′brīl, -fĕb′rĭl) [″ + L. *febris,* fever] SEE: *antipyretic.*

antifibrinolysin (ăn″tī-fī″brĭ-nŏl′ĭ-sĭn) [″ + L. *fibra,* fiber, + Gr. *lysis,* dissolution] A substance that counteracts fibrinolysis.

antiflatulent (ăn″tī-flăch′ŭ-lĕnt, ăn″tī-) [Gr. *anti-,* against, + L. *flatus,* a blowing] **1.** Preventing or relieving flatulence. **2.** Any agent that prevents or relieves flatulence.

antifungal (ăn″tī-fŭng′găl) **1.** Destroying or inhibiting the growth of fungi. **2.** An agent that destroys or inhibits the growth of fungi.

antigalactic (ăn″tī-gă-lăk′tĭk) **1.** Preventing or diminishing the secretion of milk. **2.** An agent that prevents or diminishes the secretion of milk.

antigen (ăn′tĭ-jĕn) [″ + ″] Any substance capable of eliciting an immune response or of binding with an antibody. Cellular antigens are proteins or oligosaccharides that mark and identify the cell surface as *self* or *nonself* (e.g., as skin, kidney, or nerve cell). Cell surface antigens can stimulate the production of antibodies by B lymphocytes and cytotoxic responses by white blood cells (e.g., granulocytes, monocytes, and lymphocytes).

Antigens on the body's own cells are called autoantigens. Antigens on all other cells are called foreign antigens. Matching certain types of tissue antigens is important for the success of an organ transplant. Inflammation occurs when neutrophils, monocytes, and macrophages encounter an antigen from any source during bodily injury. The antigen may be foreign or an autoantigen that has been damaged and therefore appears to be foreign. Reactions to antigens by T and B cells are part of the specific immune response. SEE: *autoantigen; cytokine; histocompatibility locus antigen.*

allogeneic a. An antigen that occurs in some individuals of the same species. Examples are the human blood group antigens.

alpha-fetoprotein a. SEE: *alpha-fetoprotein.*

carcinoembryonic a. ABBR: CEA. A molecular marker found on normal fetal cells and in the bloodstream of patients with cancers of the colon, breast, lung, and other organs. Assays for CEA are used both to monitor the effectiveness of treatments for cancer and to provide prognostic information to patients.

CD a. Any of the cell surface molecules that determine the immunological ancestry, functional development, or stage of maturity of a cell. They are also called cluster of differentiation antigens and are designated CD1, CD2, etc. The markers may be identified by specific monoclonal antibodies and are used to designate cell populations (e.g., CD4 lymphocytes as T helper cells, and CD8 lymphocytes as suppressor T cells).

CD4 a. A cell surface molecule present on and identifying T cells, monocytes, and macrophages. It is the receptor for the human immunodeficiency virus associated with AIDS. SEE: *cluster of differentiation.*

class I a. Any of the major histocompatibility molecules present on almost all cells except human red blood cells. These antigens are important in the rejection of grafts and transplanted organs.

class II a. Any of the major histocompatibility molecules present on immunocompetent cells.

cross-reacting a. An antigen having the ability to react with more than one specific antibody.

D a. The protein marker in the Rh group of antigens that stimulates the greatest immune response. SEE: *Rh blood group.*

H a. A flagellar protein present on the surface of some enteric bacilli such as *Escherichia coli*. The antigen is important in classifying these bacilli.

hepatitis a. The original term for the Australian antigen, now called hepatitis B surface antigen (HBsAg). Its discovery made possible the differentiation of hepatitis B from other forms of viral hepatitis.

hepatitis B core a. ABBR: HBcAg. A protein marker found on the core of the hepatitis B virus (HBV). HBV antigen does not circulate in the blood but is found only in liver cells infected by HBV. HBcAg stimulates the production of a protective antibody, immunoglobulin M (IgM-anti-HBc), which appears in the blood shortly before the onset of symptoms. Tests for this antibody are used with other blood tests in the diagnosis of acute and chronic hepatitis B infection. During the convalescent stage of hepatitis B infection, IgM anti-HBc is replaced by another antibody, IgG anti-HBc, which remains in the blood for years. SEE: *hepatitis B e antigen; hepatitis B surface antigen.*

hepatitis B e a. ABBR: HBeAg. A polypeptide from the hepatitis B viral core that circulates in the blood of infected people and indicates that the patient is highly infectious. It is released when viral DNA is actively replicating.

hepatitis B surface a. ABBR: HBsAg. The glycoprotein found on the surface of the hepatitis B viral envelope. It is the first marker of infection with the hepatitis B virus. If HBsAg is still found in

blood samples 6 months after infection with the virus, chronic and potentially contagious infection with hepatitis B is present. SEE: *hepatitis B core antigen; hepatitis B e antigen.*

histocompatibility locus a. ABBR: HLA. Any of the multiple antigens present on all nucleated cells in the body that identify the cells as "self." Immune cells compare these antigens to foreign antigens, which do not match the "self" and therefore trigger an immune response. These markers determine the compatibility of tissue for transplantation.

They are derived from genes at seven sites (loci) on chromosome 6, in an area called the major histocompatibility complex (MHC); each histocompatibility antigen is divided into one of two MHC classes.

In humans, the proteins created in the MHC are called human leukocyte antigens (HLA) because these markers were originally found on lymphocytes. Each gene in the MHC has several forms or alleles. Therefore, the number of different histocompatibility antigens is very large, necessitating the identification and matching of HLAs in donors and recipients involved in tissue and organ transplantation. (The identification of HLAs is called tissue typing.)

The identification of HLA sites on chromosome 6 has enabled researchers to correlate the presence of specific histocompatibility and certain autoimmune diseases (e.g., insulin-dependent diabetes mellitus, multiple sclerosis, some forms of myasthenia gravis, rheumatoid arthritis, and ankylosing spondylitis). SYN: *human leukocyte antigen*. SEE: *major histocompatibility complex*.

human leukocyte a. Histocompatibility locus antigen.

H-Y a. A histocompatibility antigen located on the cell membrane. It has a primary role in determining the sexual differentiation of the male embryo.

K a. A capsular antigen present on the surface of some enteric bacilli. The antigen is important in classifying these bacilli.

lymphogranuloma venereum a. An antigen used in a skin test for lymphogranuloma venereum.

mumps skin test a. A standardized suspension of sterile formaldehyde-inactivated mumps virus. It is used in diagnosing mumps.

nuclear a. An antigen present in the cells of patients with certain types of connective tissue disorders. Corticosteroids can be very helpful in treating patients with high concentrations of nuclear antigen.

O a. A surface antigen of some enteric bacilli. The antigen is important in classifying these bacilli.

oncofetal a. An antigen that is normally expressed in the fetus and may reappear in the adult in association with certain tumors. Examples include alpha-fetoprotein and carcinoembryonic antigens. SYN: *oncofetal protein*.

p24 a. The core protein of the human immunodeficiency virus (HIV). The presence of p24 antigen in the blood is a marker of uncontrolled HIV replication. p24 antigenemia is encountered in the acute retroviral syndrome before host immune response and in advanced acquired immunodeficiency syndrome when the immune system has been destroyed. When p24 antigen is detected in the blood, the HIV viral load is high and the person is highly infectious.

proliferating cell nuclear a. ABBR: PCNA. A protein complex released by cells actively synthesizing DNA. In the blood, PCNAs can be used as markers of disease activity in autoimmune and inflammatory illnesses, malignancies, and other conditions marked by rapid cell replication.

prostate-specific a. ABBR: PSA. A marker for cancer of the prostate. It is found in the blood; it is secreted by both benign and malignant prostate tumors, but cancerous prostate cells secrete it at much higher levels. Prostate-specific antigen is used as a screening test for cancer of the prostate and as a means of following the results of treatment in patients with known prostate cancer. SEE: *prostate cancer.*

protective a. The protein made by *Bacillus anthracis,* which binds to cell membranes and allows the lethal components of anthrax toxin to enter and kill cells.

soluble a. An antigen dissolved in a liquid. A soluble antigen is recognized by B lymphocytes but cannot be detected by T lymphocytes until it has been processed by an antigen-presenting cell. SEE: *T cell.*

T-dependent a. An antigen that can stimulate an antibody response only in the presence of helper T cells.

thymus dependent a. Any of the foreign antigens that require B lymphocyte stimulation by T cells before production of antibodies and memory cells can occur.

thymus independent a. Any of the foreign antigens capable of stimulating B cell activation and the production of antibodies without T cell interaction. Most of these antibodies fall into the IgM class. A few memory cells are created.

T independent a. Either of two types of antigens that stimulate B cell production of antibodies without the presence of T cells. TI-1 antigens (e.g., lipopolysaccharides from gram-negative organisms) stimulate production of both specific (monoclonal) and nonspecific

(polyclonal) antibodies and promote the release of cytokines from macrophages that enhance the immune response. TI-2 antigens, which result in monoclonal antibody production, may require the presence of cytokines. SEE: *B cell; T cell*.

transplantation a. The commonly used term for any of the histocompatibility antigens that cause the immune system of one individual to reject transplanted tissue.

tumor-specific a. An antigen produced by certain tumors. It appears on the tumor cells but not on normal cells derived from the same tissue.

antigen-antibody reaction The combination of an antigen with its specific antibody. It may result in agglutination, precipitation, neutralization, complement fixation, or increased susceptibility to phagocytosis. The antigen-antibody reaction forms the basis for B-cell–mediated immunity.

antigen binding site Antigenic determinant.

antigenemia (ăn″tĭ-jĕ-nē′mē-ă) The presence of an antigen in the bloodstream.

antigenic (ăn-tĭ-jĕn′ĭk) Capable of causing the production of an antibody. SEE: *antigenic drift; antigenic specificity*.

antigenic determinant The specific area of an antigen that binds with an antibody combining site and determines the specificity of the antigen-antibody reaction. SEE: *antigen*.

epitope a.d. The simplest form of an antigenic determinant within a complex antigenic marker. The epitope links with a paratope, one area of an antibody combining site.

antigenicity (ăn″tĭ-jĕn-ĭs′ĭ-tē) The condition of being able to produce an immune response to an antibody. **antigenic,** *adj.*

antigen processing The mechanism by which foreign antigens are taken into antigen-presenting cells (APCs) and broken up. Part of the antigen is then displayed (presented) on the surface of the APC next to a histocompatibility or "self" antigen, activating T lymphocytes and cell-mediated immunity. T lymphocytes are unable to recognize or respond to most antigens without APC assistance. SEE: *antigen; macrophage processing; self*.

antigen unit The smallest quantity of antigen required to fix one unit of complement.

antiglobulin (ăn″tĭ-glŏb′ū-lĭn) An antibody that binds with globulin and makes it precipitate out of solution. Antiglobulins are used in Coombs' test to detect the presence of a particular antibody or to type blood groups.

antiglobulin test A test for the presence in human blood of antibodies. The antibodies present in the blood do not, themselves, cause agglutination. It is the addition of an antibody made in animals (antiglobulin) that stimulates red blood cell clumping. The direct antiglobulin test (DAT) is used to diagnose autoimmune hemolytic anemia and hemolytic disease of the newborn. The indirect antiglobulin test (IAT), or Coombs' test, is used to identify blood types. SYN: *Coombs' test*.

direct a. t. ABBR: DAT. A laboratory test for the presence of complement or an antibody that is bound to a patient's red blood cells (RBCs). The test is used in patients with autoimmune hemolytic anemia, hemolytic disease of the newborn, and transfusion reactions. After the patient's RBCs are washed to remove unbound antibodies, they are mixed with antihuman globulin serum containing polyvalent antibodies that bind with the antibody or complement on the RBCs and cause them to agglutinate (clump). Monoclonal antibodies can be used to identify the specific class of antibody or complement component causing RBC destruction. SEE: *Coombs' test*.

antigoitrogenic (ăn″tĭ-goy″trō-jĕn′ĭk) [″ + L. *guttur,* throat, + Gr. *gennan,* to produce] Preventing the formation of a goiter.

anti-HAV Serum antibody to hepatitis A virus. The presence of anti-HAV in the blood is an indicator either of a successful immune response to vaccination or a current or previous hepatitis A infection.

anti-HBc Antibody to hepatitis B core antigen. The presence of anti-HBc in a sample of serum is an indication of infection (past or present) with hepatitis B virus.

anti-HCV Antibody to hepatitis C virus. The presence of anti-HCV in a blood sample indicates past or present infection with the virus.

antihelix (ăn″tĭ-hē′lĭks) [″ + Gr. *helix,* coil] The inner curved ridge of the external ear parallel to the helix. SYN: *anthelix*.

antihemolysin (ăn″tĭ-hĕ-mŏl′ĭ-sĭn) A substance that opposes the action of hemolysin.

antihemorrhagic (ăn″tĭ-hĕm-ō-răj′ĭk) [″ + *haima,* blood, + *rhegnynai,* to burst forth] **1.** Preventing or arresting hemorrhage. **2.** An agent that prevents or arrests hemorrhage.

antihidrotic (ăn″tĭ-hī-drŏt′ĭk) [″ + *hidrotikos,* sweating] Antiperspirant.

antihistamine (ăn″tĭ-hĭs′tă-mēn, -mĭn) A drug that opposes the action of histamine. Although there are two classes of histamine-blocking drugs, the term *antihistamine* is typically used to describe agents that block the action of histamines on H_1 receptors. These agents are used to treat allergies, hives, and other

local and systemic hypersensitivity (allergic) reactions. Side effects of first-generation antihistamines (e.g, chlorpheniramine) include sedation, drying of mucous membranes, and urinary retention. Some first-generation antihistamines can also be used to treat insomnia, motion sickness, or vertigo. Second-generation agents (e.g., loratadine) tend to be less sedating, but still have beneficial effects in the treatment of allergies. SYN: *histamine blocking agent*. SEE: *Poisons and Poisoning Appendix; histamine*.

antihistaminic (ăn″tĭ-hĭs″tă-mĭn′ĭk) **1.** Opposing the action of histamine. **2.** An agent that opposes the action of histamine.

antihormone (ăn″tī-hor′-mōn) A substance that interferes with the action of a hormone.

antihypercholesterolemic (ăn″tĭ-hī″pĕr-kō-lĕs″tĕr-ŏl-ē′mĭk) [″ + *hyper,* above, + *chole,* bile, + *stereos,* solid, + *haima,* blood] **1.** Preventing or controlling elevation of the serum cholesterol level. **2.** An agent that prevents or controls elevation of the serum cholesterol level.

antihyperprolactinemic (ăn″tĭ-hī″pĕr-prō-lăk″tĭ-nē′mĭk) [Gr. *anti-*, against, + *hyper-*, above, excessive, + *pro-*, in behalf of, + L. *lac,* milk, + Gr. *haima,* blood] **1.** Relieving or preventing the effects of high blood levels of prolactin. **2.** Any agent that lowers high blood levels of prolactin.

antihypertensive (ăn″tĭ-hī″pĕr-tĕn′sĭv) [″ + ″ + L. *tensio,* tension] **1.** Preventing or controlling high blood pressure. **2.** An agent that prevents or controls high blood pressure.

antihypnotic (ăn″tĭ-hĭp-nŏt′ĭk) **1.** Preventing or inhibiting sleep. **2.** An agent that prevents or inhibits sleep.

anti-icteric (ăn″tĭ-ĭk-tĕr′ĭk) [″ + *ikteros,* jaundice] **1.** Preventing or relieving jaundice. **2.** An agent that prevents or relieves jaundice.

anti-infective (ăn″tĭ-ĭn-fĕk′tĭv) [Gr. *anti-*, against, + L. *inficere,* to corrupt, to infect] Any agent, such as an antibiotic, antifungal, or antiviral drug, that is used to combat infection.

anti-inflammatory (ăn″tĭ-ĭn-flăm′ă-tō-rē) **1.** Counteracting inflammation. **2.** An agent that suppresses or treats inflammatory diseases or conditions.

anti-inhibitor coagulant complex A blood product derived from human plasma that is used to augment the effects of clotting factors given to patients with hemophilia. Patients with hemophilia who have received repeated injections of clotting factors may develop antibodies to those factors, decreasing the effectiveness of hemophilia treatments. Anti-inhibitors are used to counteract the effect of the unwanted antibodies.

antiketogenesis (ăn″tĭ-kē-tō-jĕn′ĕ-sĭs) [″ + *ketone* + Gr. *gennan,* to produce] The prevention or inhibition of formation of ketone bodies. In starvation, diabetes, and certain other conditions, production of ketones is increased, but they accumulate in the blood because cells do not use them as rapidly as they would carbohydrate energy sources. Increased carbohydrate intake will help to prevent or treat this. Carbohydrates are therefore antiketogenic. In ketonemia due to diabetes, both insulin and carbohydrates are needed to allow carbohydrate metabolism to proceed at a rate that would control ketone formation. **antiketogenetic, antiketogenic** (-jĕ-nĕt′ik, -jĕn′ĭk), *adj.*

Anti-kickback statute ABBR: AKBS. An American federal law that prohibits health care providers from obtaining bribes, payments, or rebates in exchange for the referral of patients to a health care facility or the purchase of health-related products or services.

antilactase (ăn″tĭ-lăk′tās) [″ + *lac,* milk, + *-ase,* enzyme] A substance that opposes the action of lactase.

antilipemic (ăn″tĭ-lī-pē′mĭk) **1.** Preventing or counteracting the accumulation of fatty substances in the blood. **2.** An agent that prevents or counteracts the accumulation of fatty substances in the blood.

antilithic (ăn″tĭ-lĭth′ĭk) [″ + *lithos,* stone] **1.** Preventing or relieving calculi. **2.** An agent that prevents or relieves calculi.

anti-LKM An antibody against liver and kidney cells, sometimes found circulating in the blood of people with autoimmune hepatitis.

antilysin (ăn-tĭ-lī′sĭn) Antibody that opposes the action of lysin.

antilysis (ăn-tĭ-lī′sĭs) [″ + *lysis,* dissolution] Prevention of lysis (death) of a cell. **antilytic** (-lĭt′ĭk), *adj.*

antilyssic (ăn-tĭ-lĭs′ĭk) [″ + *lyssa,* frenzy] Preventing rabies.

antimalarial (ăn″tĭ-mă-lā′rē-ăl) **1.** Preventing or relieving malaria. **2.** An agent that prevents or relieves malaria.

antimanic (ăn″tĭ-măn′ĭk) [Gr. *anti-*, against, + *mania,* frenzy, madness] **1.** Preventing or relieving bipolar disorder. **2.** Any agent that prevents or treats bipolar disorder.

antimere (ăn′tĭ-mēr) [″ + *meros,* a part] One of corresponding parts of the body on opposite sides of the long axis.

antimetabolite (ăn″tĭ-mĕ-tăb′ō-līt) **1.** A substance that opposes the action of or replaces a metabolite and is structurally similar to it. Certain antibiotics are effective because they act as antimetabolites. **2.** A class of antineoplastic drugs used to treat cancer. Antimetabolites are structurally similar to vitamins, coenzymes, or other substances

essential for growth and division of normal and neoplastic cells. These drugs are most effective against rapidly growing tumors. A drug-induced block of DNA synthesis occurs when the cells take in the antimetabolite rather than the necessary nutrient or enzyme.

antimicrobial (ăn″tĭ-mī-krō′bē-ăl) **1.** Destructive to or preventing the development of microorganisms. **2.** An agent that destroys or prevents the development of microorganisms.

antimicrobic (ăn″tĭ-mī-krō′bĭk) [″ + *mikros,* small, + *bios,* life] Antimicrobial.

antimitotic (ăn″tĭ-mī-tŏt′ĭk) Interfering with or preventing cell division by mitosis.

antimonial (ăn″tĭ-mō′nē-ăl) Pert. to or containing antimony.

antimony (ăn′tĭ-mō″nē) SYMB: Sb. Stibium; a crystalline metallic element, atomic weight 121.75, atomic number 51. Its compounds are used in alloys and medicines and may form poisons. SEE: *Poisons and Poisoning Appendix.*

antimuscarinic (ăn″tī-mŭs″kă-rĭn′ĭk) Opposing the action of muscarine or agents that act like muscarinics. Atropine and scopolamine are antimuscarinic drugs.

antimutagenic (ăn″tē-mū″tă-jĕn′ĭk) [″ + ″] Having the ability to block or prevent mutations.

antimyasthenic (ăn″tĭ-mī″ăs-thĕn′ĭk) [Gr. *anti-,* against, + *mys,* muscle, + *asthenia,* weakness] **1.** Preventing or relieving muscle weakness. **2.** Any agent that prevents or relieves muscle weakness, e.g., in the treatment of myasthenia gravis.

antimycotic (ăn″tĭ-mī-kŏt′ĭk) [″ + *mykes,* fungus] Inhibiting or preventing the growth of fungi.

antinarcotic (ăn″tĭ-năr-kŏt′ĭk) [″ + *narkotikos,* benumbing] **1.** Opposing the action of a narcotic. **2.** An agent that opposes the action of a narcotic. Naloxone is an antinarcotic medication that is used in the reversal of narcotic overdose.

antinatriuresis (ăn″tĭ-nā″trĭ-ū-rē′sĭs) [″ + L. *natrium,* sodium, + Gr. *ouresis,* making water] Decreasing the excretion of sodium in the urine.

antinauseant (ăn″tĭ-naw′sē-ănt) **1.** Preventing or relieving nausea. **2.** An agent that prevents or relieves nausea.

antineoplastic (ăn″tĭ-nē″ō-plăs′tĭk) **1.** Preventing the development, growth, or proliferation of malignant cells. **2.** An agent that prevents the development, growth, or proliferation of malignant cells.

antinephritic (ăn″tĭ-nĕ-frĭt′ĭk) **1.** Preventing or relieving inflammation of the kidneys. **2.** An agent that prevents or relieves inflammation of the kidneys.

antineuralgic (ăn″tĭ-nū-răl′jĭk) [″ + *neuron,* nerve, + *algos,* pain] **1.** Relieving neuralgia. **2.** An agent that relieves neuralgia.

antineuritic (ăn″tĭ-nū-rĭt′ĭk) **1.** Preventing or relieving inflammation of a nerve. **2.** An agent that prevents or relieves inflammation of a nerve.

antineuronal nuclear antibody ABBR: ANNA. Any of several antibodies that bind to neuronal targets in the cerebrum and cerebellum, producing paraneoplastic neurological dysfunction. The antibodies are typically released by cancers such as small-cell carcinoma of the lung (anti-Hu antibody—also known as ANNA-1 and ANNA-2), testicular cancer (anti-Ta antibody), or breast cancer (ANNA-2).

antinuclear (ăn″tĭ-nū′klē-ăr) Reacting with or destroying the nucleus of a cell.

antiobsessive (ăn″tĭ-ŏb-sĕs′ĭv) [Gr. *anti-,* against, + L. *obsidere,* to besiege] **1.** Preventing or treating obsession or obsessive-compulsive disorder. **2.** Any agent used to treat obsession or obsessive-compulsive disorder.

antiodontalgic (ăn″tē-ō″dŏn-tăl′jĭk) [″ + *odous,* tooth, + *algos,* pain] **1.** Relieving toothache. **2.** An agent that relieves toothache.

antioncogene A gene that inhibits or prevents the growth of tumor cells. SEE: *oncogene*.

antiovulatory (ăn″tē-ŏv′ū-lă-tō″rē) Inhibiting or preventing ovulation.

antioxidant (ăn″tē-ŏk′sĭ-dănt) An agent that prevents or inhibits oxidation. Antioxidants are substances that may protect cells from the damaging effects of oxygen radicals, highly reactive chemicals that play a part in atherosclerosis, some forms of cancer, and reperfusion injuries.

antiparallel (ăn″tĭ-păr′ă-lĕl) The characteristic sequencing of the deoxyribonucleotides on one strand of the DNA helix, which is matched by the opposite sequencing on the other strand.

antiparalytic (ăn″tĭ-păr-ă-lĭt′ĭk) Relieving paralysis.

antiparasitic (ăn″tĭ-păr-ă-sĭt′ĭk) **1.** Destructive to parasites. **2.** An agent that destroys parasites.

antiparkinsonian (ăn″tī-păr″kĭn-sōn′ē-ăn) **1.** Pert. to any effective therapy for parkinsonism. **2.** An agent effective against parkinsonism.

antipathy (ăn-tĭp′ă-thē) **1.** Feeling of strong aversion. **2.** Antagonism. **antipathic** (ăn″tĭ-păth′ĭk), *adj.*

antipedicular (ăn″tĭ-pĕ-dĭk′ū-lăr) Effective against pediculosis, said of a medicine or procedure.

antiperistalsis (ăn″tĭ-pĕr″ĭ-stăl′sĭs) [″ + *peri,* around, + *stalsis,* constriction] Reversed peristalsis; a wave of contraction in the gastrointestinal tract moving toward the oral end. In the duodenum it is associated with vomiting; in the as-

cending colon it occurs normally. SEE: *peristalsis*. **antiperistaltic** (-stăl′tĭk), *adj.*

antiperspirant (ăn″tĭ-pĕr′spĭ-rănt) **1.** Inhibiting perspiration. **2.** A substance that inhibits perspiration. SYN: *anhidrotic; antihidrotic; antisudorific*.

antiphagocytic (ăn″tĭ-făg-ō-sĭt′ĭk) Preventing or inhibiting phagocytosis.

antiphospholipid antibody syndrome (ăn″tĭ-fŏs″fō-lĭp′ĭd ăn′tĭ-bŏd″ē sĭn′drōm″) ABBR: APAS. A condition characterized by hypercoagulability associated with high blood levels of IgG antibodies against phospholipids, which are a major component of cell membranes. Many affected patients have a systemic autoimmune disease, such as systemic lupus erythematosus, but others present only with a history of frequent arterial and venous thrombi or pregnancy loss. Recent evidence suggests that antiphospholipid antibodies play a role in approx. 20% of strokes, esp. in patients who do not have common risk factors for stroke. Antiphospholipid antibodies include lupus anticoagulant and anticardiolipins; the presence of the latter causes these patients to test positive for syphilis.

Thromboses caused by the syndrome are treated and prevented with heparin, warfarin, corticosteroids, or, in some instances, immunosuppressant drugs such as cyclophosphamide.

Warfarin should not be used during pregnancy, because of the risk of fetal malformations.

antiplastic (ăn″tĭ-plăs′tĭk) [″ + *plassein,* to form] **1.** Preventing or inhibiting wound healing. **2.** An agent that prevents or inhibits wound healing by preventing formation of granulation tissue.

antiplatelet (ăn″tĭ-plāt′lĕt) **1.** Destructive to platelets. **2.** An agent that destroys or inactivates platelets, preventing them from forming blood clots.

antipodal (ăn-tĭp′ă-dăl) [Gr. *antipous,* with feet opposite] Located at opposite positions (e.g., at the north and south poles).

antiporter (ăn′tē-por″tĕr) A cell membrane protein that moves two substances in opposite directions through the membrane; the opposite of symporter.

antiprostaglandin (ăn″tĭ-prŏs″tă-glăn′dĭn) Any agent that blocks the release or action of prostaglandins. Antagonists of prostaglandins are primarily used to relieve pain and inflammation. SEE: *nonsteroidal anti-inflammatory drug*.

antiprostatitis (ăn″tĭ-prŏs″tă-tī′tĭs) Inflammation of Cowper's gland.

antiprotease (ăn″tĭ-prō′tē-ās) A chemical that interferes with the hydrolysis of proteins by a protease enzyme.

antiprotozoal (ăn″tĭ-prō″tō-zō′ăl) Destructive to protozoa.

antipruritic (ăn″tĭ-proo-rĭt′ĭk) **1.** Preventing or relieving itching. **2.** An agent that prevents or relieves itching.

antipsoriatic (ăn″tĭ-sō″rē-ăt′ĭk) [Gr. *anti,* against, + *psora,* itch] **1.** Preventing or relieving psoriasis. **2.** An agent that prevents or relieves psoriasis.

antipsychotic (ăn″tē-sī-kŏt′ĭk) [Gr. *anti,* against, + *psyche,* mind, soul] **1.** Preventing or treating psychosis, (e.g., schizophrenia). **2.** A medication to treat psychosis.

antipyresis (ăn″tĭ-pī-rē′sĭs) [″ + *pyretos,* fever] Use of antipyretics.

antipyretic (ăn-tĭ-pī-rĕt′ĭk) **1.** Reducing fever. **2.** An agent that reduces fever.

antipyrotic (ăn″tĭ-pī-rŏt′ĭk) [″ + *pyrotikos , burning*] **1.** Promoting the healing of burns. **2.** An agent that promotes the healing of burns.

antirachitic (ăn″tĭ-ră-kĭt′ĭk) [″ + *rachitis,* rickets] **1.** Helping to cure rickets. **2.** An agent for treating rickets.

antiresorptive (ăn″tē-rē-sŏrp′tĭv) [Gr. *anti,* against, + L. *resorbere,* to suck in] **1.** Blocking or opposing osteoporosis. **2.** An agent that prevents or slows the progress of osteoporosis. SEE: *osteoporosis*.

antiretroviral (ăn″tĭ-rĕt″rō-vī′răl) Any agent that acts against retroviruses such as the human immunodeficiency virus, the virus that causes the acquired immunodeficiency syndrome.

antirheumatic (ăn″tĭ-roo-măt′ĭk) **1.** Preventing or relieving rheumatism. **2.** An agent that prevents or relieves rheumatism.

antiscabietic (ăn″tĭ-skā″bē-ĕt′ĭk) [Gr. *anti,* against, + L. *scabies,* itch] **1.** Preventing or relieving scabies. **2.** An agent that prevents or relieves scabies.

antiscorbutic (ăn″tĭ-skor-bū′tĭk) [″ + L. *scorbutus,* scurvy] **1.** Preventing or relieving scurvy. **2.** An agent that prevents or relieves scurvy.

antiseborrheic (ăn″tĭ-sĕb″ō-rē′ĭk) **1.** Counteracting or effectively treating seborrhea. **2.** An agent that counteracts or relieves seborrhea.

antisecretory (ăn″tĭ-sĕ-krē′tă-rē) **1.** Inhibiting secretion of a gland or organ. **2.** An agent that inhibits secretion of a gland or organ.

antiself (ăn″tĭ-sĕlf′) The abnormal reaction of antibodies or lymphocytes with antigens present in the host. SEE: *autoantibody; autoimmune disease*.

antisense (ăn″tē-sĕns′) Strands of genetic material having a matching but reversed order of nucleic acids. In a typical double-stranded molecule of DNA, one strand, called the "sense" strand, codes for the messenger RNA; the

matching strand of DNA is the antisense strand.

antisepsis (ăn″tĭ-sĕp′sĭs) [″ + *sepsis,* putrefaction] Prevention of infection by preventing or inhibiting the growth of causative microorganisms.

antiseptic (ăn″tĭ-sĕp′tĭk) [″ +″] **1.** Pert. to antisepsis. **2.** An agent capable of producing antisepsis.

Disinfectants liberate oxygen when in contact with pus or organic substances. Alcohols, chlorhexidine, iodine, and triclosan are some commonly used antiseptics.

antiserum (ăn″tĭ-sē′rŭm) A serum that contains antibodies for a specific antigen. It may be of human or animal origin. SYN: *immune serum*.

monovalent a. Antiserum containing antibodies specific for one antigen.

polyvalent a. Antiserum containing antibodies specific for more than one antigen.

antishock garment (ăn″tĭ-shŏk′ gahr′mĕnt) A three-compartment garment that can be placed quickly on a patient in severe hypovolemia or with a suspected pelvic fracture. When the compartments are inflated, they compress the abdomen and legs, limiting the blood flow into these areas and preventing pooling of blood and fluid in the underlying tissues. The value of the device in improving long-term survival has been questioned; therefore, these garments are no longer used as frequently as they were in the past. Also known as MAST (*military antishock trousers*). SYN: *pneumatic antishock garment*.

The garment is contraindicated in cardiogenic shock, penetrating abdominal or chest trauma with hemorrhage, or congestive heart failure. In patients who are bleeding as a result of penetrating trauma, the pressure in the garment may raise systemic vascular resistance (SVR) and increase the rate and volume of blood loss.

PATIENT CARE: Inflatable compartments are filled to appropriate pressure (approx. 104 mm Hg or until the pop-off valves begin to leak), from the bottom up, and inflation is maintained until venous access and fluid resuscitation are initiated. Compartments are then deflated from top to bottom; the patient's blood pressure and pulse are monitored frequently for evidence of hypotension. SEE: *anti-G suit*.

antisialagogue (ăn″tĭ-sī-ăl′ă-gŏg) [Gr. *anti,* against, + *sialon,* saliva, + *agogos,* drawing forth] An agent, such as atropine, that lessens or prevents production of saliva.

antisialic (ăn″tĭ-sī-ăl′ĭk) **1.** Inhibiting the secretion of saliva. **2.** An agent that inhibits the secretion of saliva.

antisocial (ăn″tĭ-sō′shăl) Pert. to a person whose outlook and actions are socially negative and whose behavior is repeatedly in conflict with what society perceives as the norm. SEE: *asocial*.

antispasmodic (ăn″tĭ-spăz-mŏd′ĭk) [″ + *spasmos,* convulsion] **1.** Preventing or relieving spasm. **2.** An agent that prevents or relieves spasm.

antistaphylococcic (ăn″tĭ-stăf″ĭ-lō-kŏk′sĭk) [Gr. *anti,* against, + *staphyle,* bunch of grapes, + *cocci,* bacteria] Destructive to staphylococci.

antistreptococcic (ăn″tĭ-strĕp″tō-kŏk′sĭk) Destructive to streptococci.

antistreptolysin (ăn″tĭ-strĕp-tŏl′ĭ-sĭn) Antibody that opposes the action of streptolysin, a hemolysin produced by streptococci.

a. O ABBR: ASLO. An antibody against streptolysin O that is used retrospectively to diagnose infections with group A beta-hemolytic streptococci.

antisudorific (ăn″tĭ-soo″dă-rĭf′ĭk) Antiperspirant.

antisyphilitic (ăn″tĭ-sĭf″ĭ-lĭt′ĭk) [″ + L. *syphiliticus,* pert. to syphilis] **1.** Curing or relieving syphilis. **2.** An agent that cures or relieves syphilis.

antithenar (ăn-tĭth′ĕn-ăr) [″ + *thenar,* palm] The eminence on the ulnar side of the palm, formed by the muscles of the little finger. SYN: *hypothenar eminence*.

antithrombin (ăn″tĭ-thrŏm′bĭn) Any agent that prevents the action of thrombin.

a. III (ăn″tĭ-thrŏm′bĭn) A plasma protein that inactivates thrombin and inhibits coagulation factors IX, X, XI, and XII, preventing abnormal clotting.

antithrombotic (ăn″tĭ-thrŏm-bŏt′ĭk) Interfering with or preventing thrombosis or blood coagulation.

antithyroid (ăn″tĭ-thī′royd) [″ + *thyreoeides,* thyroid] **1.** Preventing or inhibiting the functioning of the thyroid gland. **2.** An agent that prevents or inhibits the functioning of the thyroid gland.

antitoxigen (ăn″tĭ-tŏk′sĭ-gĕn) [″ + ″ + *gennan,* to produce] Antitoxinogen.

antitoxin (ăn″tĭ-tŏk′sĭn) An antibody produced in response to and capable of neutralizing a specific biologic toxin such as those that cause diphtheria, gas gangrene, or tetanus. Antitoxins are used for prophylactic and therapeutic purposes. SEE: *antivenin*. **antitoxic** (-tŏk′sĭk), *adj.*

antitoxinogen (ăn″tĭ-tŏk-sĭn′ō-jĕn) [Gr. *anti,* against, + *toxikon,* poison, + *gennan,* to produce] An antigen that stimulates production of antitoxin. SYN: *antitoxigen*.

antitoxin unit A unit for expressing the strength of an antitoxin. Originally, the

various units were defined biologically but now are compared with a weighed standard specified by the U.S. Public Health Service and the World Health Organization.

antitragicus (ăn″tĭ-trăj′ĭ-kŭs) A small muscle in the pinna of the ear.

antitragus (ăn″tĭ-trā′gŭs) [″ + L. *tragus,* goat] A projection on the ear of the cartilage of the auricle in front of the tail of the helix, posterior to the tragus.

antitrichomonal (ăn″tī-trī′kō-mōn-ăl) **1.** Resistant to or lethal to trichomonads. **2.** A medicine effective in treating trichomonal infections.

antitrismus (ăn″tĭ-trĭs′mŭs) [″ + *trismos,* grinding] A condition in which the mouth cannot close because of tonic spasm. SEE: *trismus*.

antitrypsin (ăn″tĭ-trĭp′sĭn) A substance that inhibits the action of trypsin.

antitryptic (ăn″tĭ-trĭp′tĭk) Inhibiting the action of trypsin.

antitubercular (ăn″tĭ-too-bĕrk′ū-lĕr, -tū) [Gr. *anti-,* against, + L. *tuberculum,* a little swelling] **1.** Preventing or treating tuberculosis. **2.** Any agent used to prevent or treat tuberculosis. SYN: *antituberculotic*.

antituberculotic (ăn″tĭ-too-bĕr′kū-lŏt″ĭk) Antitubercular.

antitussive (ăn″tĭ-tŭs′ĭv) [Gr. *anti,* against, + L. *tussis,* cough] **1.** Preventing or relieving coughing. **2.** An agent that prevents or relieves coughing.

centrally acting a. An agent that depresses medullary centers, suppressing the cough reflex.

antiurolithic (ăn″tĭ-ū″rō-lĭth′ĭk) [Gr. *anti-,* against, + *ourikos,* urine, + *lithos,* stone] **1.** Dissolving or preventing the formation of calculi in the kidneys, ureters, or bladder. **2.** An agent that dissolves or prevents the formation of urinary calculi.

antivenene (ăn″tĭ-vĕn′ēn) Antivenin.

antivenereal (ăn″tĭ-vĕ-nē′rē-ăl) Preventing or curing sexually transmitted diseases.

antivenin, antivenom (ăn″tĭ-vĕn′ĭn) A serum that contains antitoxin specific for an animal or insect venom. Antivenin is prepared from the sera of immunized animals. SYN: *antivenene*.

black widow spider a. Antitoxic serum obtained from horses immunized against the venom of the black widow spider *(Latrodectus mactans)* and used specifically to treat bites of the black widow spider. The serum is available from Merck Co., Inc., West Point, PA 19486.

(Crotalidae) polyvalent a. Antisnakebite serum obtained from serum of horses immunized against venom of four types of pit vipers: *Crotalus atrox, C. adamanteus, C. terrificus,* and *Bothrops atrox* (family Crotalidae). The serum is used specifically to treat bites of these snakes.

antivenomous (ăn″tĭ-vĕn′ŏ-mŭs) Opposing the action of venom.

antiviral (ăn″tĭ-vī′răl) **1.** Opposing the action of a virus. **2.** A drug used to treat viral infections.

antivitamin (ăn″tī-vīt′ă-mĭn) A vitamin antagonist; a substance that makes a vitamin ineffective.

antivivisection (ăn″tĭ-vĭv″ĭ-sĕk′shŭn) Opposition to the use of live animals in experimentation. SEE: *vivisection*.

antixerotic (ăn″tĭ-zē-rŏt′ĭk) [″ + *xerosis,* dryness] Preventing dryness of the skin.

antizymotic (ăn″tĭ-zĭ-mŏt′ĭk) [″ + *zymosis,* fermentation] An agent that prevents or arrests fermentation (e.g., alcohol or salicylic acid).

Anton's syndrome (ăn′tŏnz) [Gabriel Anton, Ger. psychiatrist, 1858–1933] SEE: *anosognosia, visual*.

antra (ăn′tră) [L.] Pl. of antrum.

antrectomy (ăn-trĕk′tō-mē) [L. *antrum,* cavity, + Gr. *ektome,* excision] Excision of the walls of an antrum.

antritis (ăn″trī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of an antrum, esp. the maxillary sinus.

antro-, antr- [L. *antrum,* cavity] Combining forms denoting *relationship to an antrum.*

antroatticotomy (ăn″trō-ăt″ĭ-kŏt′ō-mē) [″ + *atticus,* attic, + Gr. *tome,* incision] Operation to open the maxillary sinus and the attic of the tympanum.

antrobuccal (ăn″trō-bŭk′ăl) [″ + *bucca,* cheek] Concerning the maxillary sinus and the cheek.

antrocele (ăn′trō-sēl) [″ + Gr. *kele,* tumor, swelling] Fluid accumulation in a cyst in the maxillary sinus.

antrochoanal (ăn″trō-kō′ă-năl) [″ + ″] Pertaining both to the maxillary antrum and the cavity that connects the nasopharynx and nasal cavity.

antroduodenectomy (ăn″trō-dū″ō-dĕ-nĕk′tō-mē) [″ + *duodeni,* twelve, + Gr. *ektome,* excision] Surgical removal of the pyloric antrum and the upper portion of the duodenum.

antronasal (ăn″trō-nā′zăl) [″ + *nasalis,* nasal] Rel. to the maxillary sinus and nasal fossa.

antroscope (ăn′trō-skōp) [″ + Gr. *skopein,* to examine] An instrument for visual examination of a cavity, esp. the maxillary sinus.

antrostomy (ăn-trŏs′tō-mē) [″ + Gr. *stoma,* mouth] Operation to form an opening in an antrum.

antrotomy (ăn″trŏt′ō-mē) Cutting through an antral wall.

antrotympanic (ăn″trō-tĭm-păn′ĭk) [L. *antrum,* cavity, + Gr. *tympanon,* drum] Rel. to the mastoid antrum and the tympanic cavity.

antrotympanitis (ăn″trō-tĭm″păn-ī′tĭs) [″

+ ″ + *itis,* inflammation] Chronic inflammation of the tympanic cavity and mastoid antrum.

antrum (ăn′trŭm) *pl.* **antra** [L., cavity] Any nearly closed cavity or chamber, esp. in a bone. **antral** (-trăl), *adj.*

duodenal a. The duodenal cap; a dilatation of the duodenum near the pylorus. It is seen during digestion.

gastric a. Distal non–acid-secreting segment of the stomach or pyloric gland region that produces the hormone gastrin.

maxillary a. The maxillary sinus; a cavity in the maxillary bone communicating with the middle meatus of the nasal cavity.

puncture of the a. Puncture of the maxillary sinus by insertion of a trocar through the sinus wall in order to drain fluid. The instrument is inserted near the floor of the nose, approx. 1½ in (3.8 cm) from the nasal opening. SEE: *antrotomy*.

PATIENT CARE: The antrum is irrigated with the prescribed solution (often warm normal saline solution) according to protocol. The character and volume of the returned solution and the patient's response to treatment are carefully monitored and documented. Ice packs are applied as prescribed for edema and pain; these are replaced by warm compresses as healing progresses. Assessments are made for chills, fever, nausea, vomiting, facial or periorbital edema, visual disturbances, and personality changes, which may indicate the development of complications.

pyloric a. A bulge in the pyloric portion of the stomach along the greater curvature on distention.

ANTU Alpha-naphthylthiourea, a powerful rat poison.

anuclear (ă-nū′klē-ăr) Lacking a nucleus, said of erythrocytes.

ANUG *acute necrotizing ulcerative gingivitis.* SEE: under *gingivitis*.

anulus, annulus (ăn′ū-lŭs) *pl.* **anuli** [L.] A ring-shaped structure; a ring.

a. fibrosus The outer portion of the intervertebral disk, consisting of concentric rings of collagen fibers (lamellae) oriented in varying directions and designed to withstand tensile and compressive loads on the spine as it transmits weight.

anuria (ăn-ū′rē-ă) [″ + *ouron,* urine] Absence of urine formation. **anuric,** *adj.*

anus (ā′nŭs) [L.] The outlet of the rectum lying in the fold between the buttocks.

artificial a. An opening into the bowel formed by colostomy.

imperforate a. Condition in which the anus is closed.

vulvovaginal a. Congenital anomaly in a female in which the anus is imperforate but there is an opening from the rectum to the vagina.

anvil (ăn′vĭl) [AS. *anfilt*] A common name for the incus, the second of the three bones in the middle ear. SYN: *incus*. SEE: *ear* for illus.

anxiety (ăng-zī′ĕ-tē) An uneasy feeling of discomfort or dread accompanied by an autonomic response; the source is often nonspecific or unknown to the individual; a feeling of apprehension caused by anticipation of danger. It is a potential signal that warns of impending danger and enables the individual to take measures to deal with threat. Recurrence of such reactions that disrupt life when danger does not exist constitute anxiety disorders. These include generalized anxiety disorder, panic disorder, social anxiety disorder or phobia, posttraumatic stress disorder, obsessive-compulsive disorder and procedural anxiety. SEE: *neurosis, anxiety; Nursing Diagnoses Appendix.*

PATIENT CARE: Health care providers evaluate the patient's level of anxiety and document related behaviors and physical characteristics, such as sympathetic nervous system arousal, and effects on the patient's perceptual field, and ability to learn and solve problems. Coping and defense mechanisms, avoidance behaviors, and surrounding circumstances are also assessed. Sleep history, depression, and use of alcohol, caffeine, tobacco, herbal supplements, OTC, and other drugs are investigated. Family history also is assessed as anxiety disorders may be familial. A calm, caring, quiet, and controlled atmosphere can prevent progression of the patient's anxiety and even reduce it by lessening feelings of isolation and instability. Patients with mild anxiety are assisted to identify and eliminate stressors, if possible. Appropriate outlets are provided for excess energy. Health care providers establish a trusting relationship with the patient, encouraging the patient to express feelings and concerns. False reassurance is never offered. Care for patients with severe anxiety is focused on reducing environmental and other stimuli. Clear, simple validating statements are used to communicate with the patient and are repeated as often as necessary, and reality is reinforced if distortion is evident. The patient's physical needs are addressed, and activity is encouraged to help the patient discharge excess energy and relieve stress.

If the anxiety is ongoing, the patient should be referred to a care provider who specializes in their treatment. Relaxation therapy, counseling, psychotherapy, and/or pharmacologic therapies may be required. Drug types utilized include benzodiazepines, selective sero-

tonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, and tricyclic antidepressants. Desired effects of the specific prescribed drug are explained, when the patient may expect to see these results, and adverse effects to watch for and report are described. The patient is advised that (in general) antianxiety drugs should not be stopped abruptly or without the prescriber's agreement. The patient also may benefit from referral to a support group such as the Anxiety Disorders Association of America.

castration a. Anxiety about the possibility of injury to or loss of the testicles or ovaries.

death a. The apprehension, worry, or fear related to death or dying. SEE: *Nursing Diagnoses Appendix.*

free-floating a. Anxiety unrelated to an identifiable condition, situation, or cause.

separation a. Distress, agitation, or apprehension expressed by toddlers or others when they are removed from mother, family, home, or other familiar surroundings.

anxiety attack An imprecise term for sudden onset of anxiety, sometimes accompanied by a sense of imminent danger or impending doom and an urge to escape.

anxiety disorder Any of a group of mental conditions that include panic disorder with or without agoraphobia, agoraphobia without panic disorder, simple (specific) phobia, social phobia, obsessive-compulsive disorder, posttraumatic stress disorder, acute stress disorder, generalized anxiety disorder, anxiety caused by a general medical condition, and substance-induced anxiety disorder. The symptoms vary widely but interfere significantly with normal functioning. SYN: *anxiety neurosis; expectation neurosis*. SEE: *Nursing Diagnoses Appendix.*

generalized a.d. Excessive anxiety and worry predominating for at least 6 months. Restlessness, easy fatigability, difficulty in concentrating, irritability, muscle tension, and disturbed sleep may be present. Adults with this disorder often worry about everyday, routine circumstances such as job responsibilities, finances, the health of family members, misfortune to their children, or minor matters such as being late or completing household chores. Frequently they experience cold, clammy hands; dry mouth; sweating; nausea or diarrhea; urinary frequency; trouble swallowing or a "lump in the throat"; an exaggerated startle response; or depressive symptoms. The intensity, duration, or frequency of the anxiety and worry is far out of proportion to the actual likelihood or impact of the feared event.

anxiety reaction Anxiety disorder.

anxiety state A condition marked by more or less continuous anxiety and apprehension. SEE: *neurosis, anxiety*.

anxiolytic (ăng″zī-ō-lĭt′ĭk) [L. *anxietas,* anxiety, + Gr. *lysis,* dissolution] **1.** Counteracting or relieving anxiety. **2.** A drug that relieves anxiety. SYN: *agent, antianxiety*.

AOA *Alpha Omega Alpha,* an honorary medical fraternity in the U.S.; *American Osteopathic Association.*

AoA *Administration on Aging.*

A.O.C. *anodal opening contraction.*

AORN *Association of periOperative Registered Nurses.*

aort-, aorto- Combining forms meaning *aorta*.

aorta (ā-or′tă) *pl.* **aortas, aortae** [L. from Gr. *aorte*] The main trunk of the arterial system of the body.

The aorta is about 3 cm in diameter at its origin in the upper surface of the left ventricle. It passes upward as the ascending aorta, turns backward and to the left (arch of the aorta) at about the level of the fourth thoracic vertebra, and then passes downward as the thoracic aorta to the diaphragm, and below the diaphragm as the abdominal aorta. The latter terminates at its division into the two common iliac arteries. At the junction of the aorta and the left ventricle is the aortic semilunar valve, which contains three cusps. This valve opens when the ventricle contracts and is closed by the backup of blood when the ventricle relaxes. SEE: illus.

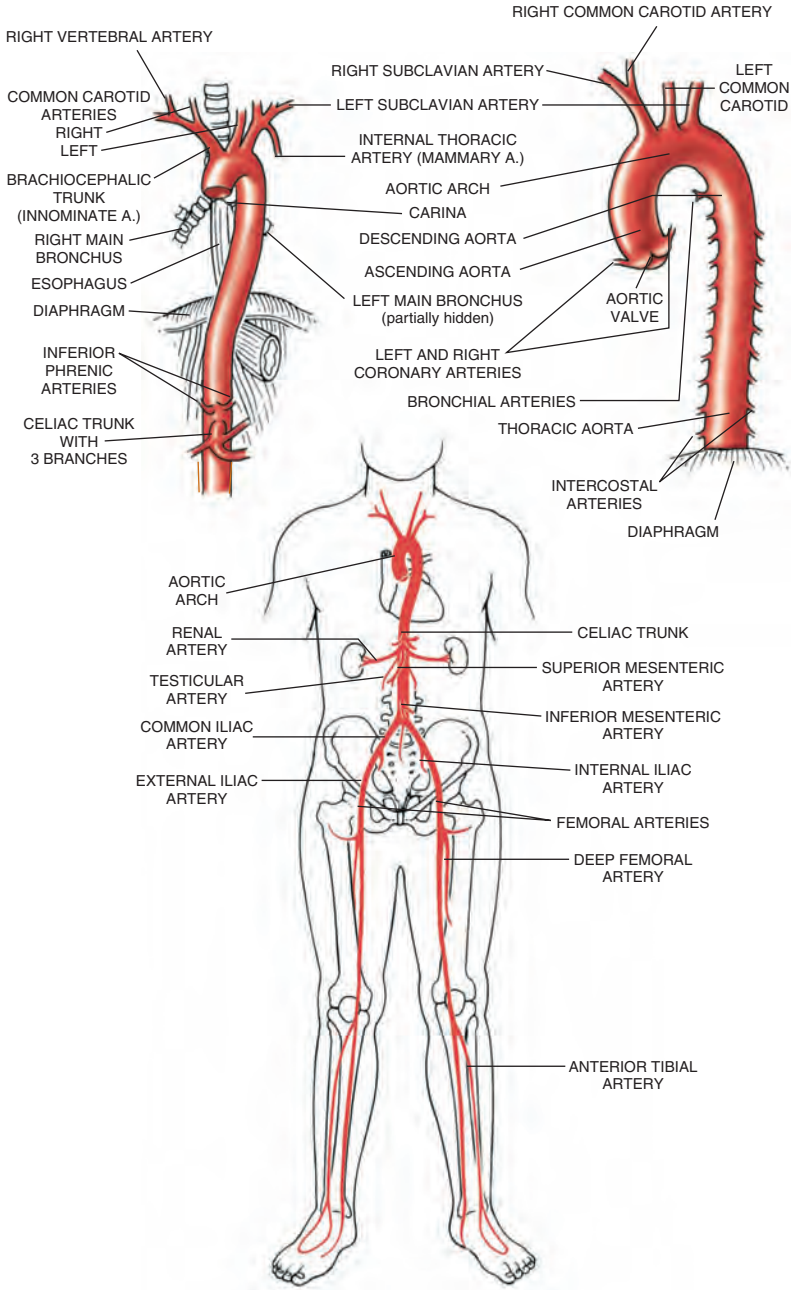
The divisions of the aorta are as follows:

Ascending aorta (two branches): Two coronary arteries (right and left) provide blood supply to the myocardium.

Aortic arch (three branches): The brachiocephalic artery divides into the right subclavian artery, which provides blood to the right arm and other areas, and right common carotid artery, which supplies the right side of the head and neck. The left common carotid artery supplies the left side of the head and neck. The left subclavian artery provides blood for the left arm and portion of the thoracic area.

Thoracic aorta: Two or more bronchial arteries provide blood for bronchi. Esophageal arteries provide blood to the esophagus. Pericardial arteries supply the pericardium. Nine pairs of intercostal arteries supply blood for intercostal areas. Mediastinal branches supply lymph glands and the posterior mediastinum. Superior phrenic arteries supply the diaphragm.

Abdominal aorta: The celiac artery supplies the stomach, liver, and spleen. The superior mesenteric artery supplies all of the small intestine except the superior portion of the duodenum. The in-



BRANCHES OF AORTA

ferior mesenteric artery supplies all of the colon and rectum except the right half of the transverse colon. The middle suprarenal branches supply the adrenal (suprarenal) glands. The renal arteries supply the kidneys, ureters, and adrenals. The testicular arteries supply the testicles and ureter. The ovarian ar-

teries (which correspond to internal spermatic arteries of the male) supply the ovaries, part of the ureters, and the uterine tubes. The inferior phrenic arteries supply the diaphragm and esophagus. The lumbar arteries supply the lumbar and psoas muscles and part of the abdominal wall musculature. The middle sacral artery supplies the sacrum and coccyx. The right and left common iliac arteries supply the lower pelvic and abdominal areas and the lower extremities. **aortal, aortic** (ā-or′tăl, -tĭk), *adj.*

aortalgia (ā″or-tăl′jē-ă) [L. from Gr. *aorte,* aorta, + *algos,* pain] Pain in the aortic area.

aortarctia (ā″or-tărk′shē-ă) [″ + L. *arctare,* to narrow] Aortic narrowing. SEE: *coarctation*.

aortectasia (ā″or-tĕk-tā′zē-ă) [″ + *ek,* out, + *tasis,* a stretching] Dilatation of the aorta.

aortectomy (ā″or-tĕk′tō-mē) [″ + *ektome,* excision] Excision of part of the aorta.

aortic (ā-or′tĭk) Pert. to the aorta.

a. body A chemoreceptor in the wall of the arch of the aorta that detects changes in blood gases (esp. oxygen) and pH. It stimulates reflex changes in heart rate, respiration, and blood pressure that restore normal blood oxygen levels. It is innervated by the vagus nerve.

aortic branch disease Takayasu's arteritis.

a. septal defect A congenital abnormality in which there is a communication between the ascending aorta and the pulmonary artery, requiring surgery to correct.

aortic arch syndrome Partial or complete blockage of the main arteries that arise from the aortic arch. Diminished blood flow to the parts of the body supplied by those arteries may lead to stroke, retinal infarct, or arm pain and weakness. One cause of this rare syndrome is Takayasu's arteritis.

aortic dissection A disruption of the wall of the aorta that causes blood to leave the true arterial lumen, either to enter a false lumen between the intima and the deeper layers of the vessel, or to hemorrhage into the chest or abdomen. Aortic dissection usually occurs in patients with aneurysmal dilation of the aorta, but it may sometimes occur as a result of trauma. It often results in sudden death. Some patients may be able to be stabilized with antihypertensive agents, pending attempts at surgical repair.

aortitis (ā-or-tī′tĭs) [L. from Gr. *aorte,* aorta, + *itis,* inflammation] Inflammation of the aorta, as occurs in patients with syphilis, autoimmune vasculitis, giant cell arteritis, Takayasu's arteritis, or rheumatoid arthritis. Symptoms usually are nonspecific: fever, chills, myalgias, and malaise.

aortoclasia (ā″or-tō-klā′zē-ă) [″ + *klasis,* a breaking] Aortic rupture.

aortocoronary (ā-or″tō-kor′ŏ-nā-rē) Pert. to both the aorta and the coronary arteries.

aortogram (ā-or′tō-grăm″) [″ + *gramma,* something written] An image of the aorta obtained through radiography, computed tomography, or magnetic resonance imaging, usually after the injection of a contrast agent.

aortography (ā″or-tog′ră-fē) [L. from Gr. *aorte,* aorta, + *graphein,* to write] Radiography of the aorta after injection of a contrast medium. **aortographic** (-grăf′ĭk), *adj.*

retrograde a. Aortography by injection of a contrast medium into the aorta via one of its branches, and thus against the direction of the blood flow.

translumbar a. Aortography by injection of a contrast medium into the abdominal aorta through a needle inserted into the lumbar area near the level of the 12th rib.

aortoiliac (ā-or″tō-ĭl′ē-ăk) Pert. to both the aorta and the iliac arteries.

aortolith (ă-or′tō-lĭth) [″ + *lithos,* stone] Calcified deposit in the aortic wall.

aortomalacia (ā-or″tō-mă-lā′shē-ă) [″ + *malakia,* softness] Softening of the walls of the aorta.

aortoplasty (ā-or″tō-plăs′tē) Surgical repair of the aorta, frequently requiring a graft.

aortorrhaphy (ā″or-tor′ă-fē) [″ + *rhaphe,* seam, ridge] Suture of the aorta.

aortosclerosis (ā-or″tō-sklĕr-ō′sĭs) [″ + *skleros,* hard] Aortic sclerosis.

aortostenosis (ā-or″tō-stĕ-nō′sĭs) Aortic stenosis.

aortotomy (ā″or-tŏt′ō-mē) [″ + *tome,* incision] Incision of the aorta.

AOSSM *American Orthopedic Society for Sports Medicine.*

AOTA *American Occupational Therapy Association.*

AOTF *American Occupational Therapy Foundation.*

AP *Anteroposterior*.

APA *American Pharmaceutical Association; American Podiatry Association; American Psychiatric Association; American Psychological Association.*

APACHE II Acronym for *Acute Physiology and Chronic Health Evaluation,* a severity of disease classification system.

apallesthesia (ă-păl″ĕs-thē′zē-ă) [″ + *pallein,* to tremble, + *aisthesis,* sensation] Inability to sense vibrations. SEE: *pallesthesia*.

apallic syndrome (ă-păl′ĭk) Persistent vegetative state.

apancreatic (ă-păn″krē-ăt′ĭk) **1.** Caused by absence of the pancreas. **2.** Pert. to noninvolvement of the pancreas.

APAP with codeine SEE: *acetaminophen*.

aparalytic (ă-păr″ă-lĭt′ĭk) [Gr. *a-,* not, + *paralyein,* to loosen] Marked by lack of paralysis.

aparathyrosis (ă-păr″ă-thī-rō′sĭs) [″ + *para,* near, + *thyreos,* an oblong shield, + *osis,* condition] Parathyroid deficiency.

apareunia (ă″păr-ū′nē-ă) [″ + *pareunos,* lying with] Inability to accomplish sexual intercourse. SEE: *dyspareunia*.

aparthrosis (ăp″ăr-thrō′sĭs) [Gr. *apo,* from, + *arthron,* joint, + *osis,* condition] **1.** A joint that moves freely in any direction, such as the shoulder joint. SYN: *diarthrosis*. **2.** An ambiguous term meaning dislocation of a joint.

apathetic (ăp″ă-thĕt′ĭk) [″ + *pathos,* disease, suffering] Indifferent; without interest. SYN: *apathic*.

apathic (ă-păth′ĭk) Apathetic.

apathism (ăp′ă-thĭzm) [″ + *pathos,* disease, suffering, + *-ismos,* condition] Slowness to react to stimuli; opposite of erethism.

apathy (ăp′ă-thē) [Gr. *apatheia*] Indifference; insensibility; lack of emotion.

apatite (ăp′ă-tīt″) [Ger. *Apatit,* "the deceptive stone"] A mineral containing calcium and phosphate ions and a univalent anion in a specific ratio; the major constituent of teeth and bones.

APC **1.** *absolute phagocyte count*. **2.** *antigen-presenting cell*.

APE *anterior pituitary extract.*

apellous (ă-pĕl′ŭs) [Gr. *a-,* not, + L. *pellis,* skin] **1.** Lacking skin. **2.** Lacking foreskin; circumcised.

apepsia (ă-pĕp′sē-ă) [Gr. *a-,* not, + *pepsis,* digesting] Cessation of digestion.

apepsinia (ă″pĕp-sĭn′ē-ă) Absence of pepsin in the gastric juice.

aperient (ă-pĕr′ē-ĕnt) [L. *aperiens,* opening] **1.** Having a mild laxative effect. **2.** A mild laxative.

aperiodic (ā″pĕr″ē-ŏd′ĭk) Occurring other than periodically.

aperistalsis (ă″pĕr-ĭ-stăl′sĭs) [Gr. *a-,* not, + *peri,* around, + *stalsis,* constriction] Absence of peristalsis.

aperitive (ă-pĕr′ĭ-tĭv) **1.** Stimulating the appetite. **2.** Aperient.

apéritif (ă-pĕr″ĭ-tēf″) [L. *aperire,* to open] An alcoholic beverage, such as wine, taken before a meal to stimulate the appetite.

Apert's syndrome (ă-pārz′) [Eugene Apert, Fr. pediatrician, 1868–1940] A congenital condition marked by premature closure of the sutures of the skull causing malformations of the head. Other manifestations include webbed fingers and toes, cleft palate or uvula, prognathic mandible, and maxillary hypoplasia, resulting in extreme malocclusion.

apertura (ăp″ĕr-tū′ră) *pl.* **aperturae** [L.] An opening.

aperture (ăp′ĕr-chūr″) An orifice or opening, esp. to anatomical or bony spaces or canals.

apex (ā′pĕks) *pl.* **apexes, apices** [L., tip] The pointed extremity of a conical structure.

a. of the lung The superior, subclavicular portion of the lung.

root a. The end of the root of a tooth. The anatomical landmark in the apical region is the apical foramen.

apexcardiogram (ā′pĕks″kār′dē-ō-grăm″) A graphic record of chest wall movements produced by the apex beat.

apexigraph, apexograph (ā-pĕks′ĭ-grăf, -ō-grăf) [L. *apex,* tip, + Gr. *graphein,* to write] An instrument for determining the location and size of the apex of a tooth root.

Apgar score (ăp′găr) [Virginia Apgar, U.S. anesthesiologist, 1909–1974] A system for evaluating an infant's physical condition at birth. The infant's heart rate, respiration, muscle tone, response to stimuli, and color are rated at 1 min, and again at 5 min after birth. Each factor is scored 0, 1, or 2; the maximum total score is 10. *Interpretation of scores:* 7 to 10, good to excellent; 4 to 6, fair; less than 4, poor condition. A low score at 1 min is a sign of perinatal asphyxia and the need for immediate assisted ventilation. Infants with scores below 7 at 5 min should be assessed again in 5 more min; scores less than 6 at any time may indicate need for resuscitation. In depressed infants, a more accurate determination of the degree of fetal hypoxia may be obtained by direct measures of umbilical cord blood oxygen, carbon dioxide partial pressure, and pH. SEE: table.

APHA *American Public Health Association.*

aphacia, aphakia (ă-fā′sē-ă, -kē-ă) [″ + *phakos,* lentil] Absence of the crystalline lens of the eye. **aphacic, aphakic** (ă-fā′sĭk, -kĭk), *adj.*

aphagia (ă-fā′jē-ă) [Gr. *a-,* not, + *phagein,* to eat] Inability to swallow.

aphalangia (ă″fă-lăn′jē-ă) [″ + *phalanx,* closely knit row] Absence of fingers or toes.

aphanisis (ă-făn′ĭ-sĭs) [Gr. *aphaneia,* disappearance] Fear or apprehension that sexual potency will be lost.

aphasia (ă-fā′zhă) [Gr. *a-,* not, + *phasis,* speaking] Absence or impairment of the ability to communicate through speech, writing, or signs because of brain dysfunction. It is considered complete or total when both sensory and motor areas are involved. SEE: *alalia*. **aphasic** (-zĭk), *adj.*

acquired epileptiform a. Landau-Kleffner syndrome.

amnesic a. Anomic a.

Apgar Score

Sign	SCORE		
	0	1	2
Heart rate	Absent	Slow (less than 100)	Greater than 100
Respiratory effort	Absent	Slow, irregular	Good; crying
Muscle tone	Limp	Some flexion of extremities	Active motion
Reflex irritability	No response	Grimace	Cry
Color*	Blue, pale	Body pink; extremities blue	Completely pink

* Skin color or its absence may not be a reliable guide in infants with dark complexions although melanin is less apparent at birth than later.

anomic a. Inability to name objects; loss of memory for words.

auditory a. Word deafness.

Broca's a. Motor a.

conduction a. Aphasia marked by an inability to repeat what one has heard and impairment in writing and word finding.

crossed a. Aphasia that develops paradoxically in a right-handed person after a stroke or lesions affecting the right hemisphere.

executive a. Motor a.

fluent a. Aphasia in which words are easily spoken but are incorrect and may be unrelated to the content of the other words spoken.

gibberish a. Utterance of meaningless phrases.

global a. Total aphasia involving failure of all forms of communication.

infantile acquired a. Landau-Kleffner syndrome.

jargon a. Communication that results in the use of jargon or disconnected words.

mixed a. Combined receptive and expressive aphasia.

motor a. Aphasia in which patients know what they want to say but cannot say it because of their inability to coordinate the muscles controlling speech. It may be complete or partial. Broca's area is disordered or diseased. SYN: *aphemia; Broca's aphasia; executive aphasia*.

nominal a. Inability to name objects.

optic a. A form of agnosia marked by inability to name an object recognized by sight without the aid of sound, taste, or touch.

primary progressive a. A form of dementia characterized primarily by inability to name objects or recall words during conversation. Progressive deterioration in the use of language is characteristic of this dementia. By contrast, in Alzheimer disease, deficits in short-term memory (and social interaction) occur before language use deteriorates.

semantic a. Inability to understand the meanings of words.

sensory a. Inability to understand spoken words if the auditory word center is involved (auditory aphasia) or written words if the visual word center is affected (word blindness). If both centers are involved, the patient will understand neither spoken nor written words.

syntactic a. Inability to use proper grammatical constructions.

transcortical a. Aphasia in which the ability to repeat words is preserved, but other language functions are impaired.

traumatic a. Aphasia caused by head injury.

visual a. Word blindness.

Wernicke's a. SEE: *Wernicke's aphasia*.

aphasiac (ă-fā′zē-ăk) An individual affected with aphasia.

aphasic (ă-fā″zĭk) **1.** Pert. to aphasia. **2.** An individual affected with aphasia.

aphasiologist (ă-fā″zē-ŏl′ō-jĭst) [Gr. *a-*, not, + *phasis,* speaking, + *logos,* word, reason] A person who studies the pathology of language and the production of speech and written language.

aphemia (ă-fē′mē-ă) [″ + *pheme,* speech] **1.** Motor aphasia. **2.** Anarthria.

aphephobia (af″ĕ-fō′bē-ă) [Gr. *haphe,* touch, + *phobos,* fear] Morbid fear of being touched.

apheresis, therapeutic (ă-fĕr′ē-sĭs) [Gr. *aphairesis,* separation] Removal of unwanted or pathological components from a patient's blood by means of a continuous-flow separator; the process is similar to hemodialysis, as treated blood is returned to the patient. The removal of cellular material is termed cytapheresis; leukapheresis describes the removal of leukocytes only. Plasmapheresis, also called plasma exchange, involves removal of noncellular materials. Therapeutic apheresis has been used to treat blood hyperviscosity, cold agglutinin hemolytic anemia, post-transfusion purpura, thrombotic thrombocytopenic purpura, myasthenia gravis, sickle cell anemia, Guillain-Barré syndrome, familial hypercholesterolemia, and certain drug overdoses.

aphonia (ă-fō′nē-ă) [Gr. *a-*, not, + *phone,* voice] Loss of speech sounds

from the larynx, as may occur in chronic laryngitis. It is not caused by a brain lesion. The condition may be caused by disease of the vocal cords, paralysis of the laryngeal nerves, or pressure on the recurrent laryngeal nerve; or it may be functional (due to psychiatric causes). **aphonic** (-fŏn′ĭk), *adj.*

hysterical a. Aphonia due to somatoform disorders. There is no organic defect.

a. paranoica Obstinate silence in the mentally ill.

postoperative a. Loss of speech following laryngectomy. Restoration of speech is accomplished with speech synthesizers and speech therapy.

spastic a. Aphonia resulting from spasm of the vocal muscles, esp. that initiated by efforts to speak.

aphonogelia (ă-fō″nō-jē′lē-ă) [″ + *phone,* voice, + *gelos,* laughter] Inability to laugh out loud.

aphose (ăf′ōz) [″ + *phos,* light] A subjective visual perception of darkness or of a shadow.

aphrasia (ă-frā′zhă) [″ + *phrasis,* speech] Inability to speak or understand phrases.

aphrodisiac (ăf″rō-dĭz′ē-ăk) **1.** Stimulating sexual desire. **2.** A drug, food, environment, or other agent that arouses sexual desire.

aphtha (ăf′thah) *pl.* **aphthae** [Gr. *aphtha,* small ulcer] A small ulcer on a mucous membrane of the mouth, as in thrush. **aphthic** (-thik), *adj.*

Bednar's a. SEE: *Bednar's aphthae*.

cachectic a. A lesion formed beneath the tongue and accompanied by severe constitutional symptoms.

aphthoid (ăf′thoyd) Resembling aphthae.

aphthong (ăf′thŏng) [″ + Gr. *phthongos,* sound, voice] A silent letter or combination of letters in a written word.

aphthongia (ăf-thŏn′jă) [Gr. *a-,* not, + *phthongos,* voice] Inability to speak due to spasm of muscles controlling speech.

aphthosis (ăf-thō′sĭs) [Gr. *aphtha,* small ulcer, + *osis,* condition] Any condition characterized by aphthae.

aphthous (ăf′thŭs) [Gr. *aphtha,* small ulcer] Pert. to, or characterized by, aphthae.

apical (ăp′ĭ-kal, ā′pĭ-kal) [L. *apex,* tip] Pert. to the apex of a structure.

apical heave Visible heaving of the chest over the apex of the heart. This usually indicates left ventricular hypertrophy. SEE: *thrust, substernal*.

apicectomy (ăp″ĭ-sĕk′tō-mē) [L. *apex,* tip, + Gr. *ektome,* excision] Excision of the apex of the petrous portion of the temporal bone.

apices (ā′pĭ-sēz, ăp′ĭ-sēz) [L.] Pl. of apex.

apicitis (ăp-ĭ-sī′tĭs) [L. *apices,* tips, + Gr. *itis,* inflammation] Inflammation of an apex, esp. that of a lung or tooth root.

apicoectomy (ăp-ī-kō-ĕk′tō-mē) [L. *apex,* tip, + Gr. *ektome,* excision] Excision of the apex of the root of a tooth.

apicolocator (ă″pĭ-kō-lō′kā-tor) [″ + *locare,* to place] An instrument for locating the apex of the root of a tooth.

apicolysis (ăp″ĭ-kŏl′ĭ-sĭs) [″ + Gr. *lysis,* dissolution] **1.** Destruction of a dental root apex. **2.** Surgical excision or collapse of the pulmonary apex.

PATIENT CARE: During and after the procedure, the patient is assessed for symptoms of tension pneumothorax (increased pulse and respirations, cyanosis, and marked dyspnea, along with severe sharp pain, tympanic resonance to percussion, and absent breath sounds on auscultation of the affected side) and for symptoms of a mediastinal shift (cyanosis, severe dyspnea, distended neck veins, increased pulse and respiratory rate, and excessive, uncontrollable coughing). After the procedure, the patient is positioned as prescribed, usually on the affected side.

Apicomplexa (ăp″ĭ-cŏm-plĕks′ă) A phylum of the kingdom Protista (formerly a division of protozoa called *Sporozoa*); named for a complex of cell organelles (apical microtubule complex) at the apex of the sporozoite form that can penetrate host cells. It includes the medically important genera *Plasmodium, Toxoplasma, Cryptosporidium,* and *Isospora*.

apicostomy (āp″ĭ-kŏs′tō-mē) [L. *apex,* tip, + Gr. *stoma,* mouth] Surgical removal of the mucoperiosteum and bone in order to expose the apex of the root of a tooth.

apicotomy (ăp″ĭ-kŏt′ō-mē) [L. *apex,* tip, + Gr. *tome,* incision] Incision of an apical structure.

apinealism (ă-pĭn′ē-ăl-ĭzm) [Gr. *a-,* not, + L. *pinea,* pine cone, + Gr. *-ismos,* condition] Absence of the pineal gland.

apiphobia (ăp″ĭ-fō′bē-ă) [L. *apis,* bee, + phobia] Unrealistic fear of bees.

apitherapy (āp″ĭ-thĕr′-ă-pē) In alternative medicine, the application of bee stings or their chemical constituents for their putative anti-inflammatory effects. Apitherapy has been used by some health care practitioners to treat arthritis and multiple sclerosis, among other disorders.

aplanatic (ă″plă-năt′ĭk) [Gr. *a-,* not, + *planetos,* wandering] Free from or correcting spherical aberration.

aplasia (ă-plā′zē-ă) [″ + *plasis,* a developing] Failure of an organ or tissue to develop normally. **aplastic** (ă-plăs′tĭk), *adj.*

a. axialis extracorticalis congenita Congenital defect of the axon formation on the surface of the cerebral cortex.

a. cutis congenita Defective devel-

opment of a localized area of the skin, usually on the scalp. The area is usually covered by a thin, translucent membrane.

thymic a. A sometimes fatal disorder in which the thymus fails to develop, causing a deficiency of gamma globulin. There is a deficiency of lymph tissue throughout the body. SYN: *thymic alymphoplasia*.

Apley's compression/distraction test (ăp′lēz) A test for differentiating knee pain caused by meniscal injuries from pain caused by ligament sprains. The test is performed with the patient prone and the knee flexed to 90°. With the femur stabilized, the leg is distracted and rotated internally and externally. An axial load is then applied to the leg while the tibia is again internally and externally rotated. Pain produced only when the leg is compressed indicates a meniscal lesion; pain produced only when the leg is distracted indicates ligament trauma.

Apley's scratch test (ăp′lēz) A test of shoulder function with several variations designed to detect asymmetries in range of motion observed during adduction, flexion, extension, internal rotation, and external rotation. The patient performs instructed movements involving positioning the hand to touch the opposite shoulder in the scapular region from behind the back and over the shoulder.

APMA. *American Podiatric Medical Association.* Formerly called the American Podiatry Association.

APN *Advanced practice nurse.*

APNA American Psychiatric Nurses Association.

apnea (ăp-nē′ă) [″ + *pnoe,* breathing] Temporary cessation of breathing and, therefore, of the body's intake of oxygen and release of carbon dioxide. It is a serious symptom, esp. in patients with other potentially life-threatening conditions. SEE: *apnea monitoring; Cheyne-Stokes respiration; sleep apnea; sudden infant death syndrome*.

central a. Absence of breathing during sleep that occurs when the respiratory center of the brainstem does not send normal periodic signals to the muscles of respiration. Observation of the patient reveals no respiratory effort, that is, no movement of the chest, and no breath sounds.

deglutition a. Cessation of breathing while swallowing.

a.–hypopnea index A measure of sleep-disordered breathing based on the number of episodes of apnea or periods of inadequate ventilation during sleep.

mixed a. Dysfunctional breathing during sleep that combines elements of obstructive and central sleep apneas.

obstructive a. Absent or dysfunctional breathing that occurs when the upper airway is intermittently blocked during sleep. Observation of the patient reveals vigorous but ineffective respiratory efforts, often with loud snoring or snorting.

a. of prematurity ABBR: AOP. A condition of the premature newborn, marked by repeated episodes of apnea lasting longer than 20 sec. The diagnosis of AOP is one of exclusion, made when no treatable cause can be found. Increased frequency of apneic episodes directly relates to the degree of prematurity. AOP is not an independent risk factor for sudden infant death syndrome. Apneic episodes may result in bradycardia, hypoxia, and respiratory acidosis.

TREATMENT: There is no specific treatment; however, initial efforts should begin with the least invasive method possible. Tactile stimulation is often successful with early recognition. When gentle stimulation does not produce a response, bag and mask ventilation is initiated. Methylxanthines such as caffeine, theophylline, and aminophylline are helpful.

PATIENT CARE: Care should include maintenance of a neutral thermal environment, avoidance of prolonged oral feedings, use of tactile stimulation early in the apneic episode, and ventilatory support as needed. The infant who has experienced and survived an episode of apnea is maintained on cardiac and respiratory monitoring devices. Before discharge, parents are taught cardiopulmonary resuscitation, use of monitoring equipment, and how to recognize signs of medication toxicity if medications are used.

sleep a. Sleep apnea.

apnea alarm mattress A mattress that is designed to sound an alarm when the infant lying on it ceases to breathe. SEE: *apnea monitoring; sudden infant death syndrome*.

apnea monitoring Monitoring the respiratory movements, esp. of infants. This may be done by use of an apnea alarm mattress, or devices to measure the infant's thoracic and abdominal movements and heart rate. SEE: *sudden infant death syndrome*.

apnea test A test used to determine whether a comatose person receiving life support has suffered brain death.

PATIENT CARE: The patient's ventilator is set to deliver no breaths per minute, and the carbon dioxide level of the blood is allowed to rise above 60 mm Hg. If apnea (no spontaneous breathing) occurs, brain death is confirmed. The test should not be performed if the person has recently received sedative, narcotic, or paralytic drugs; those drugs

may suppress spontaneous breathing, falsely suggesting brain death.

apneumatic (ăp″nū-măt′ĭk) [Gr. *a-,* not, + *pneuma,* air] **1.** Free of air, as in a collapsed lung. **2.** Pert. to a procedure done in the absence of air.

apneumatosis (ăp″nū-mă-tō′sĭs) [″ + ″ + *osis,* condition] Noninflation of air cells of the lung; congenital atelectasis.

apneumia (ăp-nū′mē-ă) [″ + *pneumon,* lung] Congenital absence of the lungs.

apneusis (ăp-nū′sĭs) Abnormal respiration marked by sustained inspiratory effort; caused by surgical removal of the upper portion of the pons.

apo- (ăp′ō) [Gr. *apo,* from] Combining form meaning *separated from* or *derived from.*

apo(a) Abbreviation for apolipoprotein(a).

apocamnosis (ăp″ō-kăm-nō′sĭs) [Gr. *apokamnein,* to grow weary] Weariness; easily induced fatigue.

apochromatic (ăp″ō-krō-măt′ĭk) Free from spherical and chromatic aberrations.

apocrine (ăp′ō-krēn, -krīn, -krĭn) [Gr. *apo,* from, + *krinein,* to separate] Denoting secretory cells that contribute part of their protoplasm to the material secreted. SEE: *eccrine; holocrine; merocrine*.

apodal (ăp′ă-dĭl) [Gr. *a-,* not, + *pous,* foot] Lacking feet.

apodia (ă-pō′dē-ă) [Gr. *a-,* not, + *pous,* foot] Congenital absence of one or both feet.

apoenzyme (ăp-ō-ĕn′zīm) The protein portion of an enzyme. SEE: *holoenzyme; prosthetic group*.

apoferritin (ăp″ō-fĕr′ĭ-tĭn) A protein that combines with iron to form ferritin. In the body, it is always bound to iron.

apogee (ăp′ō-jē) [Gr. *apo,* from, + *gaia,* earth] The climax or period of greatest severity of a disease. SYN: *acme* (2).

apolar (ā-pō′lăr) [Gr. *a-,* not, + *polos,* pole] Without poles or processes. Some nerve cells are apolar.

apolipoprotein (ăp″ō-lĭp″ō-prō′tēn) Proteins imbedded in the outer shell of lipoproteins. The apolipoproteins (Apo) are designated ApoAI, ApoAII, ApoAIV; ApoB48 and B100; ApoCI, ApoCII, ApoCIII; and ApoE. Except for ApoAII and ApoAIV, their metabolic functions are concerned with metabolizing and transporting lipoproteins. The functions of ApoAII and ApoAIV are not fully understood. All are synthesized in the liver; ApoE is synthesized also in macrophages, neurons, and glial cells. SEE: *lipoprotein*.

apolipoprotein B—apolipoprotein A-I ratio ABBR: ApoB—apo-A-I ratio. The ratio between the primary structural components of unhealthy lipoproteins (apo A-I) and high-density lipoproteins (apo B). It is a known risk factor for coronary artery disease.

apolipoprotein E ABBR: ApoE. A protein that regulates lipid concentrations in plasma and may repair neuronal damage in the central nervous system. ApoE4 allele is associated with familial late-onset Alzheimer's disease, possibly because it protects neurons less effectively than other ApoE alleles.

apology law (ă-pŏl′ŏ-jē) [Gr. *apologia,* (verbal) self-defense] A colloquial term for any legal statute that encourages health care providers to acknowledge and disclose medical errors openly. Although apology laws vary from one jurisdiction to another, most include some measure of legal protection for the individual or agency making the apology.

aponeurosis (ăp″ō-nū-rō′sĭs) *pl.* **aponeuroses** [″ + *neuron,* nerve, tendon] A flat fibrous sheet of connective tissue that attaches muscle to bone or other tissues; may sometimes serve as a fascia. **aponeurotic** (-rŏt′ĭk), *adj.*

epicranial a. Fibrous membrane connecting the occipital and frontal muscles over the top of the skull. SYN: *galea aponeurotica*.

lingual a. Connective tissue sheet of the tongue to which lingual muscles attach.

palatine a. Connective tissue sheet of the soft palate to which palatal muscles attach.

pharyngeal a. Sheet of connective tissue lying between the mucosal and muscular layers of the pharyngeal wall. SYN: *pharyngobasilar fascia*.

plantar a. Sheet of connective tissue investing the muscles of the sole of the foot. SYN: *plantar fascia*.

aponeurositis (ăp″ō-nū-rō-sī′tĭs) [″ + ″ + *itis,* inflammation] Inflammation of an aponeurosis.

aponeurotome (ăp″ō-nū′rō-tōm) [″ + ″ + *tome,* incision] Surgical instrument for cutting an aponeurosis.

aponeurotomy (ăp″ō-nū-rŏt′ō-mē) Incision of an aponeurosis.

apophysis (ă-pŏf′ĭ-sĭs) *pl.* **apophyses** [Gr. *apophysis,* offshoot] A projection, esp. from a bone (e.g., a tubercle); an outgrowth without an independent center of ossification. **apophyseal, apophysial** (ăp″ă-fĭz′ē-ăl), *adj.*

basilar a. Basilar process of the occipital bone.

a. of Ingrassia Smaller wing of the sphenoid bone.

lenticular a. Lenticular process of the incus, which articulates with the stapes.

a. raviana Anterior process of the malleus.

temporal a. Mastoid process of the temporal bone.

apophysitis (ă-pŏf″ĭ-sī′tĭs) [Gr. *apo,* from, + *physis,* growth, + *itis,* in-

flammation] Inflammation of an apophysis.

apoplectic (ăp″ō-plĕk′tĭk) [Gr. *apoplektikos,* crippled by stroke] Pert. to apoplexy.

apoplectiform (ăp″ō-plĕk′tĭ-form) [Gr. *apoplexia,* stroke, + L. *forma,* form] Resembling apoplexy. SYN: *apoplectoid*.

apoplectoid (ăp″ō-plĕk′toyd) [″ + *eidos,* form, shape] Apoplectiform.

apoplexia (ăp″ō-plĕk′sē-ă) [Gr. *apoplessein,* to cripple by a stroke] Apoplexy.

apoplexy (ăp′ō-plĕk″sē) [Gr. *apoplessein,* to cripple by a stroke] **1.** Copious effusion of blood into an organ, as in abdominal apoplexy or pulmonary apoplexy. **2.** An outmoded term for stroke, esp. a stroke in which a blood vessel in the brain ruptures.

pituitary a. Hemorrhage into or necrosis of the pituitary gland. The symptoms are sudden headache, vision loss, and circulatory collapse. Treatment usually includes prompt administration of adrenal steroids. Sometimes neurosurgery is attempted to prevent permanent blindness.

uteroplacental a. Couvelaire uterus.

apoptosis (ă-pŏp-tō′sĭs, ă-pō-tō′sĭs) [Gr. *apo,* from, + *ptosis,* a dropping] **1.** Programmed cell death; genetic limitation of the lifespan of cells. The process may be important in limiting growth of tumors. **2.** Programmed death of cells.

aporepressor (ăp″ō-rē-prĕs′or) A protein, the synthesis of which is directed by a regulator gene, that functions only when bound with specific low-molecular-weight compounds called corepressors.

aposia (ă-pō′zē-ă) [Gr. *a-,* not, + *posis,* drink] Adipsia.

apotemnophilia (ăp″ō-tĕm″nō-fēl′ē-ă) [Gr. *apo,* away, + *temnein,* to cut, + *philein,* to love] A form of paraphilia characterized by the individual requesting amputation of an extremity for erotic reasons.

apothecaries' weights and measures (ă-pŏth′ĕ-kār″ēz) An outdated and obsolete system of weights and measures formerly used by physicians and pharmacists; based on 480 grains to 1 oz and 12 oz to 1 lb. It has been replaced by the metric system. SEE: *Weights and Measures Appendix.*

apothecary (ă-pŏth′ĕ-kā-rē) [Gr. *apotheke,* storing place] A druggist or pharmacist. In England and Ireland, one licensed by the Society of Apothecaries of London or the Apothecaries' Hall of Ireland as an authorized physician and dispenser of drugs.

apothem, apotheme (ăp′ō-thĕm, -thēm) [Gr. *apo,* from, + *thema,* deposit] The brown precipitate that appears when vegetable decoctions or infusions are exposed to the air or are boiled a long time.

apotripsis (ăp″ō-trĭp′sĭs) [Gr. *apotribein,* to abrade] Removal of a corneal scar or opacity.

apovitellin (ăp″ō-vī-tĕl′-ĭn) [″ + ″] One of several components of the lipoprotein in egg yolks; a source of food allergies in susceptible individuals.

apparatus (ăp″ă-rā′tŭs, -răt′ŭs) [L. *apparare,* to prepare] **1.** A number of parts that act together to perform a special function. **2.** A group of structures or organs that work together to perform a common function. **3.** A mechanical device or appliance used in operations and experiments.

Particular apparatuses are listed under the first word. SEE: e.g., *dental apparatus; Golgi apparatus; vocal apparatus*.

apparent [L. *apparens,* appearing] **1.** Obvious and easily seen; not disguised or hidden. **2.** Appearing to the senses to be obvious and clear based on evidence that, with greater knowledge or closer examination, may or may not be valid.

appearance The visible presentation of an object.

appendage (ă-pĕn′dĭj) Anything attached to a larger or major body part, such as a tail or a limb. SEE: *appendix*.

atrial a. A small muscular pouch attached to each atrium of the heart.

auricular a. **1.** Atrial appendage. **2.** Additional tissue attached to the ear.

a. of the eye The eyelid, eyelashes, eyebrow, lacrimal apparatus, and conjunctiva.

a. of the fetus The amnion, chorion, and umbilical cord.

a. of the skin The nails, hair, and the sebaceous and sweat glands.

uterine a. The ovaries, fallopian tubes, and uterine ligaments.

appendectomy (ăp″ĕn-dĕk′tō-mē) [″ + Gr. *ektome,* excision] Surgical removal of the vermiform appendix.

incidental a. Removal of the appendix during another surgical procedure within the abdomen or pelvis.

appendical, appendiceal (ă-pĕn′dĭ-kăl, ăp-ĕn-dĭs′ē-ăl) Pert. to an appendix.

appendicectasis (ă-pĕn″dĭ-sĕk′tă-sĭs) [L. *appendere,* hang to, + Gr. *ektasis,* a stretching] Dilatation of the vermiform appendix.

appendicectomy (ă-pĕn″dĭ-sĕk′tō-mē) Appendectomy.

appendicitis (ă-pĕn″dĭ-sī′tĭs) [L. *appendere,* hang to, + Gr. *itis,* inflammation] Inflammation of the vermiform appendix, caused by blockage of the lumen of the appendix followed by infection. It may be acute, subacute, or chronic and occasionally is difficult to diagnose (because many other illnesses may cause acute abdominal pain). SEE:

Some Severe Illnesses That May Mimic Appendicitis

Disease	Clinical Findings That May Suggest the Diagnosis
Abdominal aortic aneurysm, rupture	Pulsatile abdominal mass; abdominal bruits; mature patient; imaging studies
Colic caused by kidney stone	Blood present in the urine; visualization of stone by pyelography or computed tomography
Crohn's disease, flare	History of inflammatory bowel disease; pus or blood in stools
Diverticulitis, right-sided	May be difficult to distinguish without imaging studies, laparotomy, or laparoscopy
Ectopic pregnancy	Positive pregnancy test; abdominal ultrasound
Gastroenteritis	Others at home also ill; recent travel abroad; vomiting and diarrhea present
Ischemia of the GI tract	Pain more notable than physical findings; metabolic acidosis; blood in stools; mature patient; smoker
Perforation of an internal organ	Abdominal rigidity; free air under the diaphragm on abdominal x-ray studies
Pyelonephritis	Leukocytes and bacteria in catheterized urine specimen
Salpingitis	Sexually active woman; cervical purulence; tenderness of pelvic organs on examination
Typhlitis	History of leukemia

NOTE: Surgical consultation and abdominal imaging (e.g., with computerized tomography) will lower the likelihood of missed diagnoses or inappropriate surgery.

acute a. and other subentries; *Nursing Diagnoses Appendix.*

TREATMENT: Surgery is typically required. Preoperative intravenous hydration and antibiotics are given in most instances.

acute a. A common presentation of appendiceal inflammation. Inflammation can result in infection, thrombosis, necrosis, and perforation or rupture of the intestine. Peritonitis (inflammation of the peritoneal cavity) may follow, as the contents of the lower gastrointestinal tract enter the abdominal cavity. Classic presentations, which occur about 60% of the time, include abdominal pain (initially diffuse, gradually localizing to the right lower quadrant), loss of appetite, nausea, fever, and an elevated white blood cell count. The disease is more common in males and generally occurs in the young, usually between the ages of 10 and 20, but rarely before age 2 and less often after age 50. It is nevertheless important in the differential diagnosis of abdominal pain in older adults.

DIAGNOSIS: Diagnosis is simple when pain eventually localizes to the right lower quadrant, with rebound tenderness and rigidity over the right rectus muscle or McBurney's point. Walking bent over or lying with the right knee flexed are maneuvers the patient may use instinctively to reduce discomfort. If the abdominal pain suddenly stops, perforation or infarction may have occurred. Diagnostic difficulties may arise because the anatomical location of the appendix can vary; as a result, pain may be present in the pelvis, in the right upper quadrant, or in other locations. Tachycardia and moderate to severe discomfort are common. The differential diagnosis of acute appendicitis includes flares of inflammatory bowel disease, mesenteric adenitis, pelvic inflammation, and many other illnesses. When this diagnosis is considered in a woman, it must be differentiated from pain associated with ovulation (mittelschmerz), ruptured ectopic pregnancy, torsion of the ovary, and pelvic inflammatory disease. To aid preoperative diagnosis, imaging studies, such as ultrasound or computed tomography, are often performed. SEE: table.

The greater the delay in diagnosis, the higher the incidence of complications, such as abscess formation, appendiceal rupture, sepsis, and death.

PATIENT CARE: *Preoperative:* The patient is assessed for signs and symptoms of appendicitis, such as elevated temperature; nausea or vomiting; onset, location, quality, and intensity of pain; rebound tenderness; constipation or diarrhea; and a moderately elevated white blood cell count (12,000 to 15,000/ul) with an increase in immature white blood cells. Abdominal ultrasound or CT scan may be used to confirm the diagnosis. The patient is positioned for comfort, kept NPO, intravenous fluids are started for hydration, and he/she is prepared physically and emotionally for surgery.

To prevent possible rupture of an inflamed appendix, cathartics or enemas should not be used.

Postoperative: Vital signs, the status of bowel sounds, abdominal flatus, lung sounds, and intake and output, including prescribed intravenous fluids, are monitored and documented. The patient is positioned comfortably (Fowler's position in the case of a ruptured appendix or peritonitis). Prescribed analgesics and noninvasive comfort measures are provided. Position changes, incentive spirometry for deep breathing and coughing, and early ambulation are encouraged. The patient's ability to urinate is ascertained and documented. If required, antibiotics are administered as prescribed. The dressing is inspected for any bleeding or drainage and the findings documented. Possible surgical complications include abscess formation (evidenced by continued pain and fever postoperatively) and wound dehiscence (reopening of the surgical incision after it has been closed). Nasogastric drainage may be required for decompression of the gastrointestinal tract, and prevention of nausea and vomiting if peritonitis occurs as a complication. The patient is prepared for return to home, work, and other activities.

chronic a. Appendicitis that may follow an acute but untreated attack, leaving fibrosis and narrowing of the lumen of the appendix. Some authorities question the existence of this entity, as those pathological changes can result from other inflammatory conditions or simply from a gradual narrowing of the lumen.

gangrenous a. Appendicitis in which inflammation is extreme, blood vessels are blocked in the mesentery, circulation to the appendix is cut off, and diffuse peritonitis ensues.

stump a. Inflammation occurring in the surgical remnant (the proximal portion of the appendix) after appendectomy.

tip a. Inflammation that involves only the most distal portion of the appendix. It may be difficult to visualize radiographically; e.g., during CT scanning.

appendicoenterostomy (ă-pĕn″dĭk-ō-ĕn″tĕr-ŏs′tō-mē) [L. *appendere,* hang to, + Gr. *enteron,* intestine, + *stoma,* mouth] **1.** Appendicostomy. **2.** The establishment of an anastomosis between the appendix and intestine.

appendicolysis (ă-pĕn″dĭ-kŏl′ĭ-sĭs) [″ + Gr. *lysis,* dissolution] Surgery to free the appendix from adhesions.

appendicopathy (ă-pĕn″dĭ-kŏp′ă-thē) [″ + Gr. *pathos,* disease, suffering] Any disease of the vermiform appendix.

a. oxyurica A lesion of the appendical mucosa supposedly due to oxyurids (intestinal parasitic worms).

appendicostomy (ă-pĕn″dĭ-kŏs′tō-mē) Surgical opening and fixation of the appendix onto the skin. The opening is employed as a vent to an obstructed colon (it is less efficient than a colostomy or cecostomy). Through the appendiceal lumen a tube can be passed to either instill medication (as in cases of colitis) or fluids (e.g., to relieve fecal impaction in infants with Hirschsprung's disease or in the infirm elderly patient). The opening can also be used to remove foreign bodies from the intestinal lumen.

PATIENT CARE: Emotional support is given to the patient and family members. Ostomy care is taught.

appendicular (ăp″ĕn-dĭk′ū-lăr) [L. *appendere,* to hang to] **1.** Pert. to an appendix. SYN: *appendical; appendiceal*. **2.** Pert. to the limbs.

appendix (ă-pĕn′dĭks) *pl.* **appendixes***pl.* **appendices** [L.] An appendage, esp. the appendix vermiformis. SYN: *appendage*. SEE: *digestive system* and *omentum* for illus.

a. epididymidis A cystic structure attached to the epididymis, a vestigial remnant of the mesonephric duct.

a. epiploica One of numerous pouches of the peritoneum, filled with fat and attached to the colon.

a. testis A small bladder-like structure at the upper end of the testis, a vestigial remnant of the cephalic portion of the müllerian duct.

a. vermiformis A worm-shaped process projecting from the blind end of the cecum and lined with a continuation of the mucous membrane of the cecum. SEE: *vermiform appendix*.

apperception (ăp″ĕr-sĕp′shŭn) [L. *ad,* to, + *percipere,* to perceive] The perception and interpretation of sensory stimuli; awareness of the meaning and significance of a particular sensory stimulus as modified by one's own experiences, knowledge, thoughts, and emotions. **apperceptive** (-tĭv), *adj.*

apperceptive personality test (ă″pĕr-sĕp′tĭv) ABBR: APT. A test used to assess attitudes, moods, and perceptions. The person tested examines a series of images and is asked to construct a story about each of them.

appestat (ăp′ĕ-stăt) [L. *appetitus,* longing for, + Gr. *states,* stand] The area of the brain that is thought to control appetite and food intake.

appetite (ăp′ĕ-tīt) [L. *appetitus,* longing for] A strong desire, esp. for food. Appetite differs from hunger in that the latter is an uncomfortable sensation caused by lack of food, whereas appetite is a pleasant sensation based on previous experience that causes one to seek food for the purpose of tasting and enjoying.

perverted a. Pica.

appetizer (ăp′ĕ-tī″zĕr) That which promotes appetite.

applanation (ăp″lă-nā′shŭn) [L. *ad,*

toward, + *planare,* to flatten] Abnormal flattening, esp. of the corneal surface.

applanometer (ăp″lă-nŏm′ĕ-tĕr) [″ + *planum,* plane, + Gr. *metron,* measure] A device for measuring intraocular pressure. SEE: *tonometer*.

apple packer's epistaxis SEE: under *epistaxis*.

apple picker's disease Bronchitis resulting from a fungicide used on apples.

apple sorter's disease Contact dermatitis caused by chemicals used in washing apples.

appliance (ă-plī′ăns) **1.** In dentistry, a device to provide or facilitate a particular function, such as artificial dentures or a device used to correct bite. SEE: *dental prosthesis*. **2.** A device for influencing a specific function (e.g., a cane, crutch, or walker to assist walking, or an appliance to discourage thumb sucking). SEE: *prosthesis*.

application A program designed to perform a specific function directly for the user or, in some cases, for another program.

application service provider A company that offers individuals or enterprises access over the Internet to applications and services that would otherwise have to be located on their own computers.

applicator (ăp′lĭ-kā″tor) [L. *applicare,* to attach] A device, usually a slender rod with a pledget of cotton on the end, for making local applications.

applied ethics The use of moral principles and reasoning to solve problems that arise in practical fields, such as health care, law, or management.

apposition (ăp″ō-zĭ′shŭn) [L. *ad,* toward, + *ponere,* to place] **1.** Condition of being positioned side by side or fitted together. SYN: *contiguity*. **2.** Addition of one substance to another, as one layer of tissue upon another. **3.** Development by means of accretion, as in the formation of bone or dental cementum.

apprehension test A test of chronic joint instability. If this is present, the patient displays concern or discomfort when a joint is put in a position of risk for dislocation. There is an obvious facial display of discomfort; the patient may try to resist the maneuver by muscle contraction.

Patella: The patient lies supine with a relaxed quadriceps, and the examiner places digital pressure on the patella, attempting to locate it laterally.

Shoulder: The arm is abducted to 90° and rotated externally. With continued external rotation, the patient with an unstable shoulder expresses fear of dislocation.

approach (ă-prōch′) The surgical procedure for exposing an organ or tissue.

appropriate (ăp-prō′prē-ăt) **1.** In psychiatry, relating to a behavior that is suitable and congruent. **2.** In medical practice, relating to care that is expected to yield health benefits that considerably exceed risk.

appropriate for gestational age ABBR: AGA. Born with a normal height, weight, head circumference, and body mass index; being neither abnormally large nor abnormally small at birth. Because pregnancies sometimes end before 38 weeks or after 42 weeks, the judgment of what is the appropriate size for a newborn infant is adjusted to reflect the number of weeks that the mother was pregnant and the sex of the child. Babies born after a pregnancy of 38 to 42 weeks' duration are AGA if they weigh between 2.5 and 4 kg.

approximal (ă-prŏk′sĭ-măl) [″ + *proximus,* nearest] Contiguous; next to.

approximate (ă-prŏk′sĭ-māt) [″ + *proximare,* to come near] To place or bring objects close together.

apractagnosia (ă-prăk″tăg-nō′zē-ă) Agnosia marked by the inability to use common instruments or tools whether they are being used on the individual's body or in the environment. This is usually due to a lesion in the parietal area of the brain.

apraxia (ă-prăk′sē-ă) [Gr. *a-,* not, + *praxis,* action] **1.** Inability to perform purposive movements although there is no sensory or motor impairment. **2.** Inability to use objects properly. **apraxic** (ă-prăk′sĭk), *adj.*

akinetic a. Inability to carry out spontaneous movements.

amnesic a. Inability to produce a movement on command because the command is forgotten, although the ability to perform the movement is present.

buccofacial a. Inability to use the muscles of the face or mouth (e.g., to whistle a tune or suck liquids through a straw).

constructional a. Inability to draw or construct two- or three-dimensional forms or figures and impairment in the ability to integrate perception into kinesthetic images.

developmental a. Disorder of motor planning and execution occurring in developing children; thought to be due to central nervous system immaturity.

dressing a. Inability to dress due to patient's deficient knowledge of the spatial relations of his or her body.

ideational a. Misuse of objects due to inability to perceive their correct use. SYN: *sensory apraxia*.

limb a. The inability to use the arms or legs to perform previously learned movements, such as combing one's hair or kicking a ball, despite having normal muscle strength in those body parts.

motor a. Inability to perform movements necessary to use objects properly,

although the names and purposes of the objects are known and understood.

sensory a. Ideational a.

verbal a. The inability to form words or speak, despite the ability to use oral and facial muscles to make sounds.

aproctia (ă-prŏk′shē-ă) [Gr. *a-,* not, + *proktos,* anus] Absence or imperforation of anus.

apron (ā′prŏn) [O. Fr. *naperon,* cloth] **1.** Outer garment covering the front of the body for protection of clothing during surgery or certain nursing procedures. **2.** Part of the body resembling an apron.

lead a. An apron that contains lead or equivalent material and is sufficiently pliable to wear as protection from ionizing radiation. It is used to shield patients and personnel during radiological procedures.

aprosody (ă-prŏs′ō-dē) [Gr. *a-,* not, + *prosodia,* voice modulation] Absence of normal variations of pitch, rhythm, and stress in the speech.

aprosopia (ăp″rō-sō′pē-ă) [″ + *prosopon,* face] Congenital defect in which part or all of the face is absent.

aprotes Chemical substances that are either cations such as sodium, calcium, potassium, and magnesium that carry a positive charge, or anions such as chloride and sulfate that carry a negative charge. These chemicals are unable to donate or accept protons; thus they are not acids, bases, or buffers. SEE: *buffer*.

aprotinin (ă-prō′tĭn-ĭn) A serine protease inhibitor obtained from bovine pancreas. Its action is believed to be inhibition of plasmin and kallikrein. It is used to decrease blood loss and thus transfusion requirements during surgery.

APRV *airway pressure release ventilation.*

APT *alum-precipitated toxoid.*

APTA *American Physical Therapy Association.*

APTA Code of Ethics A code of ethics that sets forth ethical principles for the physical therapy profession. According to its preamble, all physical therapists are responsible for maintaining and promoting ethical and competent practice and establishing a standard of conduct. This code of ethics, adopted by the Association (APTA), is binding on all physical therapists. Members who are found to be in breach of the ethical standards are subject to reprimand, probation, suspension, or expulsion.

aptamer (ăp′tă-mĕr) [L. *aptus,* fitted, appropriate + Gr. *meros,* part, region] A chemical, usually a protein or a nucleic acid, that can fashion itself into numerous shapes, e.g., the configuration of a cell surface receptor.

aptitude (ăp′tĭ-tūd) Inherent ability or skill in learning or performing physical or mental endeavors.

aptitude test A mental and/or physical test to evaluate skill or ability to perform certain tasks or assignments.

APTT *activated partial thromboplastin time.*

Apt test [Leonard Apt, U.S. pediatric ophthalmologist] A test used originally to identify the source of black (bloody) stools in newborn infants; it is now used in modified form to distinguish fetal from maternal hemoglobin in blood samples from any source, e.g., the umbilical cord or the gastrointestinal tract. SEE: *swallowed blood syndrome*.

aptyalia, aptyalism (ăp″tē-ā′lē-ă, ă-tī′ă-lĭzm) [″ + *ptyalon,* saliva] Absence of or deficiency in secretion of saliva. The condition may be caused by disease (mumps, typhoid fever), dehydration, drugs, radiation therapy to the salivary glands, old age, obstruction of salivary ducts, or Sjögren's syndrome, in which there is deficient function of lacrimal, salivary, and other glands.

APUD cells *amine precursor uptake and decarboxylation* cells. A class of cells, derived from the neural crest of the embryo, that produce hormones (such as insulin, ACTH, glucagon, and thyroxine) and amines (such as dopamine, serotonin, and histamine). These cells are involved in multiple endocrine neoplasia, types I and II.

apudoma (ă-pū-dō′mă) [from *APUD cells*] A tumor of APUD cells.

apulmonism (ă-pool′mŏn-ĭzm) [Gr. *a-,* not, + L. *pulmo,* lung, + Gr. *-ismos,* condition] Congenital absence of part or all of a lung.

apus (ā′pŭs) [″ + *pous,* foot] A person who has apodia, congenital absence of the feet.

apyknomorphous (ă-pĭk″nō-mor′fŭs) [″ + *pyknos,* thick, + *morphe,* form] Not pyknomorphous; pert. to a cell that does not stain deeply because its stainable material is not compact.

apyogenous (ā-pī-ŏj′ĕn-ŭs) [″ + *pyon,* pus, + *genos,* origin] Not producing pus.

apyretic (ā-pī-rĕt′ĭk) [″ + *pyretos,* fever] Without fever. SYN: *afebrile*.

apyrexia (ā-pī-rĕks′ē-ă) [″ + *pyrexis,* feverishness] Absence of fever.

apyrogenetic, apyrogenic (ā″pī-rō-jĕ-nĕt′ĭk, -jĕn′ĭk) [″ + ″ + *genos,* origin] Not causing fever.

AQ *achievement quotient.*

aq L. *aqua,* water. It is a chemical symbol used as a term in a chemical equation, usually as a subscript or in parenthesis and adjacent to the symbol for a material dissolved in water.

aqua (awk′wă) *pl.* **aquae** [L. *aqua*] ABBR: a; aq. Water.

medicated a. An aqueous solution of a volatile substance. It usually contains

only a comparatively small percentage of the active drug. Some of these solutions are merely water saturated with a volatile oil. They are used mostly as vehicles to give odor and taste to solutions.

aquagenic (ăk″wă-jĕn′ĭk) Caused by water.

aquaphobia (ăk″wă-fō′bē-ă) [″ + Gr. *phobos,* fear] An abnormal fear of water. SYN: *hydrophobia*.

aquaporin (ă″kwŏ-pŏr′ĭn, ahk″) A cell membrane protein that lets water flow into and out of cells.

aquapuncture (ăk″wă-pŭngk′chūr) [″ + *punctura,* puncture] Subcutaneous injection of water, as to produce counterirritation.

aqua running (rŭn′ĭng) A form of low-impact aerobic exercise for conditioning or for recovery from weight-bearing injuries to the limbs. Aqua running typically takes place in a pool, may involve repetitive movements of both the legs and the arms, and is often undertaken in a supervised class.

aquatic (ă-kwŏt′ĭk) **1.** Pert. to water. **2.** Inhabiting water.

aquatic therapy Exercises performed in or underwater for conditioning or rehabilitation (e.g., in injured athletes or patients with joint diseases).

aque-, aqueo- [L. *aqua,* water] Prefixes meaning *water*.

aqueduct (ăk′wĕ-dŭkt″) [″ + *ductus,* duct] Canal or channel. SYN: *aqueductus*.

cerebral a. Canal in the midbrain connecting the third and fourth ventricles. SYN: *aqueductus cerebri*.

vestibular a. Small passage reaching from the vestibule to the posterior surface of the temporal bone's petrous section.

aqueductus (ăk″wĕ-dŭk′tŭs) A canal or channel. SYN: *aqueduct*.

a. cerebri Canal in the midbrain connecting the third and fourth ventricles. SYN: *cerebral aqueduct*.

a. cochleae Canal connecting subarachnoid space and the perilymphatic space of the cochlea.

a. Fallopii Canal for facial nerve in the temporal bone.

a. vestibuli Small passage reaching from the vestibule to the posterior surface of the temporal bone's petrous section.

aqueous (ā′kwē-ŭs) [L. *aqua,* water] **1.** Of the nature of water; watery. **2.** Aqueous humor.

aqueous chambers Anterior chambers of the eye, which contain the aqueous humor.

aqueous flare During slit lamp examination of the eye, an abnormal appearance of the beam of light as it travels through the anterior chamber. It is found in patients with anterior uveitis and in those with inflammation present anteriorly.

aquiparous (ăk-wĭp′ă-rŭs) [″ + *parere,* to bring forth, to bear] Producing water.

AR **1.** *achievement ratio*. **2.** *alarm reaction*.

Ar Symbol for the element argon.

ara-A Vidarabine.

arabinose (ă-răb′ĭ-nōs) Gum sugar, a pentose obtained from plants; sometimes found in urine.

arabinosuria (ă-răb″ĭ-nō-sū′rē-ă) [*arabinose* + Gr. *ouron,* urine] Arabinose in the urine.

Ara-C Cytarabine, an antineoplastic drug of the antimetabolite class.

arachnid (ă-răk′nĭd) A member of the class Arachnida.

Arachnida (ă-răk′nĭ-dă) [Gr. *arachne,* spider] A class of the Arthropoda, including the spiders, scorpions, ticks, and mites.

arachnidism (ă-răk′nĭd-ĭzm) [″ + *eidos,* form, shape, + *-ismos,* condition of] Systemic poisoning from a spider bite. SYN: *arachnoidism*. SEE: *spider bite*.

arachnitis (ă″răk-nī′tĭs) Arachnoiditis.

arachnodactyly (ă-răk″nō-dăk′tĭl-ē) [″ + *dactylos,* finger] Spider fingers; a state in which fingers and sometimes toes are abnormally long and slender. SYN: *acromacria*. SEE: *Marfan's syndrome*.

arachnoid (ă-răk′noyd) [″ + *eidos,* form, shape] **1.** Resembling a web. **2.** Arachnoid membrane.

cranial a. Arachnoidea encephali.

spinal a. Arachnoidea spinalis.

arachnoidea (ă-răk-noyd′ē-ă) Arachnoid membrane.

a. encephali The part of the arachnoidea enclosing the brain. SYN: *cranial arachnoid*.

a. spinalis The part of the arachnoidea enclosing the spinal cord. SYN: *spinal arachnoid*.

arachnoidism (ă-răk′noyd-ĭzm) Arachnidism.

arachnoiditis (ă-răk″noyd-ī′tĭs) [″ + *eidos,* form, shape, + *itis,* inflammation] Inflammation of the arachnoid membrane. SYN: *arachnitis*.

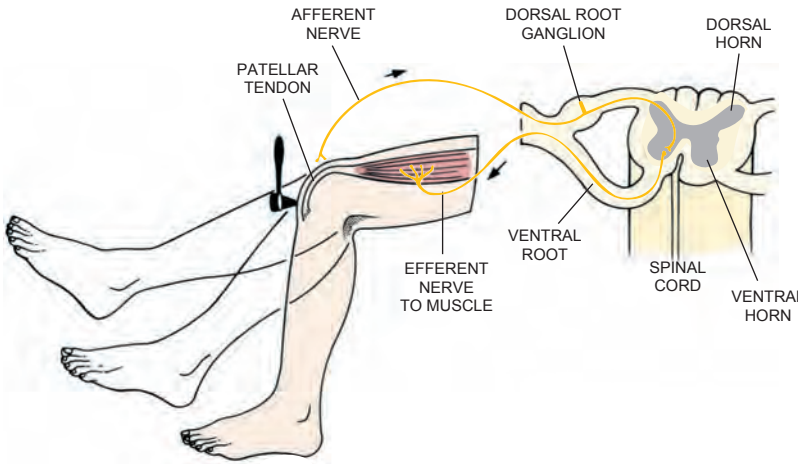
arachnolysin (ă-răk-nŏl′ĭ-sĭn) [″ + *lysis,* dissolution] The hemolysin present in spider venom.

arachnophobia (ă-răk″nō-fō′bē-ă) [″ + *phobos,* fear] Morbid fear of spiders.

Aran-Duchenne disease (ă-ran′dŭ-shĕn′) [F. A. Aran, Fr. physician, 1817–1861; G. B. A Duchenne, Fr. neurologist, 1807–1875] Spinal muscular atrophy.

Arantius' body, Arantius' nodule (ăr-ăn′shē-ŭs) *pl.* **Arantii** [Julius Caesar Arantius, It. anatomist and physician, 1530–1589] A small nodule at the center of each of the aortic valve cusps.

A-ratio (ā′rā′shē-ō) The ratio of arterial



REFLEX ARC FOR PATELLAR TENDON REFLEX

oxygen partial pressure (PaO_2) to alveolar oxygen partial pressure (PAO_2), a measure of oxygen transfer across the lung. This figure is normally greater than 0.9.

ARB *Angiotensin II receptor blocker.*

arbitration (ahr-bĭ-trā′shŭn) **1.** A legal procedure for settling a dispute outside the courts, in which the parties select and agree to abide by the decision of a neutral third party (the arbiter or arbitrator). **2.** In radiology, the interpretation of images by two or more readers, who determine and report their findings after conferring together.

arbor (ahr′bĕr) A structure resembling a tree with branches.

arborescent (ăr″bor-ĕs′ĕnt) [L. *arborescere,* to become a tree] Branching; treelike.

arborization (ăr″bor-ĭ-zā′shŭn) [L. *arbor,* tree] Ramification; branching, esp. terminal branching of nerve fibers and capillaries. SEE: *ferning nerve*.

arbovirus (ăr″bō-vī′rŭs) [*arthropod-borne virus*] Any of a large group of viruses that multiply in both vertebrates and arthropods such as mosquitoes and ticks. Arboviruses cause diseases such as yellow fever and viral encephalitis. SEE: *arenaviruses; Togaviridae*.

ARC *AIDS-related complex.* SEE: *AIDS*.

arc (ărk) [L. *arcus,* bow] **1.** A curved line; a portion of a circle. **2.** An electric spark, esp. in defibrillation or cardioversion, that follows an unwanted or potentially hazardous pathway.

reflex a. The path followed by a nerve impulse to produce a reflex action. The impulse originates in a receptor at the point of stimulation, passes through an afferent neuron or neurons to a reflex center in the brain or spinal cord, and from the center out through efferent neurons to the effector organ, where the response occurs. SEE: illus.

arcade (ăr-kād) Any anatomic structure composed of a series of arches.

Flint's a. The arteriovenous anastomoses at the bases of the pyramids of the kidney.

arcanum (ăr-kā′nŭm) *pl.* **arcana** [L. *arcanum,* a secret] Secret remedy.

arcate (ăr′kăt) [L. *arcatus,* bow-shaped] Arched; bow-shaped.

arc eyes SEE: under *eyes*.

ARCF *American Respiratory Care Foundation.*

arch [L. *arcus,* a bow] Any anatomical structure having a curved or bowlike outline. SYN: *arcus*.

abdominothoracic a. The costal arch; the anterior and lateral boundary between the line dividing the thorax and the abdomen.

alveolar a. Arch of the alveolar process of either jaw (maxillary and mandibular arch).

aortic a. A series of six pairs of vessels that develop in the embryo and connect the aortic sac with the dorsal aorta. During the fifth to seventh weeks of gestation, the arches undergo transformation, some persisting as functional vessels, others persisting as rudimentary structures, and some disappearing entirely.

branchial a. Five pairs of arched structures that form the lateral and ventral walls of the pharynx of the embryo. The first is the mandibular arch; the second is the hyoid arch; the third, fourth, and fifth arches are transitory. They are partially separated from each other externally by the branchial clefts and internally by the pharyngeal

pouches. They are important in the formation of structures of the face and neck. SYN: *pharyngeal arches*.

costal a. Arch formed by the ribs.

crural a. The inguinal ligament, which extends from the anterior superior iliac spine to the pubic tubercle. SYN: *Poupart's ligament*.

deep crural a. A band of fibers arching in front of the sheath of femoral vessels; the downward extension of the transversalis fascia.

deep palmar a. An arch formed in the palm by the communicating branch of the ulnar and the radial artery.

dental a. The arch formed by the alveolar process and teeth in each jaw (maxillary and mandibular arch). SYN: *arcus dentalis*.

glossopalatine a. The anterior pillar of the fauces; one of two folds of mucous membrane extending from the soft palate to the sides of the tongue.

hemal a. **1.** In lower vertebrates, extensions from the lateral areas of the caudal vertebrae that fuse to enclose the caudal artery and vein. In humans these are represented by the costal processes of the vertebrae. **2.** Arch formed by the body and dorsal processes of a vertebra.

hyoid a. The second branchial arch, which gives rise to the styloid process, the stylohyoid ligament, and the lesser cornu of the hyoid bone.

longitudinal a. The anteroposterior arch of the foot; the medial portion is formed by the calcaneus, talus, navicular, cuneiforms, and first three metatarsals; the lateral portion is formed by the calcaneus, cuboid, and fourth and fifth metatarsals.

mandibular a. **1.** The curved composite structure of natural dentition and supporting tissues of the mandible. **2.** The residual bony ridge after teeth have been lost from the mandible.

maxillary a. The curved composite structure of the natural dentition and supporting tissues of the upper jaw (maxillary and mandibular arch); the residual bony ridge after teeth have been lost from the upper jaw.

nasal a. Arch formed by the nasal bones and by the nasal processes of the maxilla.

neural a. Vertebral a.

palatopharyngeal a. Pharyngopalatine a.

palmar a. SEE: *deep palmar a.; superficial palmar a.*

pharyngeal a. Branchial arches.

pharyngopalatine a. The posterior pillar of the fauces; one of two folds of mucous membrane extending from the soft palate to the sides of the pharynx. The palatine tonsil lies in the front of the pharyngopalatine and behind the palatoglossal arch. SYN: *palatopharyngeal arch*.

plantar a. The arch formed by the external plantar artery and the deep branch of the dorsalis pedis artery.

pubic a. The arch formed by the rami of the ischia and pubic bones. It forms the anterior portion of the pelvic outlet.

pulmonary a. The fifth aortic arch on the left side. It becomes the pulmonary artery.

superciliary a. A curved process of the frontal bone lying just above the orbit, subjacent to the eyebrow, and directly above the supraorbital notch. SYN: *superciliary ridge*.

superficial palmar a. An arch in the palm forming the termination of the ulnar artery.

superior tarsal a. The arch of the median palpebral artery that supplies the upper eyelid.

supraorbital a. A bony arch formed by the upper margin of the orbit.

transverse a. The transverse arch of the foot formed by the navicular, cuboid, cuneiform, and metatarsal bones.

vertebral a. The arch formed by the posterior projection of a vertebra that, with the body, encloses the vertebral foramen. SYN: *neural arch*.

zygomatic a. SEE: *zygomatic arch*.

arch- SEE: *archi-*.

Archaebacteria (ăr″kĭ-băk-tēr′ē-ă) [″ + ″] A group of single-celled organisms, classified by some microbiologists as a type of bacteria and by others as a separate kingdom or domain of life. Unlike Eubacteria, they lack peptidoglycans in their cell walls. Their ribosomal RNA base sequences also differ from those found in Eubacteria. Many live in harsh environments, such as superheated steam vents or highly concentrated salt water. Some produce methane (natural gas).

arche- SEE: *archi-*.

archetype (ăr′kĕ-tīp) [″ + *typos,* model] **1.** The original type, from which other forms have developed by differentiation. **2.** An ideal or perfect anatomical type; used as a theoretical standard in judging other individuals.

archi-, arche-, arch- [Gr. *arche,* beginning] Combining forms meaning *first, principal, beginning,* or *original*.

archiblastoma (ăr″kĭ-blăs-tō′mă) [″ + *blastos,* germ, + *oma,* tumor] A tumor of archiblastic tissue.

archicerebellum The flocculonodular lobe of the cerebellum. It is tied into the vestibular system and is the phylogenetically oldest segment of the cerebellum.

archipallium (ăr″kĭ-păl′ē-ŭm) [″ + L. *pallium,* a cloak] Areas of the cerebral hemispheres that, along with the paleopallium, are sometimes called the rhinencephalon. The archipallium com-

prises the hippocampus, the dentate gyrus, the fasciolar gyrus, and the supracallosal gyrus (induseum griseum)

architis (ăr-kī′tĭs) [Gr. *archos,* anus, + *itis,* inflammation] Inflammation of the anus; proctitis.

archive (ahr′kīv″) **1.** A database; a bank of stored information. **2.** A location in which documents, images, or records are preserved.

arch width The measured distance between the canines, bicuspids, and the first molars. These distances establish the shape and size of the dental arch.

arciform (ăr′sĭ-form) Arcuate.

arctation (ărk-tā′shŭn) [L. *arctatus,* pressing together] Stricture of any canal opening.

Arctium lappa A member of the aster family, promoted as a natural diuretic and laxative. It is also known as burdock, lappa, and happy major.

arcuate (ăr′kū-āt) [L. *arcuatus,* bowed] Bowed; shaped like an arc. SYN: *arciform*.

arcus (ăr′kŭs) *pl.* **arcus** [L. *arcus,* a bow] Arch.

a. alveolaris mandibulae The arch formed by the alveolar process of the body of the mandible.

a. alveolaris maxillae The arch formed by the alveolar process of the maxilla.

a. dentalis Dental arch.

a. juvenilis Opaque ring about the periphery of the cornea similar to arcus senilis but occurring in young individuals; may be due to hypercholesterolemia, corneal irritation or inflammation, or a congenital anomaly.

a. senilis Opaque white ring about the periphery of the cornea, seen in aged persons; caused by the deposit of fat granules in the cornea or by hyaline degeneration.

ARD *acute respiratory distress.*

ardor (ăr′dor) [L., heat] Burning; great heat.

ARDS *acute respiratory distress syndrome; adult respiratory distress syndrome.*

area (ā′rē-ă) *pl.* **areae** *pl.* **areas** [L. *area,* an open space] **1.** A circumscribed space; one having definite boundaries. **2.** Part of an organ that performs a specialized function. Particular areas are listed under the first word. SEE: *effective radiating area*.

body surface a. The surface area of the body expressed in square meters. Body surface area is an important measure in calculating pediatric dosages and drug dosages in chemotherapy, managing burn patients, and determining radiation doses. Nomograms for accurately determining body surface area are available for both pediatric and adult patients. SEE: illus. *burn; rule of nines*.

performance a. SEE: *performance area*.

Area Agency on Aging ABBR: AAA. An agency that develops, coordinates, and in some cases provides a wide range of community-based services for persons aged 60 or older.

area of rescue assistance ABBR: ARA. A safe haven near or linked to a building's evacuation route where people escaping an emergency can rest fully protected from hazards such as fire, smoke, or heat.

areata, areatus (ă″rē-ā′tă, ă″rē-ā′tŭs) Occurring in circumscribed areas or patches.

area under the curve ABBR: AUC. The integrated quantity of drug (the serum drug concentration curve) after a single dose.

areca nut (ă-rē′kă nŭt) [NL. fr. Malayalam *ataykka*] Betel nut.

arecoline (ă-rē′kŏ-lĭn, lēn″) An alkaloid found in the betel nut that causes cholinergic (parasympathetic) toxicity when the nut is chewed. This chemical also causes periodontal disease and upper gastrointestinal tract cancer.

areflexia (ă″rĕ-flĕk′sē-ă) [Gr. *a-,* not, + L. *reflectere,* to bend back] Absence of reflexes.

arenaceous (ăr″ĕ-nā′sē-ŭs) [L. *arenaceus,* sandy] Resembling sand or gravel. SYN: *arenoid*.

Arenaviridae (ă″rē-nă-vĭ-rĭ′dē) Arenaviruses.

arenavirus (ă″rē-nă-vī′rŭs) *pl.* **arenaviruses** [″ + *virus,* poison] Any of a group of RNA viruses that are a source of zoonotic infections throughout the world. Some species in the group (e.g., Guanarito, Junin, Machupo, and Sabia virus) cause hemorrhagic fevers. Others (e.g., lymphocytic choriomeningitis virus) cause aseptic meningitis. SEE: *Lassa fever*.

arenoid (ăr′ĕ-noyd) Arenaceous.

areola (ă-rē′ō-lă) *pl.* **areolae, areolas** [L. *areola,* a small space] **1.** A small space or cavity in a tissue. **2.** A circular area of different pigmentation, as around a wheal, around the nipple of the breast, or the part of the iris around the pupil.

areolar (-lăr), *adj.*

Chaussier's a. SEE: *Chaussier's areola*.

a. mammae The pigmented area surrounding the nipple. SYN: *areola papillaris*.

a. papillaris Areola mammae.

second a. A pigmented area surrounding the areola mammae during pregnancy.

a. umbilicalis A pigmented area surrounding the umbilicus.

areolitis (ăr″ē-ō-lī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of a mammary areola.

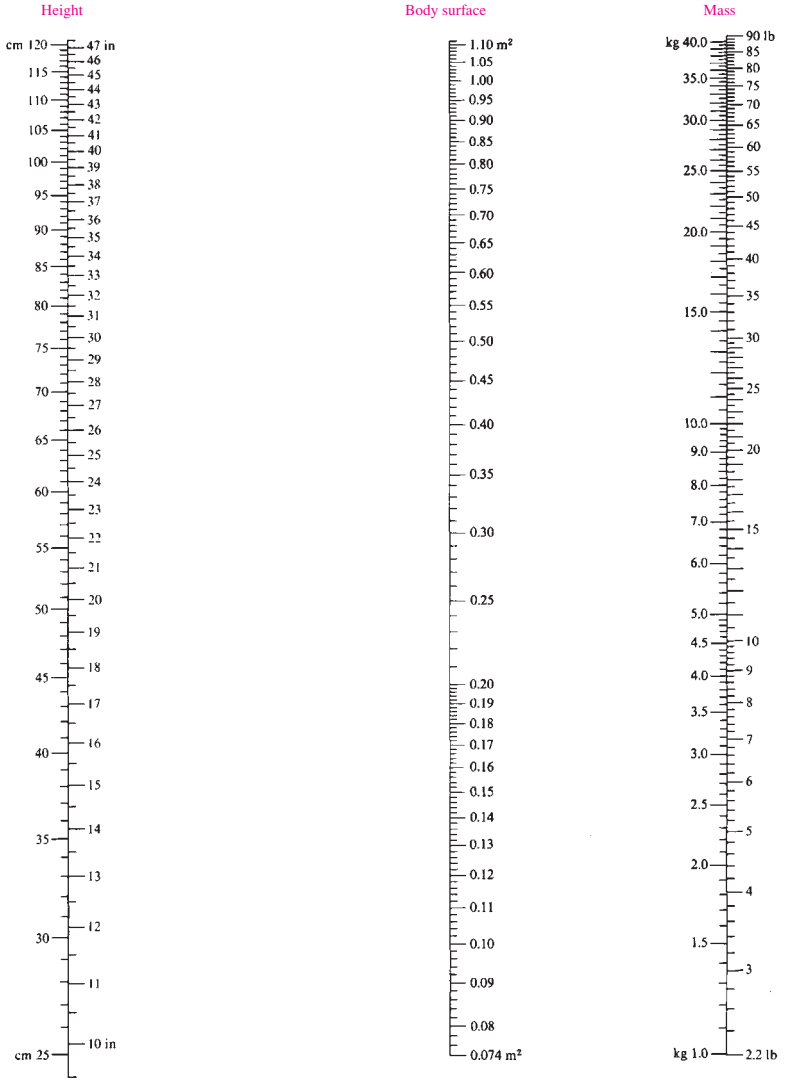
arevareva (ăr-ē″vā-rā′vă) [Tahitian,

skin rash] Severe skin disease marked by scales and general debility. Arevareva is thought to be caused by excess use of kava, an intoxicating beverage. Use of kava should be stopped. SEE: *kava*.

ARF *acute respiratory failure; acute renal failure.*

Argasidae (ăr-găs′ĭ-dī) [Gr. *argeeis,* shining] A family of soft ticks that usually infest birds but may attack humans, causing pain and fever.

argentaffin, argentaffine (ăr-jĕnt′ă-fĭn) [L. *argentum,* silver, + *affinis,* associated with] Denoting cells that react with silver salts, thus taking a brown or black stain.



NOMOGRAM FOR THE ASSESSMENT OF BODY SURFACE AREA

The body surface area is given by the point of intersection with the middle scale of a straight line joining height and mass.

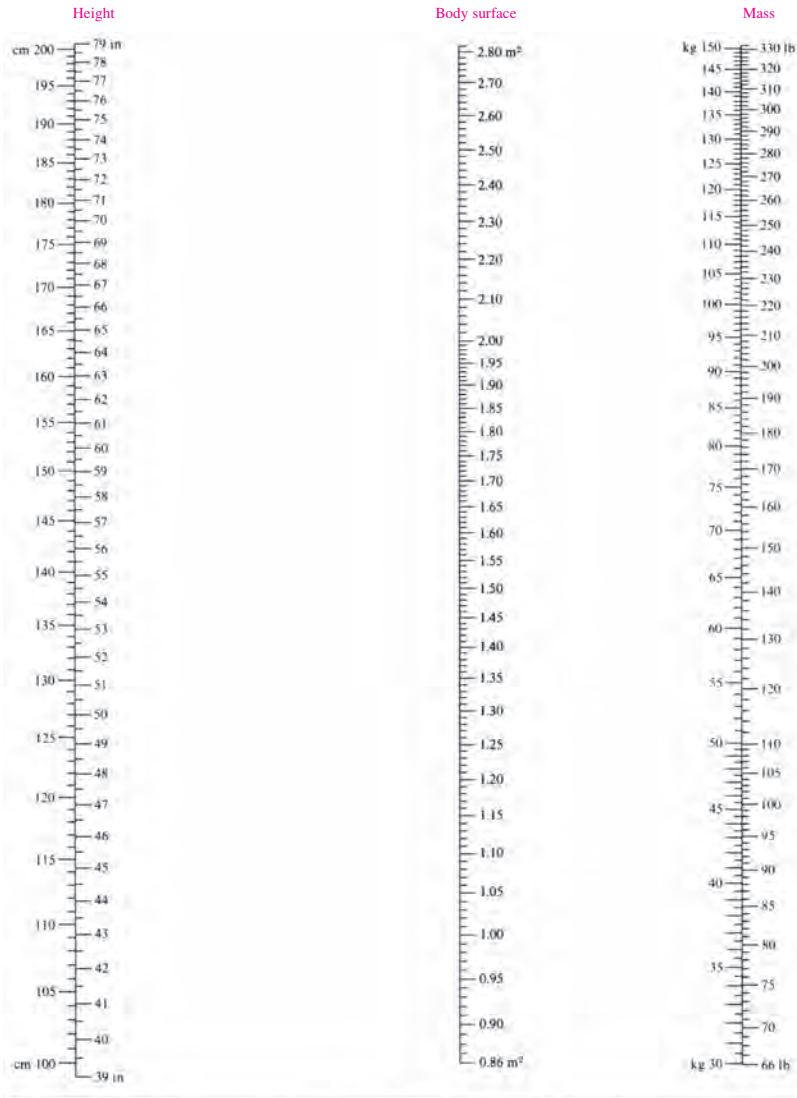
Source: Lentner, C. (ed.): *Geigy Scientific Tables*, **ed. 8. Ciba Geigy, Basel, Switzerland, 1981.**

argentaffinoma (ăr″jĕn-tăf″ĭ-nō′mă) [″ + ″ + Gr. *oma,* tumor] An argentaffin cell tumor that may arise in the intestinal tract, bile ducts, pancreas, bronchus, or ovary. Tumors of this type secrete serotonin and may produce the carcinoid syndrome. SYN: *carcinoid*.

argentum (ăr-jĕn′tŭm) [L.] SYMB: Ag. Silver; atomic weight 107.868, atomic number 47.

arginase (ăr′jĭ-nās) A liver enzyme that converts arginine into urea and ornithine.

arginine (ăr′jĭ-nēn, -nĭn) [L. *argentum,* silver] A crystalline basic amino acid, $C_6H_{14}N_4O_2$, obtained from the decom-



NOMOGRAM FOR THE ASSESSMENT OF BODY SURFACE AREA (continued)

position of vegetable tissues, protamines, and proteins. It is a guanidine derivative, yielding urea and ornithine on hydrolysis. It may also be produced synthetically. Dietary supplementation with arginine is used to treat urea cycle disorders. SEE: *amino acid*.

a. glutamate The L(+)—arginine salt of L(+)—glutamic acid.

a. hydrochloride The L(+)—arginine salt of hydrochloric acid.

suberyl a. A combination of suberic acid and arginine. It forms a portion of the molecule of various bufotoxins (toad poisons).

argininosuccinicaciduria (ăr″jĭn-ĭn-ō-sŭk-sĭn″ĭk-ăs-ĭ-dū′rē-ă) A hereditary metabolic disease caused by excessive excretion, and thus deficiency, of argininosuccinase, an enzyme required to metabolize argininosuccinic acid. Presentation of this defect includes mental retardation, friable tufted hair, convulsions, ataxia, liver disease, and epilepsy.

argon (ăr′gŏn) [Gr. *argos,* inactive] SYMB: Ar. An inert gas; atomic weight 39.948, atomic number 18. It composes approx. 1% of the atmosphere.

argon plasma coagulation The destruction of tissues with heat generated by applying an electrical current to an argon plasma. The plasma distributes heat to a minimal depth so that only superficial structures are coagulated while deeper ones remain undisturbed. APC is used in several applications, e.g., in the destruction of some superficial cancers and in the treatment of some stenoses that have formed within normally hollow organs, such as the trachea.

Argyll Robertson pupil (ăr-gĭl′ rŏb′ĕrt-sŏn) [Douglas Argyll Robertson, Scottish ophthalmologist, 1837–1909] A symptom often present in paralysis and locomotor ataxia (due to syphilis), in which the light reflex is absent but there is no change in the power of contraction during accommodation. Usually bilateral. SYN: *Robertson's pupil*.

argyria, argyriasis (ăr-jĭr′ē-ă, ăr″jĭ-rī′ă-sĭs) [Gr. *argyros,* silver] Bluish discoloration of the skin and mucous membranes as a result of prolonged administration of silver. SYN: *argyrosis*.

argyric (ăr-jĭr′ĭk) Pert. to silver.

argyrophil (ăr-jī′rō-fĭl) [″ + *philos,* fond] Denoting cells that bind with silver salts, which can then be reduced to produce a brown or black stain.

argyrosis (ăr″jĭ-rō′sĭs) Argyria.

arhinencephaly (ā″rīn-ĕn-sĕf′ă-lē) [″ + ″] Incomplete formation of the anterior cerebral hemispheres of the brain and related or neighboring structures.

arhinia Arrhinia.

Arias-Stella reaction (ăr″ī-ă-stĕl′ă) [Javier Arias-Stella, Peruvian pathologist, b. 1924] A reaction marked by decidual changes in the endometrial epithelium. These changes consist of hyperchromatic cells with large nuclei; they may be associated with ectopic pregnancy.

ariboflavinosis (ă-rī″bō-flā″vĭn-ō′sĭs) [Gr. *a-,* not, + *riboflavin* + Gr. *osis,* condition] Vitamin B_2 deficiency. Symptoms include lesions on the lips, stomatitis, and later, fissures in the angles of the mouth, seborrhea around the nose, and vascularization of the cornea.

arise time In sleep medicine the time when a person gets out of bed after sleeping as opposed to the time a person becomes alert and awake after sleep.

Aristolochia (ă-rĭs″tō-lō′kē-ă) [G., birthwort] Any derivative from one of several species of plants of the genus *Aristolochia,* also known as Virginia snakeroot, Texas snakeroot, and guaco, promoted as botanical dietary supplements.

aristolochic acid (ă-rĭs″tō-lŏk′ĭk) [fr. Aristolochia] An herbal remedy derived from *Aristolochia*. It is promoted as an aphrodisiac, a weight loss agent, and an anticonvulsant.

Its use has been associated with and may cause end-stage renal disease and cancers of the urinary tract that may occur many years after usage has stopped.

arm [AS] **1.** In anatomy, the upper extremity from shoulder to elbow. **2.** In popular usage, the entire upper extremity, from shoulder to hand. SEE: illus. **3.** In research on a therapeutic agent, one of several possible interventions. Most clinical trials include an active treatment arm – in which participants are exposed to the agent that is under study – as well as a placebo arm – that is, a sham therapy used for the purpose of contrast or comparison.

articulated a. A jointed instrument used in imaging and in therapeutic procedures (e.g., to permit stereotactic localization of deep anatomical structures; to guide the collection of ultrasonic images; or to focus or direct laser energy).

Boston a. SEE: *Boston arm*.

brawny a. Hard, swollen arm caused by lymphedema after mastectomy.

carrying angle of a. The angle formed by the long axis of the humerus and the forearm. This angle is nearly straight in the male and is increased in the female (i.e., in the female the lower part of the arm will deviate away from the body more than is the case in the male). This is a secondary sex characteristic.

Saturday-night a. A colloquial term for musculospiral paralysis.

armamentarium (ăr″mă-mĕn-tā′rē-ŭm) [L. *armamentum,* implement] The total equipment of a physician or institution, such as instruments, drugs, books, and supplies.

armature (ăr′mă-tūr) [L. *armatura,* equipment] **1.** In biology, a structure that serves to protect or is used to attack a predator (e.g., a stinger). **2.** A part of an electrical generator, consisting of a coil of insulated wire mounted around a soft iron core.

arm board SEE: under *board*.

Armed Forces Health Longitudinal Technology Application ABBR: AHLTA. The electronic health record used by the U.S. Department of Defense.

Armed Forces Radiobiological Research Institute ABBR: AFRRI. A branch of the American government that focuses on providing national defense against a military or terrorist attack that may employ ionizing radiation or an accidental release of radioactive material. Research investigations at the Institute concentrate on efforts to detect, block, and treat injuries and illnesses caused by the adverse effects of radioactive material on living organisms.

Armillifer (ahr-mĭl′fĕr) [NL "bracelet-wearing"] A genus of blood-sucking, endoparasitic arthropods. The natural hosts are reptiles; humans are accidental hosts.

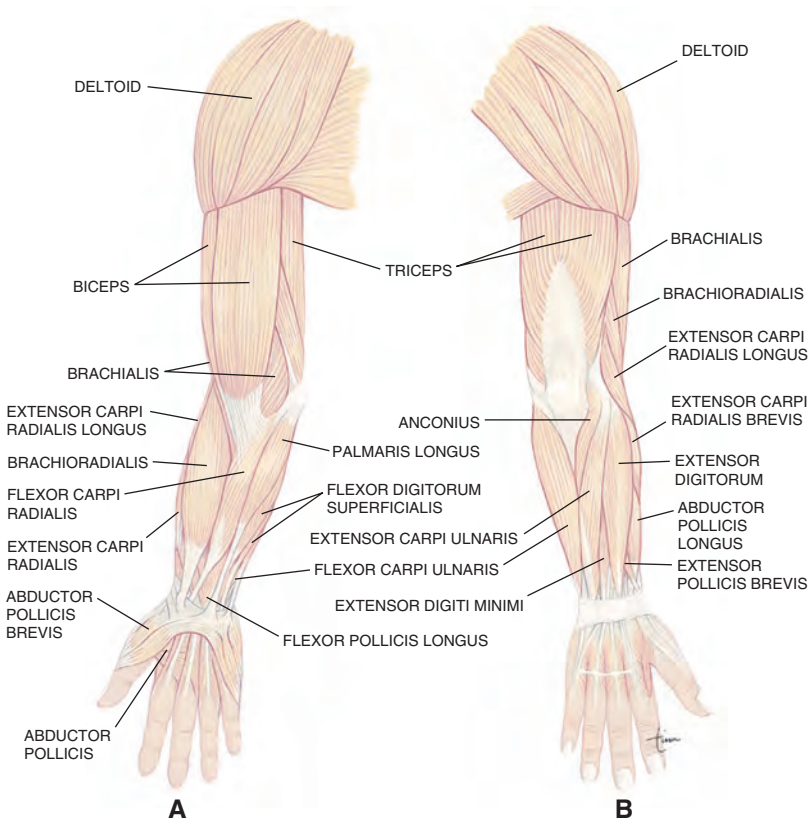
A. moniliformis A species whose larvae are parasitic in human beings in the Philippines and China.

arm lift A colloquial term for brachioplasty.

armpit (ărm′pĭt″) Axilla.

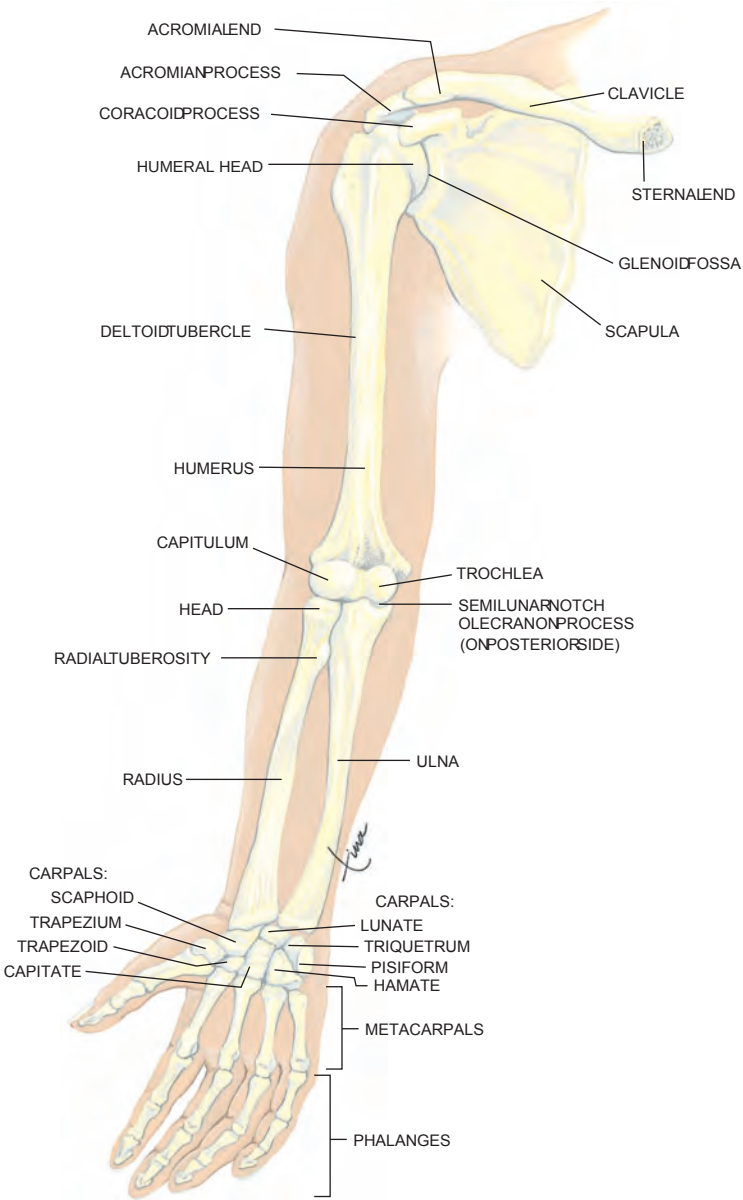
arm ratio In chromosomes, the relation of the length of the long arm of the mitotic chromosome to that of the short arm.

Arndt-Schultz principle The rule that therapeutically applied energy (e.g., thermal agents, ultrasonic energy) must be of the proper intensity to stimulate the desired physiological response.



MUSCLES OF THE ARM

(A) Anterior view, (B) Posterior view.



BONES OF THE ARM AND SHOULDER GIRDLE

Arneth, Joseph (ăr′nāt) German physician, 1873–1955.

A.'s classification of neutrophils A classification of polymorphonuclear neutrophils based on the number of lobes (one to five) in the nucleus, termed stages one to five, respectively.

arnica (ar′ni-căh) A perennial herb, *Arnica montana,* used in ointments and as a homeopathic remedy to promote healing, for pain, inflammation, and bacterial infection.

⚠ Oral ingestion at pharmacological (not homeopathic) dosages can be toxic.

VENTRICULAR ARRHYTHMIA

Ventricular trigeminy

Arnold-Chiari deformity (ăr′nōlt-kē′ă-rē) [Julius Arnold, Ger. pathologist, 1835–1915; Hans Chiari, Austrian pathologist, 1851–1916] A condition in which the inferior poles of the cerebellar hemispheres and the medulla protrude through the foramen magnum into the spinal canal. It is one of the causes of hydrocephalus and is usually accompanied by spina bifida cystica and meningomyelocele. SYN: *Chiari's deformity*.

AROM **1.** *active range of motion.* **2.** *artificial rupture of membranes.*

aroma (ă-rō′mă) [Gr. *aroma,* spice] An agreeable odor.

aromatherapy (ă-rō′mă-thĕr′ă-pē) [″ + ″] The use of fragrant oils in baths, as inhalants, or during massage to treat skin conditions, anxiety and stress, headaches, and depression, among other diseases and conditions.

aromatic (ăr″ō-măt′ĭk) **1.** Having an agreeable odor. **2.** Denoting an organic chemical compound in which the carbon atoms form closed rings (as in benzene).

a. compounds Ring or cyclic compounds related to benzene, many having a fragrant odor.

a. elixir A flavoring agent used in preparing medicines.

arousal (ă-row′zĭl) **1.** Alertness; the state of being prepared to act. **2.** Erotic excitement. **3.** Awakening from sleep.

a. level An individual's degree of alertness or responsiveness to stimuli. In testing a newborn's behavior, the level of arousal is important. These levels are deep sleep; sleep with rapid eye movements; drowsy state; a quiet, alert state; an awake and active state; and a state of active, intense crying. The infant is capable of the most responsive and complex interactions with the environment in the quiet and alert states. SEE: *psychomotor and physical development of infant*.

arraignment (ah-rān′mĕnt) A procedure whereby an accused person is brought before the court to plead to a criminal charge. A person may plead guilty, not guilty, or nolo contendere ("no contest"). The judge then sets bail.

arrector pili (ă-rĕk′tŏr pīl′ī, pē′lē) *pl.* **arrectores pilorum** [L. *arrector,* raiser, + ″] One of the involuntary muscle fibers arising in the skin and extending down to connect with the hair follicles on the side toward which the hair slopes. After certain stimuli, including cold or fright, the muscle fibers contract, straighten the follicles, and raise the hairs, resulting in piloerection.

arrest (ă-rĕst′) **1.** The condition of being stopped. **2.** To bring to a stop.

bradyasystolic a. The type of cardiac arrest marked by an extremely slow pulse, usually less than 30 beats/min. This can be due to increased vagal stimulation, progressive heart block, hypoxemia, drugs such as beta blockers, or other causes.

cardiopulmonary a. Cardiac arrest.

epiphyseal a. Cessation of the growth of long bones.

pelvic a. Condition in which the presenting part of the fetus becomes fixed in the maternal pelvis.

respiratory a. Cessation of spontaneous respirations.

sinus a. Condition in which the sinus node of the heart does not initiate impulses for heartbeat. If this condition persists, it usually requires implantation of a permanent cardiac pacemaker. SEE: *artificial cardiac pacemaker*.

Arrhenius equation (ă-rā′nē-us) [Svante Arrhenius, Swedish chemist and Nobel laureate, 1859–1927] A mathematical formula that specifies the influence of temperature on the rate of a chemical reaction. In general, a higher temperature produces a faster reaction.

arrhenoblastoma (ă-rē″nō-blăs-tō′mă) [Gr. *arren,* male, + *blastos,* germ, + *oma,* tumor] An ovarian tumor that secretes male sex hormone, causing secondary male sex characteristics (virilization) in the female.

arrhinia (ă-rĭn′ē-ă) [Gr. *a-,* not, + *rhis,* nose] Congenital absence of the nose.

arrhythmia (ă-rĭth′mē-ă) [″ + *rhythmos,* rhythm] Irregularity or loss of rhythm, esp. of the heart. SEE: *dysrhythmia*. SEE: illus. **arrhythmic** (-mĭk), *adj.*

cardiac a. Any abnormal heart rhythm caused by physiological or pathological disturbances in the discharge of cardiac impulses from the sinoatrial node or their transmission through con-

ductive tissue of the heart. SEE: *bradycardia; cardioversion; artificial cardiac pacemaker; sick sinus syndrome; tachycardia; Nursing Diagnoses Appendix.*

reperfusion a. Cardiac arrhythmia that occurs as the infarcted heart is resupplied with blood after angioplasty or thrombolysis.

sinus a. Cardiac irregularity marked by variation in the interval between sinus beats and evident on the electrocardiogram as alternately long and short intervals between P waves. Sinus arrhythmia may occur with respiration (evidenced as an increased heart rate during inspiration and a decreased heart rate on expiration) or may result from the use of digitalis glycosides. In older patients, presence of sinus arrhythmia is common and is statistically linked with an increased risk of sudden death.

ARRT *American Registry of Radiologic Technologists.*

arseniasis (ăr″sĕ-nī′ă-sĭs) [L. *arsenium,* arsenic, + *-iasis,* condition] Chronic arsenic poisoning. SYN: *arsenicalism*.

arsenic (ăr′sĕ-nĭk) [L. *arsenicum*] SYMB: As. A poisonous, grayish-white metallic element, atomic weight 74.922, atomic number 33, specific gravity 5.73. It is used in the manufacture of dyes and medicines.

Arsenic may be present in soil, water, and air as a common environmental toxicant. Minute traces of arsenic are found in vegetable and animal life (and in eggs). Many household and garden pesticides contain various forms of arsenic. All of these are toxic if ingested or inhaled in sufficient quantity. An accumulation of arsenic in the body will cause alimentary tract disorders, nausea, vomiting, diarrhea, dehydration, neuritis, and paralysis of the wrist and ankle muscles. SEE: *arsenic poisoning; Poisons and Poisoning Appendix.*

a. trioxide As_2O_3; a white powder, toxic in dosages greater than 0.20 mg per kilogram, which has been found useful in lower doses in the treatment of acute promyelocytic leukemia and other cancers.

arsenical (ăr-sĕn′ĭ-kăl) **1.** Pert. to or containing arsenic. **2.** A drug containing arsenic.

arsenicalism (ăr-sĕn′ĭ-kăl-ĭzm) [L. *arsenicum,* arsenic, + Gr. *-ismos,* condition of] Chronic arsenic poisoning. SYN: *arseniasis*.

arsenicophagy (ăr″sĕn-ĭ-kŏf′ă-jē) [″ + *phagein,* to eat] Habitual eating of arsenic.

arsenic poisoning SEE: under *poisoning*.

arsenium (ăr-sē′nē-ŭm) [L.] Arsenic.

arsine (ăr′sĭn) A poisonous gas formed from the interaction of arsenic and acid; it may be used as an agent of chemical warfare.

ART *assisted reproductive technology*.

A.R.T. *Accredited Record Technician.*

artefact SEE: *artifact*.

Artemisia annua (ăr-tĕ-mē′sē-ă ăn′ū-ĕ) A Chinese herb used as a source of the antimalarial drug, artesunate.

arterectomy (ăr″tĕ-rĕk′tō-mē) [Gr. *arteria,* artery, + *ektome,* excision] Excision of an artery or arteries. SYN: *arteriectomy*.

arteri- SEE: *arterio-*.

arteria (ăr″tē′rē-ă) *pl.* **arteriae** The Latin word for artery.

arterial (ăr-tē′rē-ăl) Pert. to one or more arteries.

arterial blood gas ABBR: ABG. Literally, any of the gases present in blood; operationally and clinically, they include the determination of levels of pH, oxygen (O_2), and carbon dioxide (CO_2) in the blood. ABGs are important in the diagnosis and treatment of disturbances of acid-base balance, pulmonary disease, electrolyte balance, and oxygen delivery. Values of the gases themselves are usually expressed as the partial pressure of carbon dioxide or oxygen, although derived values are reported in other units. Several other blood chemistry values are important in managing acid-base disturbances, including the levels of the bicarbonate ion (HCO_3), blood pH, sodium, potassium, and chloride.

arteriectasis, arteriectasia (ăr″tĕ-rē-ĕk′tă-sĭs, -ĕk-tā′zē-ă) [″ + *ektasis,* a stretching out] Arterial dilatation.

arteriectomy (ăr″tĕ-rē-ĕk′tō-mē) [″ + *ektome,* excision] Arterectomy.

arterio-, arteri- [Gr. *arteria,* artery] Combining forms indicating *relationship to an artery.*

arteriocapillary (ăr-tē″rē-ō-kăp′ĭ-lăr″ē) [″ + L. *capillus,* like hair] Pert. to both arteries and capillaries.

arteriofibrosis (ăr-tē″rē-ō-fī-brō′sĭs) [″ + L. *fibra,* fiber, + Gr. *osis,* condition] Arteriocapillary fibrosis.

arteriogram (ăr-tē′rē-ō-grăm″) [″ + *gramma,* something written] A radiograph of an artery after injection of a radiopaque contrast medium, usually directly into the artery or near its origin. SEE: *angiogram*.

arteriography (ăr″tē-rē-ŏg′ră-fē) [″ + *graphein,* to write] **1.** A radiographic procedure for obtaining an arteriogram. SEE: *angiography*. **2.** Description of arteries.

arteriol-, arteriolo- Combining forms meaning *arteriole*.

arteriola (ăr-tē″rē-ō′lă) *pl.* **arteriolae** [L.] A small artery; an arteriole.

a. macularis inferior The inferior macular arteriole, which supplies the macula retinae of the eye.

a. macularis superior The superior macular arteriole, which supplies the macula retinae of the eye.

a. medialis retinae The medial arteriole of the retina.

a. nasalis retinae inferior The inferior nasal arteriole of the retina.

a. nasalis retinae superior The superior nasal arteriole of the retina.

a. recta One of the small arteries of the kidney that supply the renal pyramids.

a. temporalis retinae inferior The inferior temporal artery of the retina.

a. temporalis retinae superior The superior temporal artery of the retina.

arteriole (ăr-tē′rē-ōl) *pl.* **arterioles** [L. *arteriola*] A minute artery, esp. one that, at its distal end, leads into a capillary. SYN: *arteriola*. **arteriolar** (ăr-tē-rē-ō′lăr), *adj.*

arteriolith (ăr-tē′rē-ō-lĭth) [″ + Gr. *lithos,* stone] An arterial calculus.

arteriolitis (ăr-tēr″ē-ō-lī′tĭs) [″ + Gr. *itis,* inflammation] Inflammation of the arteriolar wall.

arteriolonecrosis (ăr-tē″rē-ō″lō-nĕ-krō′sĭs) [″ + Gr. *nekros,* corpse, + *osis,* condition] Destruction of an arteriole.

arteriolopathy (ăr-tēr″ē-ō-lŏp′ă-thē) [″ +″] Any disease of the arterioles, esp. a disease that affects arterioles throughout the body.

calcific uremic a. Calciphylaxis.

arteriolosclerosis (ăr-tē″rē-ō″lō-sklĕ-rō′sĭs) [L. *arteriola,* small artery, + Gr. *sklerosis,* hardening] Thickening of the walls of the arterioles, with loss of elasticity and contractility. **arteriolosclerotic** (-rŏt′ĭk), *adj.*

arteriomotor (ăr-tē″rē-ō-mō′tor) [Gr. *arteria,* artery, + L. *movere,* to move] Causing changes in the interior diameter of arteries by dilatation and constriction.

arteriomyomatosis (ăr-tē″rē-ō-mī″ō-mă-tō′sĭs) [″ + *mys,* muscle, + *oma,* tumor, + *osis,* condition] Thickening of arterial walls due to overgrowth of muscle fibers.

arterionecrosis (ăr-tē″rē-ō-nĕ-krō′sĭs) [″ + *nekros,* corpse, + *osis,* condition] Arterial necrosis.

arteriopathy (ăr″tē-rē-ŏp′ă-thē) [″ + *pathos,* disease, suffering] Any disease of the arteries.

obliterative a. In organ transplantation, diffuse concentric stenosis of the graft's arteries resulting from immunologic rejection. It is characterized pathologically by hyperplastic scarring of the intima of affected arteries, along with infiltration by foam cells.

arterioplasty (ăr-tē″rē-ō-plăs′tē) [″ + *plassein,* to form] Repair or reconstruction of an artery.

arteriopressor (ăr-tē″rē-ō-prĕs′or) [″ + L. *pressura,* force] Causing increased arterial blood pressure.

arteriorrhaphy (ăr-tē″rē-or′ă-fē) [″ + *rhaphe,* seam, ridge] Arterial suture.

arteriorrhexis (ăr-tē″rē-ō-rĕk′sĭs) [″ + *rhexis,* rupture] Rupture of an artery.

arteriosclerosis (ăr-tē″rē-ō-sklĕ-rō′sĭs) [″ + *sklerosis,* to harden] A disease of the arterial vessels marked by thickening, hardening, and loss of elasticity in the arterial walls. Three forms of arteriosclerosis are generally recognized: atherosclerosis, sclerosis of arterioles, and calcific sclerosis of the medial layer of arteries (Mönckeberg's calcification). Atherosclerosis is the single most important cause of disease and death in Western societies. SEE: *atherosclerosis*.

a. obliterans Arteriosclerosis in which the lumen of the artery is completely occluded. **arteriosclerotic** (-rŏt′ĭk), *adj.*

arteriospasm (ăr-tē′rē-ō-spăzm″) [Gr. *arteria,* artery, + *spasmos,* a convulsion] Arterial spasm.

arteriostenosis (ăr-tē″rē-ō-stĕ-nō′sĭs) [″ + *stenosis,* act of narrowing] Narrowing of the lumen of an artery; may be temporary or permanent.

arteriostosis (ăr-tē″rē-ŏs-tō′sĭs) [″ + *osteon,* bone, + *osis,* condition] Calcification of an artery.

arteriostrepsis (ăr-tē″rē-ō-strĕp′sĭs) [″ + *strepsis,* a twisting] Twisting of the divided end of an artery to arrest hemorrhage.

arteriosympathectomy (ăr-tē″rē-ō-sĭm″pă-thĕk′tō-mē) [″ + *sympatheia,* suffer with, + *ektome,* excision] Removal of the arterial sheath containing fibers of the sympathetic nerve.

arteriotomy (ăr″tē-rē-ŏt′ō-mē) Surgical division or opening of an artery.

arteriovenous (ăr-tē″rē-ō-vē′nŭs) [″ + L. *vena,* a vein] ABBR: A-V. Rel. to both arteries and veins.

arteriovenous access Use of a shunt to connect an artery to a vein. This may be used in renal dialysis.

arteriovenous oxygen difference ABBR: C (a-v) O_2. The difference between the oxygen content of arterial and venous blood.

arterioversion (ăr-tē″rē-ō-vĕr′shŭn) [″ + L. *versio,* a turning] Eversion of an arterial wall to arrest hemorrhage from the open end.

arteritis (ăr″tē-rī′tĭs) [″ + *itis,* inflammation] Inflammation of an artery. SEE: *endarteritis*.

giant cell a. Temporal arteritis.

a. nodosa Widespread inflammation of adventitia of small and medium-sized arteries with impaired function of the involved organs. SYN: *periarteritis nodosa; polyarteritis nodosa*.

a. obliterans Inflammation of the intima of an artery, causing occlusion of the lumen. SYN: *endarteritis obliterans*.

rheumatic a. Archaic term for in-

flammation of small arteries as a result of rheumatic fever.

Takayasu's a. SEE: *Takayasu's arteritis*.

temporal a. A chronic inflammation of large arteries, usually the temporal, occipital, or ophthalmic arteries, identified on pathological specimens by the presence of giant cells. It causes thickening of the intima, with narrowing and eventual occlusion of the lumen. It typically occurs after age 50. Symptoms include headache, tenderness over the affected artery, loss of vision, and facial pain. The cause is unknown, but there may be a genetic predisposition in some families. Corticosteroids usually are administered. **arteritic** (-rĭt′ĭk), *adj.*

artery (ăr′tĕr-ē) *pl.* **arteries** [Gr. *arteria,* windpipe] One of the vessels carrying blood from the heart to the tissues. There are two divisions, pulmonary and systemic. The pulmonary arteries carry deoxygenated blood from the right ventricle to the lungs. The systemic arteries carry oxygenated blood from the left ventricle to the rest of the body. SEE: illus. (Systemic Arteries); *aorta* and *coronary artery disease* for illus.

ANATOMY: An arterial wall has three layers: the inner layer (tunica intima) is endothelial tissue; the middle layer (tunica media) is smooth muscle and elastic connective tissue; and the outer layer (tunica externa) is white fibrous connective tissue. SEE: illus. (Structure of an Artery).

alar a. Branch of the angular artery that supplies the tissues of the ala nasi.

angular a. The artery at the inner canthus of the eye; the facial artery.

anterior tibial a. A continuation of the popliteal artery, supplying blood to the leg, ankle, and foot.

axillary a. A continuation of the subclavian artery, supplying blood to the armpit and continuing into the arm as the brachial artery.

basilar a. An artery formed from the union of the left and right vertebral arteries. It supplies blood to the cerebellum, brainstem, and posterior portions of the cerebellum. Strokes involving this artery can damage the cerebellum and parts of the brainstem that regulate essential vegetative functions (e.g., consciousness and respiration).

brachial a. The main artery of the arm; a continuation of the axillary artery on the inside of the arm. SEE: illus.

brachiocephalic a. Innominate a.

bronchial a. A branch of the thoracic aorta, supplying blood to the bronchioles and connective tissue of the lungs.

celiac a. The first branch of the abdominal aorta. Its branches supply the stomach, liver, spleen, duodenum, and pancreas.

central retinal a. An artery that branches from the ophthalmic artery and enters the retina through the optic nerve. It supplies blood (via the retinal arterioles) to the inner two thirds of the retina.

ciliary a. Any of the branches of the ophthalmic artery that supply the choroid layer.

coiled a. Spiral a.

common hepatic a. One of the three branches of the celiac trunk in the upper abdomen that runs to the right and meets the portal vein and the common bile duct to pass together into the liver. The first branch of the common hepatic artery is the gastroduodenal artery. The second is the right gastric artery. Before entering the liver, the common hepatic artery branches into the right and left hepatic arteries. (There can be significant variation in the organization of these branches.) The hepatic artery supplies blood to the stomach, liver, gallbladder, pancreas, and duodenum.

common iliac a. Either of the pair of terminal branches of the abdominal aorta, each supplying blood to one side of the pelvis, abdominal wall, and lower limbs.

coronary a. **1.** One of a pair of arteries that supply blood to the myocardium of the heart. They arise within the right and left aortic sinuses at the base of the aorta. Decreased flow of blood through these arteries induces attacks of angina pectoris. SEE: illus. **2.** The cervical branch of the uterine artery.

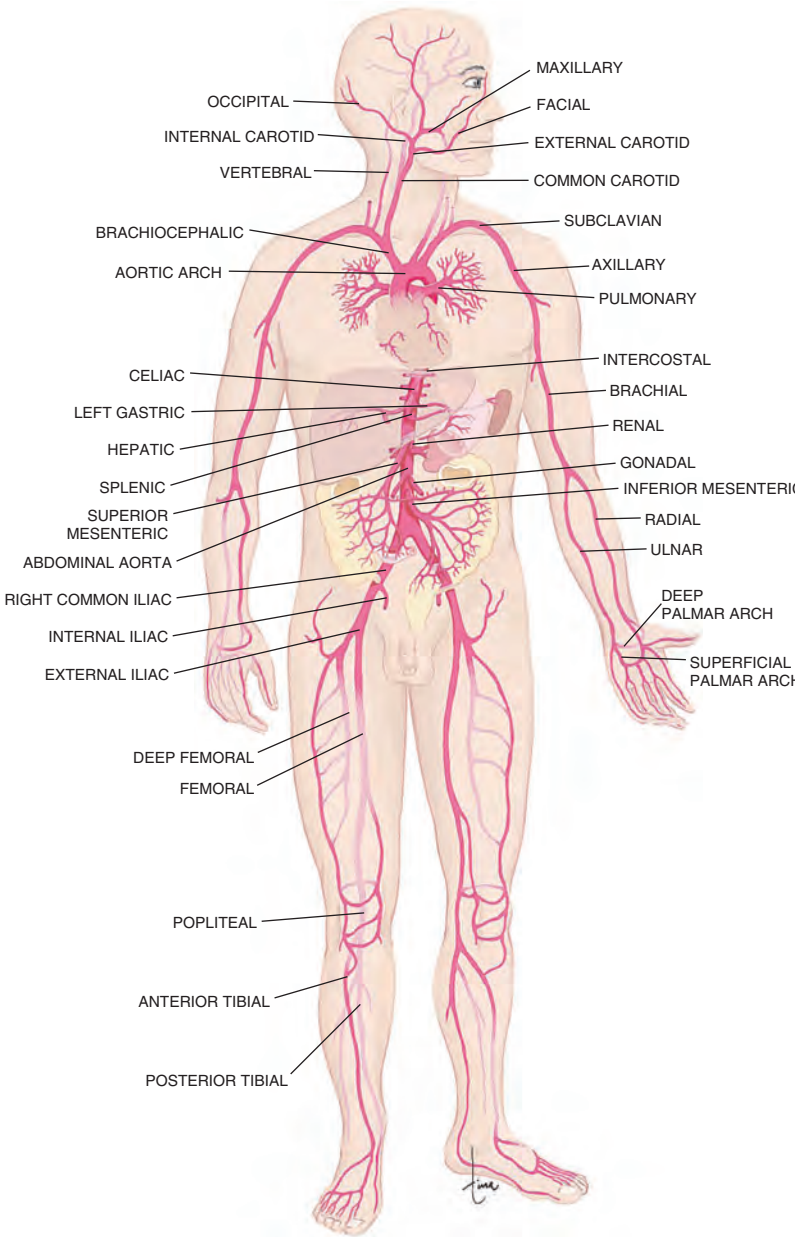
dominant a. In cardiology, the coronary artery that supplies the major posterior descending artery (PDA) of the heart. The coronary circulation is said to be "right dominant" when the PDA receives its blood flow from the right coronary artery, and "left dominant" when its flow comes from the circumflex artery.

dorsalis pedis a. A branch of the anterior tibial artery supplying blood to the foot.

elastic a. A large artery in which elastic connective tissue is predominant in the middle layer (tunica media). Elastic arteries include the aorta and its larger branches (brachiocephalic, common carotid, subclavian, and common iliac), which conduct blood to the muscular arteries.

end a. An artery whose branches do not anastomose with those of other arteries (e.g., arteries to the brain and spinal cord). SYN: *terminal artery*.

external carotid a. One of the two divisions of the common carotid artery that supplies blood to the extracranial parts of the head. It branches from the common carotid artery at the top of the trachea and proceeds behind the neck of the mandible toward the rear of the parotid gland. Its major branches are

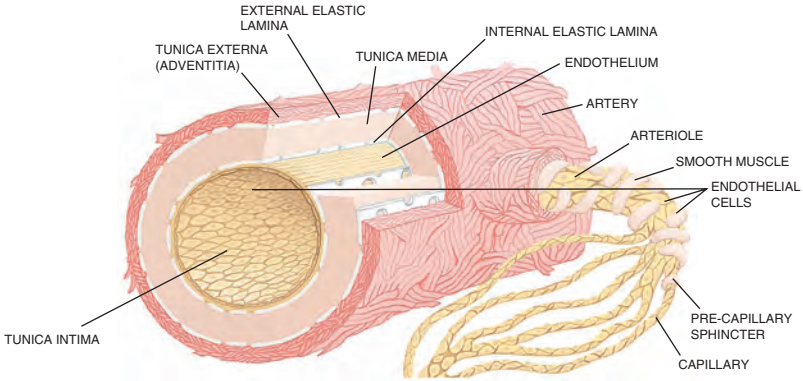


SYSTEMIC ARTERIES

(from bottom to top): the ascending pharyngeal, superior thyroid, lingual, facial, maxillary, occipital, posterior auricular, and superficial temporal arteries.

external iliac a. A branch of the common iliac artery, supplying blood to the anterior abdominal wall and lower limb.

femoral a. The artery that begins at the external iliac artery and terminates behind the knee as the popliteal artery on the inner side of the femur.



STRUCTURE OF AN ARTERY

greater palatine a. The branch of the maxillary artery that supplies the palate, upper pharynx, and auditory tube.

hepatic a. A branch of the celiac artery (a very short branch of the abdominal aorta) supplying blood to the liver.

high-takeoff coronary a. A coronary artery that originates more than a centimeter above the sinotubular junction of the aorta.

hyaloid a. A fetal artery that supplies nutrition to the lens. It disappears in the later months of gestation.

hypogastric a. Internal iliac artery.

infarct-related a. An artery whose obstruction has resulted in the death of tissue, e.g., in a region of the heart or brain.

inferior mesenteric a. A branch of the abdominal aorta, supplying blood to the left side of the colon, including the sigmoid colon and the rectum.

inferior phrenic a. A branch of the abdominal aorta, supplying blood to the diaphragm.

innominate a. The right artery arising from the arch of the aorta and dividing into the right subclavian and right common carotid arteries. SYN: *brachiocephalic artery*.

intercostal a. One of several branches of the thoracic aorta that runs between the ribs and supplies blood to the skin, muscles, and bones of the trunk.

internal carotid a. One of the two divisions of the common carotid artery in the neck. The internal carotid supplies blood to much of the cerebral hemisphere, the eye, and the orbit. It begins at about the level of the top of the trachea, running up the side of the neck and entering the base of the skull through the carotid foramen, just in front of the jugular foramen. The internal carotid then turns forward and runs in the carotid canal inside the petrous part of the temporal bone. Passing over the foramen lacerum the internal carotid emerges from its canal and follows the carotid groove upward along the medial wall of the middle cranial fossa (passing through the cavernous sinus). Just below the optic nerve it loops back and turns upward to become the middle cerebral artery of the circle of Willis. As it passes the optic nerve, the internal carotid artery puts out its first branch, the ophthalmic artery. In the neck the internal carotid artery contains two receptor sites, the carotid body, a chemoreceptor for the oxygen concentration of the blood, and baroreceptors that detect and respond to arterial pressure.

internal iliac a. A branch of the common iliac artery supplying blood to the pelvis, buttocks, external reproductive organs, and the medial side of the thigh.

internal mammary a. ABBR: IMA. The left internal mammary artery (LIMA) is the artery most commonly used in coronary artery bypass graft surgery. It is often grafted to the left anterior descending artery, the artery that supplies blood to the bulk of the left ventricle of the heart. SYN: *internal thoracic artery*.

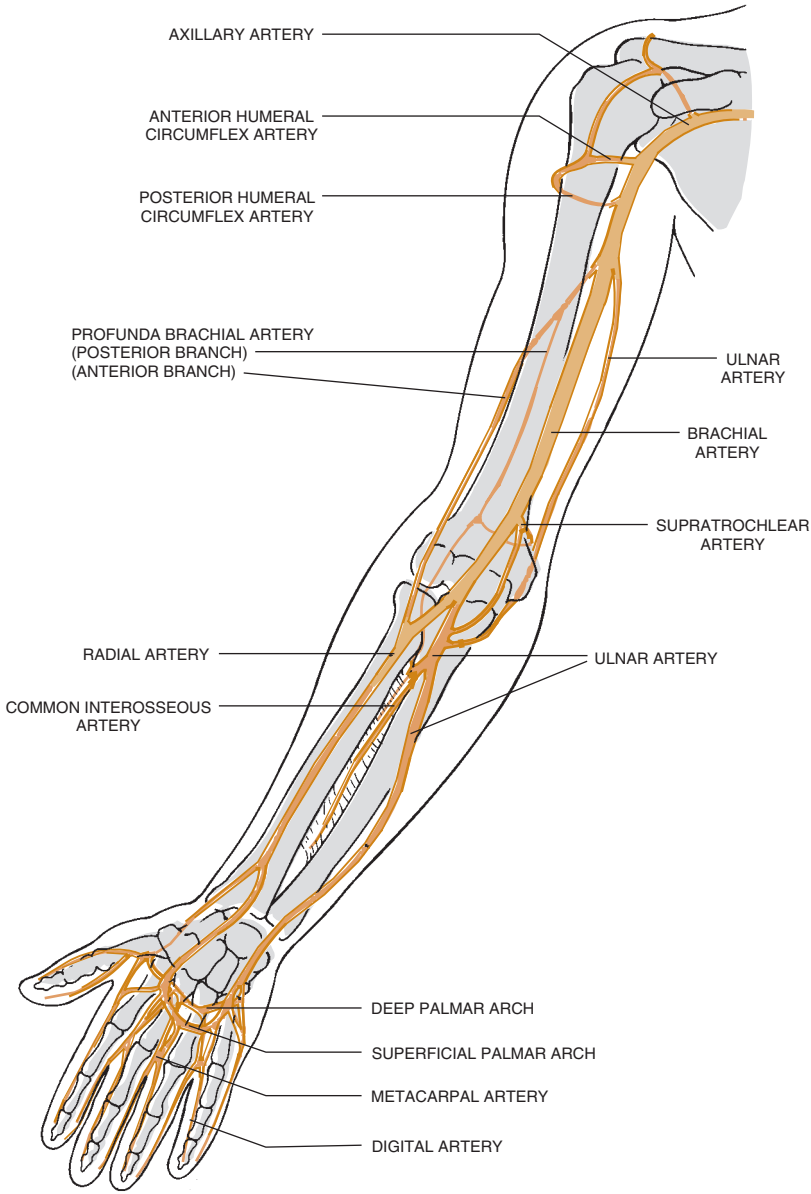
internal thoracic a. ABBR: ITA. Internal mammary a.

left circumflex a. ABBR: LCx. An artery that branches from the left main coronary artery and courses through the coronary sulcus around the lateral and posterior wall of the left ventricle. It supplies blood to portions of the left ventricle and left atrium of the heart.

left common carotid a. The second branch of the aortic arch, supplying blood to the left side of the neck and head.

left gastric a. A branch of the celiac artery (a very short branch of the abdominal aorta), supplying blood to the cardia, the esophagus below the diaphragm, and, in some people, the left lobe of the liver.

left main coronary a. An artery that derives blood from the aortic sinus and supplies blood to the left anterior de-



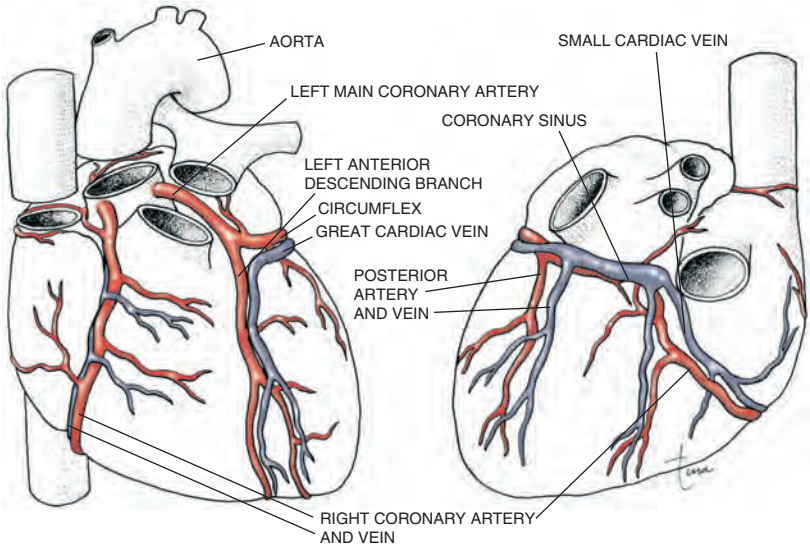
RIGHT ANTERIOR ARM

BRACHIAL ARTERY

scending artery and left circumflex artery. It is the dominant artery to the left ventricle and left atrium of the heart.

lumbar a. One of several branches of the abdominal aorta that run toward the lumbar spine and supply blood to the vertebral bodies and muscles of the lower back and to the posterior wall of the abdomen.

middle cerebral a. ABBR: MCA. One of two paired arteries (right and left MCAs) that are primary branches of the internal carotid artery. They supply blood to the frontal, orbital, parietal,



CORONARY ARTERIES

(A) anterior, (B) posterior

and temporal lobes of the brain. Strokes involving the dominant middle cerebral artery result in hemiparesis and aphasia.

middle sacral a. A branch of the abdominal aorta, supplying blood to the sacrum, coccyx, and buttocks.

muscular a. A medium-sized artery with more smooth muscle than elastic tissue in the tunica media. Most named arteries are muscular arteries.

ophthalmic a. A branch of the internal carotid artery, supplying blood to the eye.

ovarian a. A branch of the abdominal aorta, supplying blood to the ovaries, their ligaments, the fallopian tubes, and the distal ureters.

peroneal a. A branch of the posterior tibial artery, supplying blood to the ankle and deep calf muscles.

popliteal a. A continuation of the femoral artery, supplying blood to the knee and calf.

posterior tibial a. A branch of the popliteal artery, supplying blood to the leg and foot.

a. of the pterygoid canal Vidian artery.

pulmonary a. The artery that takes blood from the right ventricle to the lungs.

radial a. A branch of the brachial artery, supplying blood to the forearm, the lateral side of the wrist, and the palm.

renal a. A branch of the abdominal aorta, supplying blood to the kidneys, the adrenal gland, and the superior portion of the ureter.

right common carotid a. A branch of the brachiocephalic artery supplying blood to the right side of the neck and the head.

right coronary a. ABBR: RCA. An artery which derives from the right aortic sinus. It supplies blood to the right ventricle, the right atrium, and often, the inferior or posterior wall of the left ventricle of the heart.

root a. An artery accompanying a nerve root into the spinal cord.

spermatic a. One of two long slender vessels, branches of the abdominal aorta, following each spermatic cord to the testes.

spiral a. The coiled terminal branch of a uterine artery. It supplies the superficial two thirds of the endometrium, and in a pregnant uterus it empties into intervillous spaces, supplying blood that bathes the chorionic villi at the placental site. SYN: *coiled artery*.

splenic a. A branch of the celiac artery (a very short branch of the abdominal aorta) supplying blood to the spleen, stomach, omentum, and pancreas.

striated a. One of the branches of the middle cerebral artery that supply the basal nuclei of the brain.

subclavian a. The large artery at the base of the neck that supplies blood to the arm. The right subclavian artery

branches from the brachiocephalic artery; the left subclavian artery branches from the aortic arch.

sulcal a. A tiny branch of the anterior spinal artery.

superficial temporal a. A branch of the external carotid artery, supplying blood to the parotid glands, cheeks, and temples.

superior mesenteric a. The second of three major arterial trunks to the gut. The superior mesenteric artery emerges from the ventral midline of the aorta only a few centimeters distal to the celiac trunk, and it supplies the entire midgut, which includes the distal half of the duodenum, the jejunum, the ileum, the ascending colon, and half of the transverse colon.

superior phrenic a. A branch of the thoracic aorta, supplying blood to the diaphragm.

suprarenal a. A branch of the abdominal aorta supplying blood to the adrenal gland.

sylvian a. [François Sylvius] The middle cerebral artery in the fissure of Sylvius.

terminal a. End a.

testicular a. A branch of the abdominal aorta, supplying blood to the testes, epididymis, cremasteric muscles, and lower ureters.

ulnar a. A branch of the brachial artery supplying blood to the forearm, the medial side of the wrist, the palm, and the hand.

vertebral a. The first branch of the subclavian artery, supplying blood to the cervical vertebrae and the basilar artery.

vidian a. SEE: *vidian artery*.

arthr- SEE: *arthro-*.

arthralgia (ăr-thrăl′jē-ă) [Gr. *arthron,* joint, + *algos,* pain] Pain in a joint. **arthralgic** (-jĭk), *adj.*

a. saturnina Joint pain resulting from lead poisoning.

arthrectomy (ăr-thrĕk′tō-mē) [″ + *ektome,* excision] Excision of a joint.

arthresthesia (ăr″thrĕs-thē′zē-ă) [″ + *aisthesis,* sensation] Joint sensibility; the perception of articular motions.

arthritic (ăr-thrĭt′ĭk) **1.** Pert. to arthritis. **2.** A person afflicted with arthritis.

arthritis (ăr-thrī′tĭs) *pl.* **arthritides** [″ + *itis,* inflammation] Joint inflammation, often accompanied by pain, swelling, stiffness, and deformity. Arthritis is very common, affecting millions of people. The most prevalent type, called osteoarthritis, or degenerative arthritis, increases in incidence with age, but is not considered a part of normal aging. Other forms of arthritis include rheumatoid arthritis, ankylosing spondylitis, and psoriatic arthritis. The term *arthritis* differs from the term *rheumatic disease* in that arthritis is a disease of joints, whereas rheumatic disease may also affect other tissues and organs. **arthritic** (-thrĭ′tĭk), *adj.*

ETIOLOGY: Arthritis may result from infections (e.g., rheumatic fever, staphylococcal infections, gonorrhea, tuberculosis), metabolic disturbances (e.g., gout, calcium pyrophosphate crystal disease), multisystem autoimmune diseases (e.g., psoriasis, rheumatoid arthritis, systemic lupus erythematosus), neuropathies (e.g., Charcot's joint), joint trauma, endocrine diseases (e.g., acromegaly), and other illnesses. SEE: *bursitis; monoarthritis; osteoarthritis; polyarthritis; rheumatism*.

TREATMENT: Anti-inflammatory drugs, corticosteroids, monoclonal antibodies, antibiotics, joint aspiration, surgery, and occupational or physical therapies each may play a role in the treatment of arthritic illnesses, depending on the underlying cause and the severity of the illness.

acute suppurative a. Septic a.

adjuvant a. ABBR: AA. An experimental model of arthritis in rodents induced by injection of foreign substance, such as Freund's adjuvant, into the tail vein or paw. This model can be used to study new agents for human arthritis treatment. SEE: *Rheumatoid a.*

allergic a. Arthritis occurring in serum sickness or, rarely, as a result of food allergies. SEE: *serum sickness*.

bacterial a. Infection of joints associated with fever and other systemic symptoms. Joint destruction occurs if the infection is not treated expeditiously. Removal of pus from the joint is necessary. In older or immunosuppressed patients, the most common causative organism is *Staphylococcus aureus*. Staphylococci, anaerobes, or gram-negative bacteria are found in prosthetic joint infections. Gonococci and *Borrelia burgdorferi,* the spirochete that causes Lyme disease, differ from other forms of bacteria that cause joint infection in that they tend to affect younger and more active individuals. SYN: *acute suppurative arthritis; septic arthritis*.

cricoarytenoid a. One of the causes of dysphonia and vocal fold immobility that does not involve laryngeal nerve damage. It is caused by degenerative changes of the cricoarytenoid joints.

degenerative a. Osteoarthritis.

enteropathic a. Joint disease associated with inflammatory bowel disease.

epidemic a. Infectious arthritis, often accompanied by a rash, caused by the Ross River virus.

experimental a. Any form of arthritis induced in laboratory animals, used to study pathophysiology, or to foster improvements in diagnosis or treatment of the disease.

gonococcal a. Arthritis, often with tenosynovitis and/or rash, caused by gonococcal infection. The joints of the knees, wrists, and hands are most commonly affected. The disease may affect any sexually active person and may follow infection of a mucous membrane by gonorrhea. This presentation of gonorrhea is usually called "disseminated gonococcal infection" (DGI).

TREATMENT: It is treated with intravenous ceftriaxone. A tetracycline antibiotic is usually given at the same time to treat possible co-infection with *Chlamydia* species.

gouty a. Arthritis caused by gout.

hypertrophic a. Osteoarthritis.

juvenile idiopathic a. ABBR: JIA. The preferred name for juvenile rheumatoid arthritis.

juvenile rheumatoid a. ABBR: JRA. A group of chronic, inflammatory diseases involving the joints and other organs in children under age 16. The age of onset is variable, as are the extra-articular manifestations. JRA affects about 1 in 1000 children (150,000 to 250,000 in the US alone) with overall incidence twice as high in females and is the most common form of arthritis in childhood. At least five subgroups are recognized. SYN: *Still's disease; juvenile idiopathic arthritis*. SEE: *Nursing Diagnoses Appendix.*

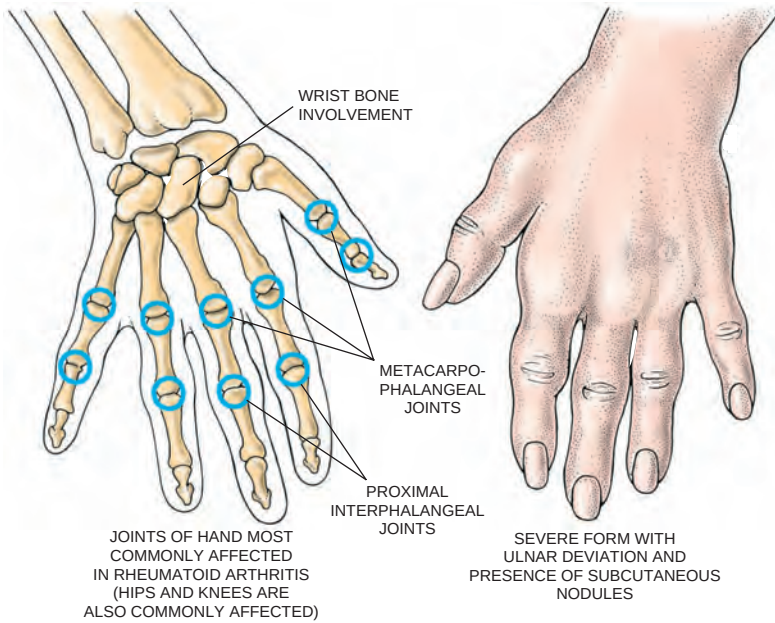
SYMPTOMS: Signs and symptoms depend on the type of JRA that is present.

TREATMENT: Anti-inflammatory agents are the mainstay of palliation, but have little effect on the outcome of the disease. Corticosteroids may have adverse effects on bone growth; most rheumatologists try to minimize their use. Disease-modifying drugs, such as methotrexate or leflunomide are current mainstays of treatment. Hematopoietic stem cell transplantation may be used in specialized treatment centers. Surgery is used to release ankylosed joints once the child reaches physical maturity and is able to carry out vigorous rehabilitation. Physical and occupational therapy are needed to maintain muscle strength and joint range of motion thus preventing contractures, deformities, and disability. Gait training and joint protection also are helpful. Splinting joints in correct alignment reduces pain and prevents contractures. Regularly scheduled slit-lamp examinations aid in early diagnosis of iridocyclitis, which should be managed by an ophthalmologist, usually with corticosteroids and mydriatics. Other extra-articular manifestations should be referred to experienced medical and surgical specialists.

PATIENT CARE: The child and family are instructed about the disease process and treatment and coping strategies, and are encouraged to express concerns. A well-balanced diet, regular exercise and rest periods, and avoidance of excessive fatigue and overexertion are encouraged. The child should be encouraged to be independent and involved in education, social, and vocational activities. Moist heat helps to relieve pain and stiffness. Placing the child in a warm bath, immersing painful hands and feet in pans of warm water for 10 min two to three times daily, or using daily whirlpool baths, a paraffin bath, or hot packs provides temporary relief of acute swelling and pain. Swimming and water aerobic exercise in warm water are recommended to strengthen muscles and maintain mobility. Good posture and body mechanics are important; sleeping on a firm mattress without a pillow or with only a thin pillow is recommended to maintain proper body alignment. The patient should lie prone to straighten the hips and knees when resting or watching television. When braces or splints are required, their use is explained and demonstrated. Activities of daily living and the child's natural affinity for play provide opportunities to maintain mobility and incorporate therapeutic exercises using assistive and safety devices. The child with photophobia due to iridocyclitis should wear sunglasses. The child and family are referred to local and national support and information groups like the Arthritis Foundation (404-872-7100) (www.arthritis.org). Desired outcomes include the child's ability to achieve and maintain optimal health with joints that are movable, flexible, and free of deformity; to move with minimal or no discomfort; to engage in activities suitable to his or her interests, capabilities, and developmental level; and to perform self-care activities to maximum capabilities.

Lyme a. The large-joint arthritis that develops in approx. 35% to 80% of patients with Lyme disease, caused by the spirochete *Borrelia burgdorferi*. It appears 2 weeks to 2 years after infection and is marked by periodic episodes of pain that move among different joints; the shoulders, knees, elbows, and ankles are involved most commonly. Approx. 10% of patients develop permanent deformities. The likelihood of chronic arthritic complaints is markedly diminished if patients are treated with amoxicillin or other appropriate antibiotics. SEE: *Lyme disease*.

oligoarticular type I juvenile idiopathic a. A form of JIA that accounts for about 33% of all cases; 80% of cases occur in girls, usually presenting in early childhood. As the name implies, few joints are involved, typically the large joints of the knee, ankle, or elbow. One



RHEUMATOID ARTHRITIS

third of cases develop chronic iridocyclitis. Results of rheumatoid factor evaluation are usually negative. Ultimately, 10% of these children develop ocular damage, and 20% go on to develop polyarthritis.

oligoarticular type II juvenile idiopathic a. A form of JIA that 90% of the time occurs in boys. As with type I, few joints are involved in this form of JIA; the hip girdle is usually involved. Sacroiliitis and acute iridocyclitis are the important extra-articular manifestations; an unknown percentage of children develop chronic spondyloarthropathy.

palindromic a. Transient recurrent arthritis, of unknown etiology, usually affecting large joints, such as the knees and elbows.

polyarticular juvenile idiopathic a., rheumatoid factor–negative A form of JIA that accounts for about 25% of all cases; 90% of cases occur in girls. It may involve multiple joints. Iridocyclitis, its most severe extra-articular manifestation, is rare. Severe arthritis develops in 10% to 15% of these children.

polyarticular juvenile idiopathic a., rheumatoid factor–positive A form of JIA that accounts for 5% to 10% of all cases; 80% of cases occur in girls. Typically presenting later in childhood, this form may affect multiple joints. There are few extra-articular manifestations but 50% or more of these children develop severe arthritis.

psoriatic a. Arthritis associated with psoriasis. The exacerbations and remissions of arthritic symptoms do not always parallel those of psoriasis. "Sausage-shaped" deformities of the fingers and toes are often present.

reactive a. Joint inflammation that occurs shortly after an infection of the urinary or gastrointestinal tract. It often affects large joints in the lower extremities, usually in persons younger than 50. Reiter's syndrome may be a form of reactive arthritis.

rheumatoid a. A chronic systemic disease marked by inflammation of multiple synovial joints. The disease usually affects similar groups of joints on both sides of the body and can create bony erosions that can be seen radiographically. Subcutaneous nodule formation and elevated serum rheumatoid factor levels are common. Patients typically complain of joint stiffness in the morning rather than after activities. Women are affected 3 times more often than men. Members of some ethnic groups, such as certain Native Americans, have higher rates of this disease than the general population. The illness usually begins in mid-life, but any age group can be affected. SEE: illus.

ETIOLOGY: Factors implicated in the development and the severity of this

disease include genetics (e.g., HLA haplotypes), autoimmune phenomena, and environmental influences.

SYMPTOMS: Joint pains, morning stiffness, gelling (stiffness that returns after the patient sits or rests), malaise, and fatigue are often present. Systemic disease marked by pleural effusions, pericarditis, pulmonary fibrosis, neuropathies, and ocular disorders may occur that can lead to symptoms from each of these organs. Symptoms usually develop gradually over the course of several months but may begin abruptly in some patients.

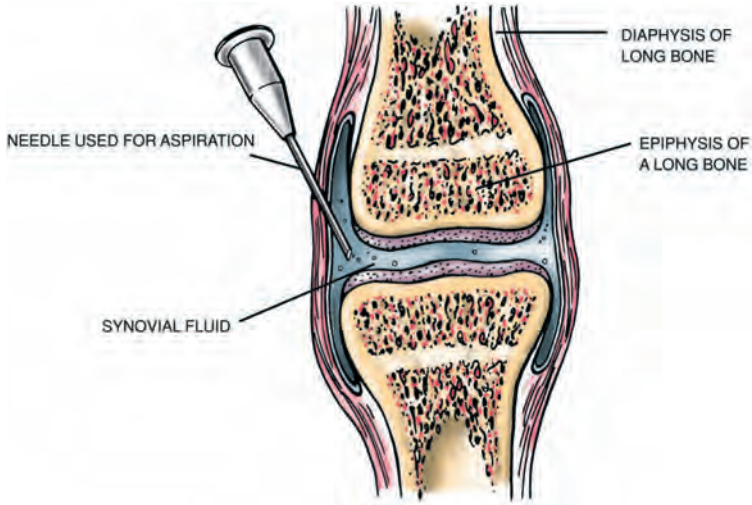
TREATMENT: Most rheumatologists now recommend aggressive therapy with disease-modifying antirheumatic drugs (DMARDs) early in the course of the illness to prevent bony erosions and loss of joint function. Drugs in this class include agents like methotrexate. Nonsteroidal anti-inflammatory drugs (e.g., ibuprofen) or corticosteroids often are prescribed for disease palliation. Many patients may continue to take low-dose corticosteroids for years, but the benefits of long-term steroid use have to be weighed against the risks, such as diabetes, osteoporosis, and adrenal suppression. Gold compounds can be used, but they are weaker than DMARDs and newer agents. Newer agents include antibodies to tumor necrosis factor and other immunomodulatory drugs. Powerful immunosuppressive agents like cyclosporine, azathioprine, and mycophenolate may also be used. Combination therapies involving several agents from different classes can be used. Joint replacement surgery can be helpful for some patients.

PATIENT CARE: All joints are assessed for inflammation, deformities, and contractures. The patient's ability to perform activities of daily living (ADLs) is evaluated. The patient is assessed for fatigue. Vital signs are monitored, and weight changes, pain (location, quality, severity, inciting and relieving factors), and morning stiffness (esp. duration) are documented. Use of moist heat is encouraged to relieve stiffness and pain. Prescribed anti-inflammatory and analgesic drug therapy is administered and evaluated; the patient is taught about the use of these medications. Patient response to all medications is evaluated, esp. after a change in drug regimen, and the patient and family are taught to recognize the purpose, schedule, and side effects of each. Over-the-counter drugs and herbal remedies may interact with prescribed drugs and should not be taken unless approved by knowledgeable physicians or pharmacists. Inflamed joints occasionally are splinted in extension as prescribed to prevent contractures. Pressure areas are noted, and range of motion is maintained with gentle, passive exercise if the patient cannot comfortably perform active movement. Once inflammation has subsided, the patient is instructed in active range-of-motion exercise for specific joints. Warm baths or soaks are encouraged before or during exercise. Cleansing lotions or oils should be used for dry skin. The patient is encouraged to perform ADLs, if possible, allowing extra time as needed. Assistive and safety devices may be recommended for some patients. The patient should pace activities, alternate sitting and standing, and take short rest periods. Referral to an occupational or physical therapist helps to keep joints in optimal condition as well as teaching the patient methods for simplifying activities and protecting joints. The importance of keeping PT/OT appointments and following home-care instructions should be stressed to both the patient and the family. A well-balanced diet that controls weight is recommended, as obesity further stresses joints. Both patient and family should be referred to local and national support and information groups. Desired outcomes include cooperation with prescribed medication and exercise regimens, ability to perform ADLs, slowed progression of debilitating effects, pain control, and proper use of assistive devices. For more information and support, patient and family should contact the Arthritis Foundation (404-872-7100) (www.arthritis.org). SEE: *Nursing Diagnoses Appendix.*

septic a. Inflammation of the synovial tissues in a joint as the result of a pyogenic (pus-forming) bacterial infection. Once infection occurs, cartilage is destroyed and the joint space narrows. Patients at greatest risk are those with pre-existing arthritis, joint trauma, or immune deficiencies and those who use intravenous drugs. SYN: *bacterial arthritis; acute suppurative arthritis.*

ETIOLOGY: The primary site of infection is usually elsewhere, with joint infection occurring as the result of bacteremia or spread from osteomyelitis in an adjacent bone. The most common pathogen for those 16 to 40 years old is *Neisseria gonorrhoeae;* other common bacteria include *Staphylococcus aureus,* group B streptococci, and gram-negative bacilli such as *Escherichia coli* and *Salmonella* spp.

SYMPTOMS: Suppurative arthritis is marked by an acutely painful, warm, swollen joint with limited range of motion and fever; the white blood cell count and erythrocyte sedimentation rates are increased. Except in gonococcal arthritis, only one joint is affected, most commonly the knee, hip, or shoulder.



ARTHROCENTESIS

TREATMENT: Prompt treatment is necessary, including drainage of the joint and antimicrobial drug therapy (intravenous penicillinase-resistant penicillins and third-generation cephalosporins). The affected joint is supported with a sling or pillows, and the patient's pain is treated with mild opioids and nonsteroidal anti-inflammatory agents. Without vigorous treatment, significant joint destruction can occur.

syphilitic a. Arthritis that occurs in the secondary and tertiary stages of syphilis and is marked by tenderness, swelling, and limitation of motion.

systemic juvenile idiopathic a. A form of JIA that accounts for 20% of all cases; boys are affected 60% of the time. Fever and rash may be the presenting symptoms, either with or without joint involvement. Ultimately, 25% of these children develop severe arthritis.

tuberculous a. Chronic, slowly progressive infection of joints (such as hips, knees, ankles, or intervertebral disks) by *Mycobacterium tuberculosis*. The organism usually spreads via the blood or from osteomyelitis in an adjacent bone. The macrophage and lymphocyte response to the mycobacterium destroys the bone along the joint margins, resulting in progressive pain, fibrosis, and restricted movement. SEE: *granuloma*.

arthritis mutilans Severe joint destruction, a characteristic of several inflammatory joint diseases, including some instances of psoriatic arthritis.

arthritogenic (ăr-thrī′tō-jĕn″ĭk) Capable of causing or accelerating joint disease.

arthro-, arthr- [Gr. *arthron,* joint] Combining forms meaning *joint*.

arthrocentesis (ăr″thrō-sĕn-tē′sĭs) [″ + *kentesis,* a puncture] Entry into a joint space with a needle to remove fluid. SEE: illus.

arthrochalasia (ăr″thrō-kăl-ā′zē-ŭ) [″ + Gr. *chalasia,* relaxation] Pathological loosening of the joints. Such loosening of the hip joints causes dislocations. SEE: *hypermobility*.

arthrochondritis (ăr″thrō-kŏn-drī′tĭs) [″ + *chondros,* cartilage, + *itis,* inflammation] Inflammation of an articular cartilage.

arthroclasia (ăr″thrō-klā′zē-ă) [″ + *klasis,* a breaking] The intentional breaking of adhesions of an ankylosed joint to provide movement.

arthrodesis (ăr-thrō-dē′sĭs) [″ + *desis,* binding] The fusion of two bones.

arthrodia (ăr-thrō′dē-ă) [Gr.] A type of synovial joint that permits only simple gliding movement within narrow limits imposed by ligaments.

arthrodynia (ăr″thrō-dĭn′ē-ă) [Gr. *arthron,* joint, + *odyne,* pain] Pain in a joint.

arthrodysplasia (ăr″thrō-dĭs-plā′zē-ă) [″ + *dys,* bad, + *plassein,* to form] A hereditary condition marked by deformity of various joints.

arthroendoscopy (ăr″thrō-ĕn-dŏs′kō-pē) [″ + *endon,* within, + *skopein,* to examine] An old term for arthroscopy.

arthrogenic muscle inhibition ABBR: AMI. A clinical impairment caused by an ongoing reflex inhibition of the musculature surrounding a joint following distention or damage to structures of that joint.

arthrogram (ăr′thrō-grăm) [″ + *gramma,* something written] Visualization of a joint by radiographic study