



F 1. *Fahrenheit*; *femto-*; *field of vision*; *folic acid*; *formula*; *function*. 2. Symbol for the element fluorine.

F₁ In genetics, the first filial generation, the offspring of a cross between two unrelated individuals.

F₂ In genetics, the second filial generation, the offspring of a cross between two individuals of the F₁ generation.

FA *fatty acid*; *filterable agent*; *first aid*; *fluorescent antibody*.

FAAN *Fellow of the American Academy of Nursing*.

FAARC *Fellow of the American Association of Respiratory Care*.

Fab *fragment antigen binding*.

fabella (fă-bĕl'lä) *pl. fabellae* [L., little bean] Fibrocartilage or bone that sometimes develops in the head of the gastrocnemius muscle.

Fabere maneuver Patrick's test.

FABERE test, FABER test Acronym for flexion, abduction, external rotation, and extension of the hip. The FABERE test is used to identify hip arthritis or sacroiliac dysfunction. SEE: *Patrick's test*.

fabrication (făb'rĭ-kă'shŭn) [L. *fabricatus*, having built] A deliberately false statement told as if it were true.

Fabry's disease (fă'brĕz) [J. Fabry, Ger. physician, 1860–1930] An X-linked, recessive metabolic disease in which there is a galactosidase deficiency, which leads to accumulation of glycosphingolipids throughout the body. Clinically, by age 10, there is discomfort of the hands and feet with paresthesia or burning pain. There may be painful abdominal crises resembling other causes of acute abdominal pain. As these patients age, glycolipid deposition in the kidneys, heart, and brain may produce serious organ dysfunction.

FACCP *Fellow of the American College of Chest Physicians*.

FACD *Fellow of the American College of Dentists*.

face [L. *facies*] 1. The anterior part of the head from the forehead to the chin, extending laterally to but not including the ears. SEE: *illus.*; *facial expression*.

ANATOMY: There are 14 bones in the face. The blood supply is bilateral from the facial, maxillary, and superficial temporal branches of the external carotid artery and the ophthalmic branch of the internal carotid artery. The veins include the external and internal jugular veins.

2. The visage or countenance.

moon f. A full, round face seen in

Cushing's syndrome or more often as a side effect of corticosteroid therapy.

facebow (fäs'bō) [' + AS *boga*] In orthodontics, an appliance that maintains the position of the posterior molars or moves the molars distally. A metal archwire (a metal wire fitting the dental or alveolar arch) is attached to a molar tooth in each arch. External attachments connect to an elastic strap that fits behind the head. The force for this active appliance is supplied by the neck strap.

face-lift A nonscientific term for plastic surgery of the face. SEE: *rhytidectomy*.

FACEP *Fellow of the American College of Emergency Physicians*.

facet (fäs'ĕt) [Fr. *facette*, small face] A small, smooth area on a bone or other hard surface.

wear f. A line or plane worn on a tooth surface by attrition.

facetectomy (fäs'ĕ-tĕk'tō-mĕ) [' + Gr. *ektome*, excision] Surgical removal of the articular facet of a vertebra.

facial [L. *facialis*] Pert. to the face.

facial bones Any of the 14 cranial bones that make up the face: maxillae (2); nasal (2); palatine (2); inferior nasal conchae (2); mandible (1); zygoma (2); lacrimal (2); vomer (1).

facial reflex In coma, contraction of facial muscles following pressure on the eyeball. SYN: *bulbomimic reflex*; *Mondonesi's reflex*.

facial spasm An involuntary contraction of muscles supplied by the facial nerve, involving one side of the face or the region around the eye. SEE: *cranial nerve; tic*.

-facient Suffix meaning to *make happen; to cause*.

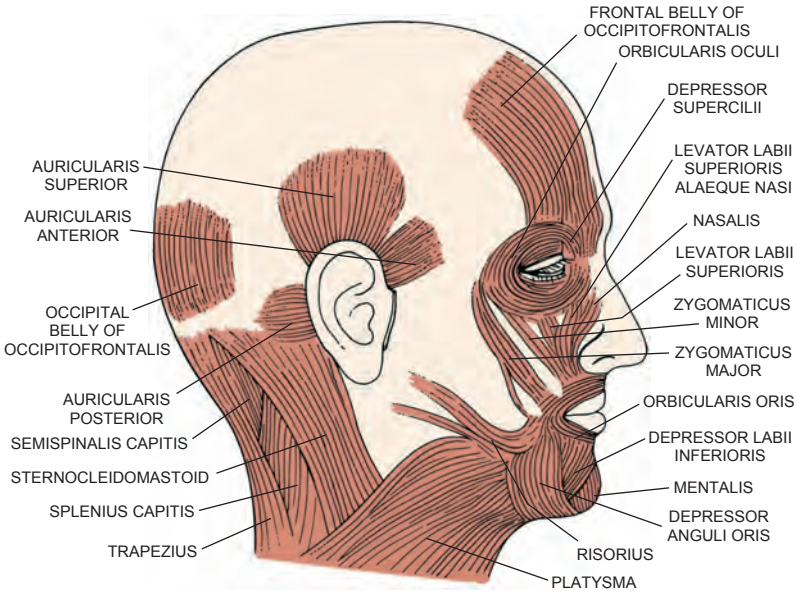
facies (fă'shĕ-ĕz) *pl. facies* [L] 1. The face or the surface of any structure. 2. The expression or appearance of the face.

adenoid f. A dull, lethargic appearance with open mouth, which may be due to hypertrophy of adenoids or to chronic mouth breathing.

f. hippocratica The facial appearance classically described in those dying from long-continued illness or from cholera. The cheeks and temples are hollow, the eyes sunken, the complexion leaden, and the lips relaxed.

f. leontina The lion-like facial appearance seen in certain forms of leprosy.

masklike f. An expressionless face with little or no animation, seen in parkinsonism.



MUSCLES OF FACE AND SCALP

myopathic f. The facies due to muscular relaxation. The lids drop and the lips protrude.

parkinsonian f. A masklike facies with infrequent eye blinking and decreased facial expressiveness.

facilitation (fă-sîl'î-tă-shûn) [L. *facilis*, easy] **1.** The hastening of an action or process; esp., addition of the energy of a nerve impulse to that of other impulses activated at the same time. **2.** In neuromuscular rehabilitation, a generic term referring to various techniques that elicit muscular contraction through reflex activation.

autogenic f. The process of inhibiting the muscle that generated a stimulus while providing an excitatory impulse to the antagonist muscle.

proprioceptive neuromuscular f. ABBR: PNF. An approach to therapeutic exercise directed at relaxing muscles, increasing joint range of motion, and regaining function by using spiral-diagonal patterns of movement. The principles and techniques were created and refined in the 1940s by Dr. Herman Kabat and two physical therapists, Maggie Knott and Dorothy Voss. PNF uses a developmental sequence of mobility, stability, controlled mobility, and skill; it emphasizes precision in patient position, manual contacts, verbal cueing, and timing.

facility, long-term care An institution such as a nursing home that is capable of providing continuous care for older or chronically ill persons.

facings [L. *facies*, face] A veneer of restorative material used on a tooth or on a prosthesis to simulate a natural tooth.

facio-auriculo vertebral syndrome Hemifacial microsomia.

faciobrachial (fă'shē-ō-bră'kē-äl) [F + Gr. *brachion*, arm] Pert. to the face and arm, esp. to juvenile muscular dystrophy.

faciocervical (fă'shē-ō-sēr'vî-käl) [F + *cervix*, neck] Pert. to the face and neck, esp. to progressive dystrophy of facial muscles.

faciolingual (fă'shē-ō-lîn'gwäl) [F + *lingua*, tongue] Pert. to the face and tongue, esp. to paralysis of these.

facioplasty (fă'shē-ō-pläs'tē) [F + Gr. *plassein*, to form] Plastic surgery of the face.

facioscapulothoracic (fă'shē-ō-skăp'ü-lō-hü'mēr-äl) [F + *scapula*, shoulder blade, + *humerus*, shoulder] Pert. to the face, scapula, and upper arm.

FACOG *Fellow of the American College of Obstetricians and Gynecologists.*

FACP *Fellow of the American College of Physicians.*

FACR *Fellow of the American College of Rheumatology.*

FACS *Fellow of the American College of Surgeons.*

FACSM *Fellow of the American College of Sports Medicine.*

factitious (făk-tîsh'üs) [L. *facticius*, made by art] Produced artificially; not natural.

factitious disorder A disorder that is not real, genuine, or natural. The symp-

toms, physical and psychological, are produced by the individual and are under voluntary control. These symptoms and the behavior are used to pursue a goal (i.e., to assume the role of patient and to stay in a hospital). This is attained by various means, such as taking anticoagulants or other drugs when they are not needed, or feigning pain with nausea and vomiting, dizziness, fainting, fever of unknown origin, or other illnesses. Psychological symptoms may include feigned memory loss, hallucinations, and uncooperativeness. Affected patients have a severe personality disturbance. SEE: *malingering*; *Munchausen syndrome*.

factor [L., maker] **1.** A contributing cause in any action. **2.** In genetics, a gene. **3.** An essential chemical such as a vitamin or immunoglobulin.

antihemophilic f. ABBR: AHF. Blood coagulation factor VIII. SYN: *antihemophilic globulin*. SEE: *coagulation factor*.

autocrine f. A growth factor produced by the cell that stimulates the same cell to grow.

autocrine motility f. A chemical released by cancer cells that induces motility, enabling the cells to metastasize.

B cell growth f. Interleukin-4.

B cell stimulatory f. II Interleukin-6.

Bucky f. SEE: *Bucky factor*.

Castle's intrinsic f. Intrinsic factor.

coagulation f. One of the various factors involved in blood clotting. The generally accepted terms for the factors and their Roman numeral designations are as follows:

Factor I, fibrinogen; *Factor II*, prothrombin; *Factor III*, tissue; *Factor IV*, calcium ions; *Factor V*, proaccelerin (an unstable protein substance also called labile factor); *Factor VII*, proconvertin; *Factor VIII*, antihemophilic factor; *Factor IX*, Christmas factor (also called plasma thromboplastin component [PTC]); *Factor X*, Stuart factor; *Factor XI*, plasma thromboplastin antecedent (PTA); *Factor XII*, Hageman factor; *Factor XIII*, fibrin-stabilizing factor (FSF); prekallikrein; and HMWK, also called *Fitzgerald*, *Falujenc*, or *Williams factor*, or *contact activation cofactor*. Factor VI, once called accelerin, is no longer used.

correction f. A number by which a measured value is multiplied, to correct for systematic measurement error.

corticotropin-releasing f. Corticotropin-releasing hormone.

edema f. An enzyme made by *Bacillus anthracis* (the bacterium that causes anthrax). It causes the cellular and tissue swelling characteristic of anthrax infection.

eosinophil chemotactic f. A mediator released when mast cells are in-

jured. This is in response to inflammation.

eosinophil colony-stimulating f. Interleukin-5.

eosinophil differentiation f. Interleukin-5.

heparin-binding epidermal growth f. ABBR: HB-EGF. A cytokine, classed as a monokine, that is involved in immune and inflammatory responses. It is produced by macrophages and stimulates production of smooth muscle cells and fibroblasts.

hepatocyte growth f. ABBR: HGF. A cytokine, classed as a monokine, that is involved in immune and inflammatory responses. It is formed from platelets, fibroblasts, macrophages, endothelial cells, and smooth muscle cells. It stimulates growth of hepatocytes and increases migration and motility of various epithelial and endothelial cells.

hepatocyte stimulatory f. Interleukin-6.

intrinsic f. A glycoprotein secreted by the parietal cells of the gastric mucosa. It is necessary for the absorption of ingested vitamin B₁₂. The absence of this factor leads to vitamin B₁₂ deficiency and pernicious anemia. SYN: *Castle's intrinsic factor*.

lethal f. 1. A gene or an abnormality in genetic composition that causes death of a zygote or of an individual before the reproductive age. **2.** A protein made by *Bacillus anthracis* (the germ that causes anthrax). It splits signal transduction proteins within infected cells, resulting in cellular dysfunction and death.

leukemia inhibitory f. ABBR: LIF. A cytokine that regulates the growth and differentiation of many cells throughout the body, including endothelial cells, fat cells, embryonic stem cells, germ cells, osteoblasts, and peripheral nerve cells.

leukocyte inhibitory f. Leukocyte migration inhibition factor.

leukocyte migration inhibition f. ABBR: LMIF. A lymphokine that inhibits movement of neutrophils. SYN: *leukocyte inhibitory factor*.

lymphocyte mitogenic f. ABBR: LMF. A lymphokine that stimulates production of lymphocytes and other lymphokines.

magnification f. ABBR: MF. Image size divided by object size; a quantitative expression of the degree of enlargement of an image. In radiography, it is the ratio of the source-to-image-receptor distance to the source-to-object distance.

mast cell growth f. Interleukin-3.

mast cell growth f. II Interleukin-4.

maturation-promoting f. ABBR: MPF. A complex cellular protein that stimulates cell division in eukaryotic cells. Part of MPF is the protein cyclin,

which accumulates during interphase and triggers mitosis or meiosis.

milk f. A substance present in certain strains of mammary cancer-prone mice that is transferred to offspring through milk from the mammary glands. It can induce the development of mammary cancer in suckling mice exposed to the factor.

M-phase promoting f. Maturation-promoting factor.

multi-colony stimulating f. Interleukin-3.

natural killer cell stimulating f. Interleukin-12.

neutrophil chemotactic f. A lymphokine that attracts neutrophils, but not other white blood cells, and causes proteolytic damage in sepsis and trauma.

plasmacytoma simulating f. Interleukin-11.

platelet-derived growth f. ABBR: PDGF. A polypeptide that stimulates collagen synthesis, smooth muscle formation, tissue repair, and the proliferation of fibroblasts and microglia.

platelet-activating f. ABBR: PAF. A phospholipid that affects the signaling between cells in important body processes such as inflammation, sepsis, and thrombosis. It is released by mast cells, basophils, and activated eosinophils.

pre-B cell growth f. Interleukin-7.

quality f. ABBR: QF. In radiology, a scale used to account for the biological effects of different radiations. Factors include beta, electron, and gamma x-radiation ($Q = 1$), thermal neutrons ($Q = 5$), and alpha neutrons and protons ($Q = 20$).

Rh f. An antigen found on the membranes of the red blood cells. It was discovered in 1940 by Landsteiner and Wiener, who prepared anti-Rh serum by injecting red cells from Rhesus monkeys into rabbits or other animals. They found that the red cells of 85% of Caucasians will be agglutinated when in contact with anti-Rh serum. These people are called Rh-positive. The remaining 15%, whose red cells are not agglutinated by anti-Rh serum, are called Rh-negative. More than 25 blood factors are known to belong to the Rh system. Rh incompatibility between mother and fetus is the cause of hemolytic disease of the newborn. SYN: *Rh agglutininogen*. SEE: *blood group*; *Rh blood group*.

spreading f. The hyaluronidase made by *Bacillus anthracis*, the bacteria that causes anthrax. SEE: *hyaluronidase*.

T-cell growth f. II Interleukin-4.

transforming growth f. ABBR: TGF. Polypeptide growth factor that competitively binds to epidermal growth factor (EGF) receptors. This molecule can promote growth of fibroblasts in cell cul-

tures, thus "transforming" normal cells into those with the abnormal properties of malignant cells. SEE: *cytokine*.

vascular endothelial growth f. ABBR: VEGF. A growth factor produced by endothelial cells that promotes angiogenesis and increases microvascular permeability.

facultative (fak'ül-tä'tiv) [L. *facultas*, capability] **1.** Having the ability to do something that is not compulsory. **2.** In biology and particularly bacteriology, having the ability to live under certain conditions. Thus a microorganism may be facultative with respect to oxygen and be able to live with or without oxygen.

faculty 1. A normal mental attribute or sense; ability to function. **2.** Persons employed as teachers at a college or university.

FAD *flavin adenine dinucleotide*.

Fagales (fög-ä'lēs) [L. *fagus*, beech] The order of trees and shrubs that includes alder, birch, and hazel. The pollen from such trees causes hay fever, principally in the early spring.

Faget's sign (fäj'ëts, fah-zhāz') [Jean C. Faget, Fr. physician, 1818-1884] In a patient with a fever, a pulse slower than would be expected. It may be seen in some viral infections.

Fahrenheit scale (fär'ën-hit') [Daniel Gabriel Fahrenheit, Ger.-Dutch physicist, 1686-1736] A temperature scale with the freezing point of water at 32° and the boiling point at 212°, indicated by F. SEE: *table*; *Celsius scale*; *Kelvin scale*; *thermometer*.

Fahr's syndrome (färz) [K. T. Fahr, Ger. pathologist, 1877-1945] A rare movement disorder caused by the abnormal accumulation of calcium in the basal ganglia and the cerebral cortex. The disease is dominantly inherited.

failed back surgery syndrome Persistent or recurring low back pain (with or without sciatic symptoms) in patients who have undergone one or more surgeries on a lumbar disk.

fail safe Problem-free or infallible, said of a device, system, or program manufactured or conceived not to malfunction.

failure (fäl'yër) Inability to function, esp. loss of what was once present, as in failing eyesight or hearing.

acute kidney f. Renal failure, acute.

acute liver f. The development of severe liver damage with encephalopathy and jaundice within eight weeks of the onset of liver disease. Coagulopathy, electrolyte imbalance, and cerebral edema are common. Death is likely without liver transplantation. SYN: *fulminant hepatic failure*; *fulminant hepatitis*.

ETIOLOGY: The most common causes of acute liver failure are viral hepatitis, acetaminophen overdose (and other

Fahrenheit and Celsius Scales*

F	C	F	C	F	C
500°	260°	203°	95°	98°	36.67°
401	205	194	90	97	36.11
392	200	176	80	96	35.56
383	195	167	75	95	35
374	190	140	60	86	30
356	180	122	50	77	25
347	175	113	45	68	20
338	170	110	43.3	50	10
329	165	109	42.8	41	5
320	160	108	42.2	32	0
311	155	107	41.7	23	-5
302	150	106	41.1	14	-10
284	140	105	40.6	5	-15
275	135	104	40.0	-4	-20
266	130	103	39.4	-13	-25
248	120	102	38.9	-22	-30
239	115	101	38.3	-40	-40
230	110	100	37.8	-76	-60
212	100	99	37.2		

* To convert a Fahrenheit temperature to degrees Celsius, subtract 32 and multiply by 5/9. To convert a Celsius temperature to degrees Fahrenheit, multiply by 9/5 and add 32.

drug reactions), trauma, ischemia, acute fatty liver of pregnancy, and autoimmune disorders.

SYMPTOMS: Early symptoms are often nonspecific and may include nausea, vomiting, dizziness, lightheadedness, or drowsiness. As liver injury becomes more obvious, bile permeates the skin, producing jaundice. Alterations in mental status (lethargy or coma) and bleeding caused by coagulopathy may develop.

DIAGNOSIS: The diagnosis is suggested by jaundice and altered mental status in addition to elevations in liver function tests and prolongation of the protime and International normalized ratio (INR).

PATIENT CARE: Affected patients should be hospitalized, usually in intensive care under very close monitoring. General patient care concerns apply. Airway support and mechanical ventilation are often needed. Fluids and/or pressors, such as dopamine, may be needed to maintain blood pressure and cardiac output. Nutritional support with a low salt, protein-restricted diet, and most calories supplied by carbohydrates, blood product infusions (fresh frozen plasma and platelets), and lactulose (to reduce blood ammonia levels and treat hepatic encephalopathy) are usually administered. Potassium supplements help to reverse the effects of high aldosterone levels, and potassium-sparing diuretics increase urine volume. Ascitic fluid is removed by paracentesis or shunt placement to relieve abdominal discomfort and aid respiratory effort. Portal hypertension requires shunt placement to divert blood flow,

and variceal bleeding is treated with vasoconstrictor drugs, balloon tamponade, vitamin K administration, and perhaps surgery (to ligate bleeding portal vein collateral vessels).

Medications that are normally metabolized by the liver and medications that may injure the liver further should be avoided. Patients who have overdosed on acetaminophen may benefit from the administration of acetylcysteine if it can be administered within 12 hr of a single ingestion.

Liver transplantation is the definitive treatment for acute liver failure. Early transplant evaluation should be carried out for every patient for whom there is a donated organ available. Without transplantation, the mortality from acute liver injury may reach 80%.

The patient's level of consciousness should be assessed frequently, with ongoing orientation to time and place. Girth should be measured daily. Signs of anemia, infection, alkalosis, and GI bleeding should be documented and reported immediately. A quiet atmosphere is provided. Physical restraints are applied as minimally as possible, with chemical restraint prohibited. If the patient is comatose, the eyes are protected from corneal injury using artificial tears and/or eye patches.

The prognosis for the illness should be discussed in a sensitive but forthright fashion and emotional support provided to family members. Agency social workers, the hospital chaplain, and other support personnel should be involved in the patient's care as appropriate to individual needs.

adult f. to thrive A progressive func-

tional deterioration of a physical and cognitive nature; the individual's ability to live with multisystem diseases, cope with ensuing problems, and manage his or her care are remarkably diminished. SEE: *Nursing Diagnoses Appendix*.

cardiac f. A condition resulting from the heart's inability to pump sufficient blood to meet the body's needs. SYN: *heart failure*.

fulminant hepatic f. Acute liver failure.

heart f. Cardiac f.

kidney f. Renal f.

liver f. The inability of the liver to function because of a disease process within the liver or because of demands beyond its capability. SEE: *acute liver f.*

metabolic f. Rapid failure of physical and mental functions ending in death.

multisystem organ f. SEE: *multiple systems organ failure*.

renal f. Inability of the kidneys to function adequately. It may be partial, temporary, chronic, acute, or complete. SYN: *kidney failure*. SEE: *end-stage renal disease*.

respiratory f. SEE: *respiratory failure, acute; respiratory failure, chronic*.

f. to thrive ABBR: FTT. A condition in which infants and children not only fail to gain weight but also may lose it, or in which older persons lose the physiological or psychosocial reserves needed to care for themselves. The causes include almost any chronic and debilitating condition.

failure-to-rescue (fāl'yēr-too-rēs'kū) ABBR: FTR. Loss of life among hospitalized patients resulting from inadequate recognition and treatment of life-threatening complications. FTR is correlated with high ratios of patients to nurses and with psychological variables (e.g., burnout). It has been used, along with complication rates of surgery and other criteria, as an indicator of the quality of hospital care.

faint [O. Fr. *faindre*, to feign] **1.** To feel weak as though about to lose consciousness. **2.** Weak. **3.** Loss of consciousness resulting from vasovagal or vasodepressor mechanisms. SEE: *syncope*.

faintness **1.** A sensation of impending loss of consciousness. SYN: *presyncope*. **2.** A sensation of weakness due to lack of food.

faith healing Recovery from illness attributed to the agency of a divine being or power, usually through a variety of spiritual practices such as prayer, laying on of hands, anointing with oil, or other rituals.

falces (fāl'sez) [L.] Plural of falx.

falcial (fāl'shāl) Pert. to a falx.

falciform (fāl'si-form) [L. *falx*, sickle, + *forma*, form] Sickle-shaped.

falciform ligament of the liver A wide,

sickle-shaped reflection of the peritoneum that serves as a principal attachment of the liver to the diaphragm and separates the right and left lobes of the liver. Its broad attachment extends from the posterior superior portion of the liver to the anterior convex portion connected to the internal surface of the right rectus abdominis muscle. SYN: *falx ligamentosa*.

fall **1.** To drop accidentally to the floor, ground, or lower level (e.g., into a chair). **2.** Any unexplained event that results in the patient's inadvertently coming to rest on the floor, ground, or lower level (e.g., into a chair). In older adults, falls are a leading cause of non-fatal injuries, and injuries sustained during falls are a leading cause of death. Lacerations, head injuries, and fractures of the arm, wrist, hip, ribs, and spine are caused by falls. Falls also may have long-term psychological sequelae (e.g., loss of independence, social isolation, anxiety, and depression). About 35%–40% of people 65 years of age or older fall each year; by age 80 that figure increases to 50%. Women are somewhat more likely to fall than men and also are more likely to sustain significant injuries. It is important for health care providers to search for the cause or causes of the fall. The single biggest predictor of a fall is a history of falls. Other proven risk factors for falls include reduced visual acuity and hearing, vestibular dysfunction, peripheral neuropathy, and musculoskeletal disorders (e.g., physical weakness, inability to get up from a chair without using one's arms, Parkinson's disease, a history of stroke, postural hypotension, increased body sway when standing, inability to perform a tandem walk, the use of medicines [e.g., antihypertensives, antidepressants, sedatives, or benzodiazepines], daily use of four or more prescription drugs, inability to transfer from bed or chair to bathtub or toilet, and environmental hazards). With careful clinical investigation the cause of falls can sometimes be determined and appropriate steps taken to prevent them.

PATIENT CARE: Hazards in the home that increase the chances of falling are improper footwear, scatter rugs that are not secure or slip resistant, uneven flooring, out-of-the-way light switches or electrical outlets, cluttered access to paths through a room or entrance, poorly lighted steps and stairways, lack of handrails along the entire length of a stairway, and tubs and showers that are not fitted with sturdy grab bars and have slippery floors.

The Joint Commission on the Accreditation of Hospital Organizations (JCAHO) mandates that hospitalized and nursing-home patients be assessed

for fall risk, with periodic reevaluation, according to a standard assessment tool (e.g., the Morse Fall Scale, Tinetti Balance & Gait Evaluation or St. Thomas's Risk Assessment Tool in Falling Elderly Inpatients [STRATIFY]). A complete health history should be obtained and lab test results evaluated for changes that could lead to falls. Vital signs should also be monitored, with attention paid to orthostatic hypotension. During hospitalizations, care providers need to be observant to detect motor, sensory, or cognitive deficits that could lead to falls; to respond promptly to the patient's call lights; to make sure the patient is kept oriented; to avoid the use of side rails (which may provoke injuries); to use low bed positions and bed alarms as necessary; and to provide time for procedures, moves, etc. Balanced food and fluid intake and the correction of fluid, electrolyte, or nutritional imbalances may decrease fall risk, as may careful, systematic reviews of patient medication usage.

After hospital discharge, a home visit should be made to assess the environment for safety hazards, and patient and family assisted in revising any hazards. The patient should be encouraged to remain mobile, to wear walking shoes rather than slippers, to wear glasses, and to use assistive devices (canes, walkers) to help gait and balance. Physical therapy and occupational therapy consultations help the patient with muscle strengthening and balance training (e.g., with exercise regimens such as tai chi').

fallen bladder A colloquial term for a cystocele.

fallen lung sign The radiological appearance of traumatic transection or rupture of the trachea or a main stem bronchus, consisting of a collapsed lung that seems to dangle from the hilum by nothing more than its vascular attachments. Pneumothorax, pneumomediastinum, and subcutaneous emphysema are sometimes also seen with tracheobronchial tears.

falling drop 1. In physical diagnosis, a metallic tinkle heard over the normal stomach and bowel when they are inflated. 2. A metallic tinkle heard over large cavities containing fluid and air, as in hydropneumothorax.

fallophobia (fāl'ō-fō'bē-ā) A colloquial term for the fear of falling and of what it may mean for one's future health and prospects for independent living.

fallopian tube The hollow, cylindrical structure that extends laterally from the lateral angle of the fundal end of the uterus and terminates near the ovary. It conveys the ovum from the ovary to the uterus and spermatozoa from the uterus toward the ovary. Each lies in

the superior border of the broad ligament of the uterus. SYN: *oviduct*; *uterine tube*. SEE: *female genitalia* for *illius*; *uterus*.

ANATOMY: The narrow region near the uterus, the isthmus, continues laterally as a wider ampulla. The latter expands to form the terminal funnel-shaped infundibulum, at the bottom of which lies a small opening, the ostium, through which the ovum enters the tube. Surrounding each ostium are several finger-like processes called fimbriae extending toward the ovary. Each tube averages about $4\frac{1}{2}$ in (11.4 cm) in length and $\frac{1}{4}$ in (6 mm) in diameter. Its wall consists of three layers: mucosa, muscular layer, and serosa. The epithelium of the mucosa consists of ciliated and nonciliated cells. The muscular layer has an inner circular and an outer longitudinal layer of smooth muscle. Ciliary action and peristalsis move the ovum or zygote toward the uterus. The serosa is connective tissue underlying the peritoneum.

falloscopy (fāl-lōp'ō-skō-pē) Imaging the interior of the fallopian tube (the endosalpinx) with a flexible fiberoptic endoscope. The procedure is used in the diagnosis and treatment of tubal infertility.

fallotomy (fāl-ōt'ō-mē) Salpingotomy.

fallout Settling of radioactive molecules from the atmosphere after their release into the air following an explosion or radiation accident.

falls, risk for Increased susceptibility to falling that may cause physical harm. SEE: *Nursing Diagnoses Appendix*.

Falls Efficacy Scale ABBR: FES. An instrument used to identify the fear of falling in the elderly as a factor in their decreased function and independence. Subjects state their fear of falling increases when they are unable to perform ten common activities of daily living.

false imprisonment An intentional tort; unlawful intentional confinement of another within fixed boundaries so that the confined person is conscious of the confinement or harmed by it.

false-negative (fāwls'nēg'ā-tīv) A test result that falsely indicates that a condition is not present when in fact it is. SEE: *Bayes' theorem*; *false-positive*.

false-negative ratio ABBR: FNR. The ratio of subjects affected by an illness whose test results wrongly suggest they are disease-free to all those subjects who have the disease. The false-negative ratio of a test is useful in determining the test's reliability (i.e., the higher the ratio, the less reliable the test).

A high FNR may be biological or analytical in origin. Biological false-negative test results may occur when a test is performed at the wrong stage of an illness (e.g., before an antibody or anti-

gen is found in the blood). Analytical false negatives may result when a test lacks adequate sensitivity or specificity to detect an agent that is already present.

false-negative reaction SEE: *false-negative*.

false-positive (fawls'pös'ī-tiv) A result in a test or procedure that falsely indicates that a condition is present when in fact it is not. It may result from faulty laboratory technique or from the presence of another disease or condition that mimics the one sought. SEE: *Bayes' theorem*; *false-negative*.

false-positive ratio ABBR: FPR. The ratio of patients who are disease-free but test positive for an illness, as a result of error, to all patients who do not have the disease.

false-positive reaction SEE: *false-positive*.

falsification (faw'l'sī-fi-kā'shūn) The act of writing or stating what is not true.

retrospective f. Deliberate or unconscious alteration of memory for past events or situations, a mental mechanism for ego preservation.

falx (fäls, fäl'sēz) *pl.* **falces** [L.] Any sickle-shaped structure.

f. cerebelli A fold of the dura mater that forms a vertical partition between the hemispheres of the cerebellum.

f. cerebri A fold of the dura mater that lies in the longitudinal fissure and separates the two cerebral hemispheres.

famciclovir (fäm-sī'klō-vēr) An antiviral drug used to treat herpes simplex and herpes zoster.

familial [L. *familia*, family] Pert. to or common to the same family (e.g., a disease occurring more frequently in a family than would be expected by chance).

familial adenomatous polyposis ABBR: FAP. A rare autosomal dominant syndrome that predisposes patients to colorectal cancers. FAP is characterized by the growth of hundreds of polyps in the colonic mucosa. Polyps may also proliferate in the stomach and small bowel, and patients may have congenital hypertrophy of the retinal pigment epithelium; desmoid tumors; osteomas; and facial or dental anomalies. Prophylactic colectomy protects affected persons from developing colon cancer. Because of the dominant inheritance of the disease, screening of family members with endoscopy or virtual colonoscopy is strongly recommended. FAP is found in about 0.12% of the population. SYN: *Gardner's syndrome*; *multiple intestinal polyposis*. SEE: *Turcot syndrome*.

familial cancer syndrome Any genetic predisposition to cancer that is found in several generations of a kindred. Some recognized cancer syndromes that recur in families include the multiple endo-

crine neoplasias, retinoblastoma, familial polyposis of the colon, and Fanconi's anemia, among others.

familial disease A disease that occurs in several members of the same family.

familial Hibernian fever A rare, autosomal dominantly inherited syndrome characterized by intermittent elevations of body temperature, muscle pains, abdominal pain, inguinal hernias, and rash. The disease is also known as tumor necrosis factor receptor periodic syndrome or TRAPS.

familial Mediterranean fever An autosomal recessive disorder in which patients suffer repeated febrile illnesses without evidence of infection. It occurs most often in people of Middle Eastern or Italian descent. Symptomatic attacks typically begin at around ages 5 to 15, often consisting of fever, joint pains, abdominal pain resembling peritonitis, pleurisy or pericarditis, and rashes (although individual symptoms may vary). Duration and frequency of the attacks can be unpredictable. About 40% of patients ultimately develop amyloidosis. SYN: *recurrent polyserositis*.

familial periodic paralysis A rare familial disease marked by attacks of flaccid paralysis, often at awakening. This condition is usually associated with hypokalemia but is sometimes present when the blood potassium level is normal or elevated. In affected individuals the condition may be precipitated by administration of glucose in patients with hypokalemia, and by administration of potassium chloride in those with hyperkalemia.

TREATMENT: Acetazolamide is used to prevent either hypokalemia or hyperkalemia. Oral potassium chloride is given in attacks accompanied by hypokalemia.

family **1.** A group of individuals who have descended from a common ancestor. **2.** In biological classification, the division between an order and a genus. **3.** A group of people living in a household who share common attachments, such as mutual caring, emotional bonds, regular interactions, and common goals, which include the health of the individuals in the family.

blended f. A common contemporary family group including children from previous and current relationships.

extended f. The basic or nuclear family plus close relatives.

single-parent f. A family in which only one of the parents is living with the child or children.

Family and Medical Leave Act ABBR: FMLA. A federal law, enacted in 1993, that requires large employers to grant up to 12 weeks of unpaid leave during any 12-month period to long-standing employees for compelling medical or

family reasons. Reasons include care of spouse, child, or parent of employee who has a serious health problem; birth of child of employee and care of the child; adoption or foster care-placement of a child with employee; and serious employee health problems that do not allow person to perform essential functions of job position.

family care leave Permission to be absent from work to care for a family member who is pregnant, ill, disabled, or incapacitated.

family planning The spacing of conception of children according to the wishes of the parents rather than to chance. It is accomplished by practicing some form of birth control.

symptothermal f.p. A fertility awareness method by which a woman plots her daily basal body temperature, cervical mucus characteristics, and common subjective complaints associated with ovulation (e.g., mittelschmerz) on a graph to identify the days of the menstrual cycle during which there is the highest potential for conception. The validity of this method is controversial.

family practice Comprehensive medical care with particular emphasis on the family unit, in which the physician's continuing responsibility for health care is not limited by the patient's age or sex or by a particular organ system or disease entity.

Family practice is the specialty that builds on a core of knowledge derived from other disciplines, drawing most heavily on Internal Medicine, Pediatrics, Obstetrics and Gynecology, Surgery, and Psychiatry, and establishes a cohesive unit, combining the behavioral sciences with the traditional biological and clinical sciences. The core of knowledge encompassed by the discipline of family practice prepares the family physician for a unique role in patient management, problem solving, counseling, and as a personal physician who coordinates total health care delivery. (Definition supplied by The American Academy of Family Physicians.)

family processes, dysfunctional: alcoholism The state in which the psychosocial, spiritual, and physiological functions of the family unit are chronically disorganized, leading to conflict, denial of problems, resistance to change, ineffective problem solving, and a series of self-perpetuating crises. SEE: *Nursing Diagnoses Appendix*.

family processes, interrupted A change in family relationships and/or functioning. SEE: *Nursing Diagnoses Appendix*.

family processes, readiness for enhanced A pattern of family functioning that is sufficient to support the well-being of family members and can be strength-

ened. SEE: *Nursing Diagnoses Appendix*.

family therapy Treatment of the members of a family together, rather than as individual patients. The family unit is viewed as a social system important to all of its members.

famine Pronounced scarcity of food in a broad geographical area, causing widespread starvation, disease, and/or death in a population.

Fanconi's syndrome (fān-kō'nēz) [Guido Fanconi, Swiss pediatrician, 1892–1979] **1.** Congenital hypoplastic anemia. **2.** One of several diseases marked by aminoaciduria associated with failure of the proximal renal tubules. Polyuria, osteomalacia, and growth failure are common findings.

fang [AS., to plunder] A sharp hollow tooth through which some animals inject toxins into their prey.

fango (fān'gō) [Italian, mud] Mud obtained from thermal springs in Battaglia, Italy, used to treat rheumatism and gout.

Fannia (fān'ē-ā) A genus of small houseflies.

fantasy (fān'tā-sē) [Gr. *phantasia*, imagination] An imaginary (mental) image; a daydream.

FAOTA *Fellow of the American Occupational Therapy Association.*

FAP familial adenomatous polyposis.

FAPTA *Fellow of the American Physical Therapy Association.*

farad (fār'ād) [Michael Faraday, Brit. physicist, 1791–1867] A unit of electrical capacity. The capacity of a condenser that, charged with 1 coulomb, gives a difference of potential of 1 V. This unit is so large that 1 millionth of it has been adopted as a practical unit called a microfarad.

faraday (fār'ā-dā) The amount of electric charge associated with 1 g equivalent of an electrochemical reaction. It is equal to approx. 96,000 coulombs. SEE: *coulomb*; *farad*.

faradic (fā-rād'ik) Pert. to induced electricity.

faradism (fār'ā-dīzm) Therapeutic use of an interrupted current to stimulate muscles and nerves. Such a current is derived from the secondary, or induction, coil.

faradization (fār'ā-dī-zā'shūn) **1.** The treatment of nerves or muscles with faradic current. **2.** The condition of nerves or muscles so treated.

Farber's disease (fahr'bēr) [S. Farber, U.S. pathologist, 1903–1973] A rare autosomal recessive lysosomal storage disease in which abnormal by-products of lipid metabolism accumulate in the brain. It is one of the lipid storage diseases, which include Gaucher's disease and Niemann-Pick disease.

farcy (fär'sē) [L. *farcire*, to stuff] A chronic form of glanders.

button f. Farcy marked by dermal tubercular nodules.

farina (fä-rē'nä) [L.] Finely ground meal commonly made from wheat or other grain, used as cereal and flour.

farinaceous (fär'i-nä'shüs) 1. Starchy. 2. Pert. to flour.

farmer's lung A form of hypersensitivity alveolitis caused by exposure to moldy hay that has fermented. *Actinomyces micropolyspora faeni* and *Thermoactinomyces vulgaris* are the causative microorganisms. SEE: *alveolitis*; *bagassosis*; *hypersensitivity*.

farpoint (fär'poynt) The greatest distance at which objects can be seen distinctly with the eyes in complete relaxation.

farsightedness (fär'sit'éd-nēs) An error of refraction in which, with accommodation completely relaxed, parallel rays come to a focus behind the retina. Affected individuals can see distant objects clearly, but cannot see near objects in proper focus. SYN: *hyperopia*. **farsighted, adj.**

fas (fäs) A receptor for tumor necrosis factor that induces apoptosis (cell death). SYN: *CD95*.

fasci-, fascio- Combining forms meaning *band* or *fascia* (*fibrous membrane*).

fascia (fäsh'ē-ä) *pl. fasciae* [L., a band] A fibrous membrane covering, supporting, and separating muscles (deep fascia); the subcutaneous tissue that connects the skin to the muscles (superficial fascia). **fascial** (fä'shē-äl), *adj.*

Abernathy's f. SEE: *Abernathy's fascia*.

anal f. A fascia of connective tissue covering the levator ani muscle from the perineal aspect.

aponeurotic f. A tendinous fascia that provides attachment for a muscle.

Buck's f. The fascial covering of the penis, derived from Colles' fascia.

Cloquet's f. Fascia surrounding the femoral ring.

Colles' f. SEE: under *Colles*, *Abraham*.

cremasteric f. The fascia covering the cremaster muscle of the spermatic cord.

cribriform f. The fascia of the thigh covering the saphenous opening.

crural f. The deep fascia of the leg.

deep f. Fascia that covers structures below the skin, which is lined by superficial fascia.

deep cervical f. The fascia of the neck covering the muscles, vessels, and nerves.

endothoracic f. The fascia that separates the pleura of the lung from the inside of the thoracic cavity and the diaphragm. SYN: *extrapleural fascia*.

extrapleural f. Endothoracic f.

f. lata femoris The wide fascia encasing the hips and the thigh muscles.

lumbodorsal f. Thoracolumbar f.

pectineal f. The pubic section of the fascia lata.

pelvic f. The fascia within the pelvic cavity. It is extremely important in maintaining normal strength in the pelvic floor. SEE: *diaphragm*, *pelvic*.

perineal f. Three layers of tissue between the muscles of the perineum comprising the urogenital diaphragm.

pharyngobasilar f. The fascia lying between the mucosal and muscular layers of the pharyngeal wall. SYN: *pharyngeal aponeurosis*.

plantar f. The fascia investing the muscles of the sole of the foot. SYN: *plantar aponeurosis*.

Scarpa's f. SEE: under *Scarpa*, *Antonio*.

subcutaneous f. Superficial f.

superficial f. The areolar connective tissue and adipose tissue below the dermis of the skin. SYN: *hypodermis*; *subcutaneous fascia*; *subcutaneous tissue*.

superficial cervical f. The fascia of the neck just inside the skin. It includes cutaneous blood vessels, nerves, lymphatics, lymph nodes, and some fat. In the front it also contains the platysmus muscle.

thoracolumbar f. The fascia and aponeuroses of the latissimus dorsi, serratus posterior inferior, internal oblique, and transverse abdominis muscles, which provide support and stability for the lumbar spine in postural and lifting activities. The fascia attaches medially to the spinous processes of the vertebral column and inferiorly to the iliac crest and sacrum. SYN: *lumbodorsal fascia*.

f. transversalis The fascia located between the perineum and the transversalis muscle. It lines the abdominal cavity.

fascial reflex (fäsh'ē-äl) Muscular contraction resulting from percussing facial fascia.

fasciaplasty (fäsh'ē-ä-pläs'tē) [f + Gr. *plassein*, to form] Plastic surgery of a fascia.

fascicle (fäs'y-kl) [L. *fasciculus*, little bundle] A fasciculus.

fascicular (fä-sik'ü-lär) 1. Arranged like a bundle of rods. 2. Pert. to a fasciculus.

fasciculation (fä-sik'ü-lä'shün) 1. Formation of fascicles. 2. Involuntary contraction or twitching of muscle fibers, visible under the skin. 3. Spontaneous contractions of muscle fibers that do not cause movement at a joint.

fasciculus (fä-sik'ü-lüs) *pl. fasciculi* A small bundle, esp. of nerve or muscle fibers; specifically, a division of a funiculus of the spinal cord comprising fibers

of one or more tracts. Sometimes the term is used as a synonym for *tract*. SYN: *fasciola*.

f. cuneatus A triangular bundle of nerve fibers lying in the dorsal funiculus of the spinal cord. Its fibers enter the cord through the dorsal roots of spinal nerves and terminate in the medulla.

dorsolateral f. SEE: *tract, dorsolateral*.

dorsal longitudinal f. A bundle of association fibers connecting the frontal lobe with the occipital and temporal lobes of the brain.

f. gracilis A bundle of nerve fibers, lying in the dorsal funiculus of the spinal cord medial to the fasciculus cuneatus, that conducts sensory impulses from the periphery to the medulla. SYN: *Goll's tract*.

inferior longitudinal f. A bundle of association fibers connecting the occipital and temporal lobes of the brain.

medial longitudinal f. ABBR: MLF. A long discrete brainstem and spinal cord axon tract running ventrally close to the midline. It carries a variety of axons coordinating body movements.

posterior longitudinal f. A nerve fiber bundle running between the corpora quadrigemina and the nuclei of the fourth and sixth spinal nerves.

fasciectomy (fāsh'ē-ēk'tō-mē) [L. *fascia*, band, + Gr. *ektome*, excision] Excision of strips of fascia.

fasciitis (fās'ē-ī'tis) Inflammation of any fascia.

eosinophilic f. Inflammation of muscle fascia, associated with eosinophilia, pain, and swelling.

necrotizing f. A severe bacterial infection that spreads rapidly through the body along superficial or deep fascial planes, resulting in necrosis of subcutaneous tissue and extensive undermining.

SYMPTOMS: The onset of illness is usually acute and progression is rapid. Initially there is severe pain (out of proportion to the injury), swelling at the injury site, fever, chills, and flulike symptoms or malaise. These symptoms worsen as the infection spreads. If extensive surgical débridement, drainage, and antibiotics are not instituted early, the patient may die.

ETIOLOGY: Bacteria most commonly responsible are invasive group A hemolytic streptococci, *Staphylococcus aureus*, *Clostridium perfringens*, oral flora (e.g., after a bite), enteric flora, coliforms, proteus, pseudomonas, klebsiella, and *Vibrio vulnificus* (esp. in alcoholics, diabetics, and the immunocompromised). The size of the wound that gives these bacteria access to the subcutaneous tissue is not related to the severity of infection. Predisposing factors include surgical or traumatic

wounds (including those with foreign bodies), drug injections (especially contaminated drugs of abuse), burns, frostbite, insect bites, and other skin lesions (open sores or varicella). Individuals with diabetes, cancer, alcoholism, obesity, or malnutrition are at increased risk.

TREATMENT: Emergency surgical débridement is required.

PATIENT CARE: Health care professionals should maintain contact and standard precautions, administer oxygen, establish an IV access (avoiding use of the infected extremity), obtain specimens for blood studies (CBC and differential, electrolytes, glucose, BUN, creatinine, and arterial blood gas specimens), urinalysis, and cultures (wound tissue specimens are collected during débridement). IV fluids and antibiotics and analgesics are administered as prescribed. Cardiac monitoring is initiated, and an indwelling urinary catheter inserted (unless the infection involved the perineal area). The patient also may require imaging studies (x-rays, CT, MRI) to assess for gas and necrosis in subcutaneous facial planes. Hyperbaric oxygen therapy, when combined with antibiotic and surgical débridement, helps to promote healing by encouraging growth of epithelial tissue and blood vessels.

Patient care also includes frequent assessment of the patient and lab values for indications of life-threatening complications (sepsis, gangrene, coagulation disorders, multiple organ dysfunction). The infection site should be monitored continually for changes such as edema, color changes, and increased or decreased pain (anesthesia). The patient's pain should be documented using a standard pain-rating scale. Opioids or opiates should be provided as indicated, particularly during painful dressing changes. Patient-controlled analgesia with added drugs for breakthrough pain may be appropriate. A nutritionist should ensure that the patient's caloric and nutrient intake is sufficient to support wound healing. Enteral feeding may be needed. Ongoing emotional support should be provided to the patient and family, as they confront the possibility of death, and the threat of amputation or disfigurement, knowing that further surgery and extensive skin grafting may be required in the future. The patient should be assessed for depression and anxiety, given information about rehabilitation, and encouraged to seek additional counseling to deal with role changes and body image issues. SEE: *Fournier's gangrene*.

plantar f. Painful inflammation of the heel and bottom surface of the foot caused by excessive stretching of the fi-

brous tissue (fascia) that attaches the heel to the forefoot. Can be caused or exacerbated by excessive physical activity, improper footwear, obesity, or pregnancy.

fasciodesis (fāsh"ē-ōd'ē-sīs) [f + Gr. *desis*, binding] Surgical attachment of a fascia to a tendon or another fascia.

Fasciola (fā-sī'ō-lā) [L. *fasciola*, a band] A genus of flukes belonging to the class Trematoda.

F. hepatica A species that infests the liver and bile ducts of cattle, sheep, and other herbivores; the common liver fluke. Infested aquatic plants are the source of human infection. **SEE: illus.**



FASCIOLA HEPATICA

(Orig. mag. ×2)

fasciolopsiasis (fās"ē-ō-lōp-sī'ā-sīs) Infection with *Fasciolopsis buski*. It is contracted by ingestion of plants grown in water infested by the intermediate host, snails.

SYMPTOMS: The symptoms are diarrhea, abdominal pain, anasarca, and eosinophilia.

TREATMENT: Praziquantel.

Fasciolopsis buski (fās"ē-ō-lōp'sīs) A trematode (fluke) that infests the intestinal tract of certain mammals including humans. Symptoms include vomiting, anorexia, and diarrhea alternating with constipation. The number of flukes present may be sufficient to cause intestinal obstruction. The disease occurs in Asia, including central and southern China. **SEE: illus.; fasciolopsiasis.**



FASCIOLOPSIS BUSKI

(Orig. mag. ×2)

fascioplasty (fāsh"ē-ō-plās'tē) [L. *fasciola*, a band, + Gr. *plassein*, to form] Plastic operation on a fascia.

fasciorrhaphy (fāsh-ē-or'ā-fē) [f + Gr. *rhaphe*, seam, ridge] Suturing of a fascia.

fasciotomy (fāsh-ē-ōt'ō-mē) [f + Gr. *tome*, incision] Surgical incision and division of a fascia.

FASRT *Fellow of the American Society of Radiologic Technologists.*

fast [AS. *faest*, fixed] Resistant to the effects or action of a chemical substance.

fast [AS. *faestan*, to hold fast] Abstinence from food, usually voluntary.

fastidious In microbiology, concerning an organism that has precise nutritional and environmental requirements for growth and survival.

fastigium (fās-tīj'ē-ūm) [L., ridge]

1. The highest point. **2.** The fullest point of development of acute, infectious diseases when the temperature reaches the maximum. **3.** The most posterior portion of the fourth ventricle, formed by the junction of the anterior and posterior medullary vela projecting into the medullary substance of the cerebellum of the brain.

fasting [AS. *faestan*, to hold fast] Going without food or other nutritional support. This forces the body to catabolize its own glycogen, fat, and protein reserves in order to produce glucose. The products of incomplete fat metabolism (fatty acids, diacetic acid and acetic acid) produce ketosis and mild acidosis. Since glycogen reserves are depleted quickly in children, fasting can be esp. hazardous to their health.



Unsupervised fasting to lose weight can cause severe health hazards, including cholecystitis, electrolyte disturbances, cardiac dysrhythmias, and occasionally death.

fasting hypoglycemia A blood glucose level less than 50 mg/dl (3.3 mmol/L) that occurs before or between meals. Its most common cause in diabetic patients is an excessive dose of insulin or of another medication used to control high blood glucose. It may also be caused by some other medications, e.g., pentamidine or quinine, or by alcohol consumption, critical illnesses, prolonged exercise, or, rarely, insulin-secreting tumors.

fastness [AS. *faest*, fixed] The ability of cells to resist stains or destructive agents.

fast-track (fāst'trāk') A colloquial term for a clinic in which patients seeking care for nonacute conditions in the emergency department are triaged for medical or surgical attention; an urgent-care clinic affiliated with an emergency department.

PATIENT CARE: Fast-tracks are used by hospitals to limit overcrowding in emergency departments, reducing patient waiting times. Patients with upper respiratory illnesses and minor trauma are commonly referred to fast-tracks, permitting emergency depart-

ments to focus on the critically or acutely ill.

fat [AS. *faett*] **1.** Body tissue that serves as an energy reserve and as a source of inflammatory cytokines. Excessive amounts of fat in the body are found in obesity. SEE: *heart; obesity*. **fatty** (făt'ē), *adj.* **2.** In chemistry, triglyceride ester of fatty acids; one of a group of organic compounds closely associated in nature with the phosphatides, cerebrosides, and sterols. The term *lipid* is applied in general to a fat or fatlike substance. Fats are insoluble in water but soluble in ether, chloroform, benzene, and other fat solvents. During hydrolysis, fats break down into fatty acids and glycerol (an alcohol). Fats are hydrolyzed by the action of acids, alkalies, lipases (fat-splitting enzymes), and superheated steam.

CHEMICAL STRUCTURE: In the fat molecule, one molecule of glycerol is combined with three of fatty acids. Three fatty acids, oleic acid ($C_{18}H_{34}O_2$), stearic acid ($C_{18}H_{36}O_2$), and palmitic acid ($C_{16}H_{32}O_2$), constitute the bulk of fatty acids in neutral fats found in body tissues. According to the fatty acid with which the glycerol is combined, corresponding fats are triolein, tristearin, and tripalmitin. These three fats are the principal fats present in foods.

PHYSIOLOGY: The most important function of fats is as a form of stored or potential energy. In conjunction with carbohydrates, fats are protein spacers—dietary or body protein need not be used for energy production. Glycogen storage is sufficient to supply energy needs for about 12 hr, but in a 70-kg man of average build, 12 kg of stored fat (in the form of triglycerides) can supply energy needs for as long as 8 weeks. Subcutaneous fat provides a small amount of insulation against heat loss, and some organs such as the eyes and kidneys are cushioned by fat. The diglyceride phospholipids are part of all cell membranes. Dietary fat provides the essential fatty acids needed for normal growth.

Because certain fatty acids (linoleic, D-linolenic, and arachidonic) are necessary for formation of other products in the body and because the body does not synthesize them, they are classed as *essential fatty acids*. Linolenic acid can, however, be converted into other fatty acids including arachidonic acid. Arachidonic acid is of particular importance because it is essential to the formation of prostaglandins, thromboxanes, prostacyclins, and leukotrienes. These three essential fatty acids are obtainable in the diet from plant sources.

Animals fed a fat-free diet develop dermatitis and fail to grow; the liver be-

comes fatty, and there are neurological disturbances. These changes can be prevented or reversed by the addition of linoleic and linolenic acids to the diet. The human diet should consist of about 4% of the calories from linoleic and 1% from linolenic acids.

DIGESTION AND ABSORPTION: In the stomach, emulsified fats such as cream or egg yolk are acted on by gastric lipase; however, most fats undergo digestion in the intestine, where a pancreatic lipase hydrolyzes them to fatty acids and glycerol. The salts in bile are not enzymes; they emulsify fats and permit pancreatic lipase to digest them. Bile salts then make fatty acids soluble in water so that they may be readily absorbed. In the intestinal mucosa, fatty acids and glycerol combine to form neutral fats, then join to proteins to form chylomicrons, which enter the lacteals. In this form, they are carried in the lymph through the lymph vessels to the thoracic duct, which empties lymph into the blood.

METABOLISM: Absorbed fats are used in the following ways: oxidized to carbon dioxide and water to produce energy; stored in adipose tissue for energy production later; changed to phospholipids for cell membranes; converted to acetyl groups for the synthesis of cholesterol, from which other steroids are made; and used to make secretions such as sebum.

Intermediary metabolism: In the oxidation of fat to carbon dioxide and water, several intermediary substances (ketones) are formed. The principal ones are acetoacetic acid, beta-hydroxybutyric acid, and acetone. Excessive production of ketone bodies, which occurs when fats are incompletely oxidized, is called ketosis. This occurs esp. when there is an interference in carbohydrate metabolism, as in diabetes. Ketosis also occurs in starvation, certain fevers, pregnancy toxemias, and hyperthyroidism. Ketosis results in acidosis.

SOURCES: In addition to fat being absorbed from the intestine, body fat may arise from the conversion of carbohydrates (glucose) or excess amino acids into fat. Fatty acids cannot be converted directly to glucose, but they are split into two-carbon acetyl groups that enter the Krebs cycle and thereby have the same energy-producing function as carbohydrates.

NUTRITION: Fats have a high caloric value, yielding about 9 kcal per gram as compared with about 4 kcal per gram for carbohydrates and proteins. The average American diet of 3000 kcal may derive 40% of the caloric value from fats. Nutritionists and epidemiologists believe that decreasing dietary fat to 30% would decrease the risk of developing

Food Sources of Saturated and Trans Fats

Meat products	Visible fat and marbling in beef, pork, and lamb, esp. in prime-grade and ground meats, lard, suet, salt pork
Processed meats	Frankfurters, luncheon meats such as bologna, corned beef, liverwurst, pastrami, and salami
Poultry and fowl	Bacon and sausage Chicken and turkey (mostly beneath the skin), cornish hens, duck, and goose
Whole milk and whole-milk products	Cheeses made with whole milk or cream, condensed milk, ice cream, whole-milk yogurt, all creams (sour, half-and-half, whipped)
Plant products	Coconut oil, palm-kernel oil, cocoa butter
Miscellaneous	Fully hydrogenated shortening and margarine, many cakes, pies, cookies, and mixes

SOURCE: Lutz, CA and Przytulski, KR: Nutrition and Diet Therapy. FA Davis, Philadelphia, 2001.

cancer, esp. of the colon, breast, and prostate.

In addition to their nutritive values, fats improve the taste and odor of foods, provide a feeling of satiety, and because of their high caloric content are of special importance in high-calorie diets. Fat-free fat substitutes that have been termed "designer fats" have been investigated for several decades. Whether they will play a major role in providing foods with fewer calories from fat has not been determined. SEE: table.

CONTRAINDICATIONS: Fat intake should be reduced in certain diseases such as hepatitis and in low-calorie diets.

body f. The portion of the human body that consists of fat. This is estimated in several ways: by determining body density by underwater weighing (hydrodensitometry), by calculating the ratio of weight in kilograms to height in meters squared (Quetelet index), and more recently, by estimating bioelectrical impedance of the body. None of these methods provides a precise indicator of body composition; however, bioelectrical impedance is the simplest, least expensive, and most nearly accurate.

brown f. Adipose tissue occurring primarily in the full-term newborn. It is located near major vessels. The fat produces heat metabolically and is therefore an important factor in temperature regulation. As the infant matures, shivering is established as a means of controlling body temperature. The brown fat either involutes or becomes white fat. SEE: *tissue, brown adipose*.

neutral f. Compounds of the higher fatty acids (palmitic, stearic, and oleic) with glycerol. They are the common fats of animal and plant tissues.

trans f., trans-fat A fat derived from the partial hydrogenation of vegetable oils. Examples include vegetable shortening and margarine. Studies have associated trans-fat consumption with an

increased risk for coronary artery disease. SEE: *trans fatty acid*.

fatal (făt'1) [L. *fatalis*] **1.** Inevitable. **2.** Causing death.

fatality A death, esp. one caused by an accident, injury, occupational illness, or catastrophe.

fate map A diagram that demarcates the regions of embryonic cells that will develop into specific differentiated organs and tissues in the body of the adult.

father, biological The male who contributes the ovum-fertilizing sperm that subsequently becomes a fetus.

fatigability (făt'ī-gă-bil'ī-tê) The condition of becoming easily tired or exhausted.

fatigue (fă-têg') [L. *fatigare*, to tire]

1. An overwhelming sustained sense of exhaustion and decreased capacity for physical and mental work at the usual level. SEE: *Nursing Diagnoses Appendix*. **2.** The condition of an organ or tissue in which its response to stimulation is reduced or lost as a result of overactivity. **3.** To bring about fatigue. Fatigue may be the result of excessive activity, which causes the accumulation of metabolic waste products such as lactic acid; malnutrition (deficiency of carbohydrates, proteins, minerals, or vitamins); circulatory disturbances such as heart disease or anemia, which interfere with the supply of oxygen and energy materials to tissues; respiratory disturbances, which interfere with the supply of oxygen to tissues; infectious diseases, which produce toxic products or alter body metabolism; endocrine disturbances such as occur in diabetes, hyperinsulinism, and menopause; psychogenic factors such as emotional conflicts, frustration, anxiety, neurosis, and boredom; or physical factors such as disability. Environmental noise and vibration contribute to the development of fatigue. SEE: *chronic fatigue syndrome*.

acute f. Fatigue with sudden onset

such as occurs following excessive exertion. It is relieved by rest.

chronic f. Long-continued fatigue not relieved by rest, indicative of disease such as tuberculosis, diabetes, or other conditions of altered body metabolism. SEE: *chronic fatigue syndrome*.

muscle f. The reduced capacity of a muscle to perform work as a result of repeated contractions and accumulation of lactic acid in anaerobic cell respiration. Fatigue may be partial or complete.

fatigue state Exhaustion.

fat overload syndrome A rare complication of intravenous administration of fat emulsion. Findings include sudden elevation of the serum triglyceride level, fever, hepatosplenomegaly, coagulopathy, and dysfunction of other organs. Specific therapy is not available, but plasma exchange has been used experimentally.

fat pad syndrome Pain and tenderness just below the kneecap (patella) when the joint is straightened. It can occur as a complication of knee trauma or surgery. It results from squeezing or crushing the infrapatellar fat pad between the kneecap and the femoral condyle. SYN: *Hoffa's syndrome*.

fat replacement, fat substitute Any substance developed to provide the physical characteristics of fats with relatively few or no calories. Fat replacements may be carbohydrate polymers, protein or fat-based materials that are either not absorbed or not digested in human metabolism.

Simplex is the trade name for a fat replacement made of milk and egg white and provides only 1 to 2 kcal/gram as opposed to the 9 kcal/gram supplied by fat. Olestra is a calorie-free fat replacement made from sucrose and vegetable oil and is suitable for cooking. Overconsumption of Olestra may result in fat-soluble vitamin deficiency.

fat replacer A substance that tastes like fat or acts like fat in food preparation, but has fewer calories.

fat suppression In magnetic resonance imaging, the dampening of bright signals given off by body fat to allow other tissues to become more visible.

fatty streak SEE: *atherosclerosis*.

fauces (fă'sēz) [L.] The constricted opening leading from the oral cavity to the oropharynx. It is bounded by the soft palate, the base of the tongue, and the palatine arches. The anterior pillars of the fauces are known as the glossopalatine arch, and the posterior pillars as the pharyngopalatine arch. SEE: *fossa faucial* (-shāl), *adj.*

fault In legal medicine, failing to meet an obligation; a legal responsibility for a failed outcome.

fauna (faw'nă) [L. *Faunus*, mythical de-

ity of herdsmen] 1. Animal life as distinguished from plant life. 2. All the animals, including microscopic forms, in a specified area. SEE: *flora*.

favolate (fă-vē'ō-lăt) [L. *favolus*, little honeycomb] Honeycombed. SYN: *alveolate*.

favolus (fă-vē'ō-lūs) [L., little honeycomb] A depression or small pit, esp. on the skin. SYN: *foveola*.

favism (fă'vīzm) [It. *fava*, bean, + Gr. *-ismos*, condition] A hereditary condition common in Sicily and Sardinia resulting from sensitivity to a species of bean, *Vicia faba*. It is marked by fever, acute hemolytic anemia, vomiting, and diarrhea, and may lead to prostration and coma. It is caused by ingestion of the beans or inhalation of the pollen of the plant by persons who have an inherited deficiency of the enzyme glucose-6-phosphate dehydrogenase.

favus (fă'vūs) [L., honeycomb] A skin disease caused by the fungus *Trichophyton schoenleinii*. It is marked by pinhead- to pea-sized, cup-shaped, yellowish crusts (scutulum) over the hair follicles of the scalp and is accompanied by musty odor and itching. It may spread all over the body. SEE: *scutulum*.

FCAP *Fellow of the College of American Pathologists*.

Fc fragment A small piece of an immunoglobulin (an antibody) used by macrophages in processing and presenting foreign antigens to T lymphocytes. SEE: *immune response*; *macrophage processing*.

Fc receptor A receptor on phagocytes (neutrophils, monocytes, and macrophages) that binds Fc fragments of immunoglobulins G and E. SEE: *immunoglobulin*; *macrophage processing*; *phagocytosis*.

F.D. *fatal dose*; *focal distance*.

FDA *Food and Drug Administration*.

FDP *fibrin degradation products*.

Fe [L. *ferrum*] Symbol for the element iron.

fear [AS. *faer*] Anxiety caused by a perceived threat, real or imagined. Focused apprehension and fright. SEE: *emotion*; *Nursing Diagnoses Appendix*; *Phobias Appendix*.

features Any part of the face.

febrifacient (fēb-rī-fă'shēnt) [L. *febris*, fever, + *facere*, to make] Producing fever.

febrifuge (fēb'rī-fūj) Something that reduces fever. SYN: *antipyretic*. **febrifugal**, *adj.*

febrile (fē'brīl, fē'brīl, fēb'rīl) [L. *febris*, fever] Pert. to fever; feverish.

febrile state A term used to describe constitutional symptoms that accompany a rise in temperature. The pulse and respiration rate usually increase, with headache, pains, malaise, loss of appe-

tite, concentrated and diminished urine, chills or sweating, restlessness, insomnia, and irritability.

fecal DNA (fē'kīl) [L. *faex*, sediment, dregs] Traces of nucleic acids found in the stool of individuals with colorectal cancers and polyps. Detection of DNA in stool has been proposed as an alternative to testing samples of stool for occult blood loss. Testing stool for traces of malignant DNA is a more sensitive screening test for intestinal cancer than screening stool samples for occult blood, but the test is expensive and is not as accurate a screening tool as colonoscopy.

fecal fat test The measurement of the total quantity of lipids in a timed stool specimen, as a part of the evaluation of chronic diarrhea, especially when fat malabsorption is suspected. The collected feces must not be contaminated by urine or by chemicals used in toilets. High levels of fecal fat (e.g., more than 14 g/day) suggest biliary, pancreatic, or small bowel disorders.

fecal impaction Constipation caused by a firm mass of feces in the distal colon or rectum. The size or firmness of the mass prevents its passage.

ETIOLOGY: Fecal impaction is relatively common in the elderly, esp. in immobilized residents of nursing homes, and in children with encopresis. It may also result from painful anal conditions that inhibit the patient's desire to defecate; drugs such as narcotics, calcium-channel blockers, retained barium, or anticholinergics that retard bowel movements; neurological diseases such as spinal cord injury; complications of intestinal or obstetrical surgery; dehydration; rectoceles, colon cancers, or other pathological lesions; and functional (psychogenic) disorders.

SYMPTOMS: Abdominal colic and a sensation of fullness, anorexia, and rectal pain are common.

PATIENT CARE: Impaction of stool may be prevented by following a high-fiber, fluid-rich diet; getting regular exercise; limiting intake of constipating drugs; routinely using stool softeners or laxatives; and learning biofeedback and habit-training.

A trial of laxatives or enemas may relieve the obstructing feces. If this is unsuccessful, manual extraction is indicated. This may require local anesthesia. The impaction is fragmented by using a scissoring action of the fingers. After the impaction is fragmented, use of mild laxatives, such as mineral oil instilled into the rectum, provides lubrication and assists in passage of the fragments. Surgery is rarely required.

fecalith (fē'kā-līth) [f + Gr. *lithos*,

stone] A fecal concretion. SYN: *coprolith*.

fecal occult blood test A screening test for disorders of the gastrointestinal tract, including anemias that may be caused by gastrointestinal blood loss, e.g., cancer of the colon. Traditionally, a small amount of feces is collected on cards accompanying several consecutive bowel movements. These cards are submitted to a lab for analysis. Alternately, a flushable pad is dropped into the toilet bowl after a bowel movement. A change in color (to blue or green) in the pad reveals occult blood if present.

PATIENT CARE: Patients should be taught how to collect and protect card specimens submitted to the laboratory. They should avoid taking NSAIDs such as ibuprofen or aspirin and should not take more than one adult aspirin (325 mg) per day for several days prior to and during specimen collection. They should also avoid red meats (including cold cuts) for 3 days before and during the testing period, and limit vitamin C intake to less than 250 mg/day. The patient should avoid contaminating the stool sample by not allowing it to touch the toilet or the water. The bowel movement should be made into a clean, dry container or onto the flushable collection tissue supplied with the kit. A wooden stick or swab transfers a small quantity of the specimen to the collection card. Specimens should be protected from heat, light, and chemicals. When developing the test, the health care professional makes sure the developer to be used is compatible with the sampling kit. Gloves should be worn and standard precautions followed. If the specimen is fresh, 3 to 5 min should elapse before adding developer to make sure the stool has penetrated the paper. The manufacturer's instructions should be followed precisely. For all guaiac tests, a blue color indicates the presence of blood. Blue-green also may indicate blood, while green alone is considered negative. After reading the results, the positive and negative controls should be tested to verify test accuracy. The results are then documented. Care should be taken to be sure that a test kit is not used after its expiration date. Specimens should not be collected or the test run if blood can be seen in the stool or urine, if the patient is menstruating, or if a urinary tract infection is present.



The developer bottle should be stored in a lab area rather than left in a patient area, as it could be mistaken for a liquid medication or a toy.

fecaloid (fē'kā-loyd) [f + Gr. *eidos*, form, shape] Resembling feces.

fecaloma (fē'kāl-ō'mā) [f' + Gr. *oma*, tumor] Scatoma.

fecaluria (fē'kāl-ū-rē-ā) [f' + Gr. *ouron*, urine] Feces in the urine. It may arise when a fistula forms between the lower gastrointestinal tract and the urinary bladder.

fecal vomit Feces in vomitus. This occurs in strangulated hernia or intestinal obstruction preventing normal bowel movements.

feces (fē'sēz) [L. *faeces*, dregs] Body waste such as food residue, bacteria, epithelium, and mucus, discharged from the bowels by way of the anus. Also called *dejecta*; *excrement*; *excreta*; *stool*.

fecal (fē'kāl), *adj.*

Fe(C₂H₅O₃)₂ Ferrous lactate; lactate of iron.

FeCl₂ Ferrous chloride.

FeCl₃ Ferric chloride.

FeCO₃ Ferrous carbonate.

fecula (fēk'ū-lā) [L. *faecula*, dregs] 1. Sediment. 2. Starch.

feculent (fēk'ū-lēnt) [L. *faeculentus*] Having sediment.

fecund (fē'kūnd) Fertile.

fecundate (fē'kūn-dāt) [L. *fecundare*, to bear fruit] To fertilize, impregnate, or render fertile.

fecundation (fē'kūn-dā'shūn) Impregnation; fertilization.

artificial f. Impregnation by mechanical injection of the seminal fluid into the uterus. SYN: *artificial insemination*.

fecundity (fē'kūn-dī-tē) Ability to produce offspring; fertility.

Federal Emergency Management Agency ABBR: FEMA. The agency of the federal government that supervises civil defense, disaster planning, and emergency medical services in communities that have suffered floods, tornados, hurricanes, and other catastrophes.

Federal False Claims Act An American federal law that makes the submission of a falsified bill to a federal agency, such as Medicare, illegal.

Federal Register A publication that makes available to the public proposed and final government rules, legal notices, orders, and documents having general applicability and legal effect. It contains published material from all federal agencies.

Federal Torts Claims Act ABBR: FTCA. Statute enacted by Congress in 1946 that specifies how and when private parties may sue the United States in federal court for torts committed by those acting on behalf of the United States. It controls the legal liability of health care professionals employed at government clinics (e.g., in the Indian Health Service, military clinics, and federally funded clinics for undeserved communities).

feedback 1. The influence of the output or result of a system on the input or

stimulus. Feedback may be positive or negative. In positive feedback, the result of the process intensifies the stimulus (e.g., uterine contraction stimulates oxytocin secretion, which brings about increased contractions and increased oxytocin). In negative feedback, the result of the process reverses or shuts off the stimulus (e.g., a high blood glucose level stimulates insulin secretion, which lowers blood glucose, which in turn decreases insulin secretion).

2. In psychiatry, the expressed verbal reaction or physical reaction (i.e., body language) of one person to another person's actions or behaviors. 3. In motor learning, the use of sensory information from contracting muscles to influence subsequent muscular contractions.

feeder A device used to introduce nutrition into the mouth of an infant who has difficulty eating, sucking, or swallowing (e.g., a child with a cleft lip or palate).

feeder layer A population of connective tissue cells that are used to nourish cultured tissue cells in the laboratory. The feeder cell layer is often derived from mouse fibroblasts. Feeder cells supply metabolites to the cells they support, do not grow or divide, and can be inactivated by gamma irradiation.

feedforward (fēd'fōr'wōrd) Anticipatory motor impulses sent before movement to prepare the musculoskeletal system for postural adjustments. The feedforward mechanism is thought to help prepare muscles to perform required tasks.

feeding [AS. *fedan*, to give food to] Taking or giving nourishment.

artificial f. 1. Providing a liquid food preparation through a tube passed into the stomach, duodenum, jejunum, or rarely, the rectum or intravenously. This is also done through gastrostomy or duodenostomy. SEE: *hyperalimentation*. 2. Feeding of an infant with food other than mother's milk.

enteral tube f. SEE: *enteral tube feeding*.

forced f. Tube feeding to an individual who does not want to eat or to be fed by this means.

intravenous f. The provision of total or partial nutritional requirements intravenously; essential in treating some diseases. It is accomplished by carefully controlling the composition of fluid given with respect to total calories derived from protein hydrolysates, dextrose, and fat emulsions, and the electrolytes, minerals, and vitamins. Patients unable to safely eat have been completely maintained for extended periods via intravenous nutritional support, usually through a major vein, such as the subclavian or the jugular. SEE: *total parenteral nutrition*.

rectal f. The introduction of fluid nutrients into the colon through the rec-

tum, a mode of feeding rarely used because little nourishment other than water is absorbed through the colon. SYN: *nutritive enema*.

fee-for-service Payment for specific health care services provided to a patient (as opposed to payments received for the number of patients seen, the number of hours worked, or the number of patients enrolled in a health care panel). The individual or an insurance carrier may make the payment.

feeling [AS. *felan*, to feel] **1.** The conscious experience of emotion. **2.** A sensory perception.

Feer's disease (färz) [Emil Feer, Swiss pediatrician, 1864–1955] Acro-dynia.

fee splitting The unethical practice of returning to the referring health care provider a portion of the fee received from a patient who is seen in consultation.

feet [AS. *fet*] Plural of foot.

Feingold diet (fin'göld) [Benjamin Feingold, U.S. pediatrician, 1900–1982] A nutritional plan from which all artificial colors, artificial flavors, preservatives, and salicylates have been eliminated. It had been used in treating hyperactive children.

Feiss' line A line that extends from the first metatarsophalangeal joint, over the navicular tubercle, to the apex of the medial malleolus. Changes in the angle formed by this line before and during weightbearing can be used to determine excessive pronation of the foot. If the angle formed by Feiss' line is in the range of 30 to 90 degrees while the foot is weight bearing, it may be considered hyperpronated.

Feldenkrais method [Dr. Moshe Feldenkrais, Ukrainian physicist, 1904–1984] A form of therapy devoted to improving limitations of range of motion, improving poor posture, and relieving stress.

feline (fē'līn) [L. *felēs*, cat] Concerning cats.

Felis domesticus (fē'līs dōm-ēs'tī-kūs) [L., house cat] The scientific name for the domestic cat whose dander is a source of allergenic protein. Cat-related allergens are abbreviated Fel by the World Health Organization.

fellatio (fēl-ā'shē-ō) [L. *fellare*, to suck] Oral stimulation of the penis. SYN: *oral sex*. SEE: *cunnilingus*.

fellow (fēl'ō) [ME. *felowe*] **1.** A physician who has received primary training in a medical specialty and is pursuing further specialized training. SEE: *fellowship*.

2. A senior member of an academic institution.

fellowship (fēl'ō-shīp) [ME. *felaweshipe*] An awarded or sponsored educational experience leading to specialized training. SEE: *fellow*.

felon (fēl'ōn) [ME. *feloun*, malignant]

An infection or abscess of the soft tissue of the terminal joint of a finger. SYN: *whitlow*.

felony A more serious crime than a misdemeanor with punishment greater than that for misdemeanors; can be grounds for license denial, revocation, suspension, or probation of a health care provider. It is punishable by imprisonment or death, depending on state law and the type of crime.

feltwork (fēlt'wōrk) **1.** A fibrous network. **2.** A plexus of nerve fibrils.

Felty's syndrome (fēl'tēz) [Augustus Roi Felty, U.S. physician, 1895–1963] Rheumatoid arthritis associated with splenomegaly and neutropenia.

FEMA *Federal Emergency Management Agency*.

female [L. *femella*, little woman] **1.** An individual of the sex that produces ova or bears young. **2.** Characteristic of this sex or gender. SEE: *genitalia*, *female*.

female genital cutting Partial or complete surgical removal of the clitoris, a traditional practice in some African, Middle Eastern, and Southeast Asian cultures. The cutting usually is performed between the ages of 1 week and 14 years. The procedure is performed by nonmedical personnel without benefit of anesthesia or sterile conditions. The most common procedures are removal of the clitoral prepuce, excision of the clitoris, removal of the labia minora and sometimes most of the labia majora. The two sides may be sutured together to occlude the vagina. Possible immediate complications include infection, tetanus, shock, hemorrhage, and death. The possible long-term physical and mental disabilities include chronic pelvic infection, keloids, vulvar abscesses, sterility, incontinence, depression, anxiety, sexual dysfunction, and obstetric complications. SYN: *female circumcision*; *female genital mutilation*; *infibulation*(2).

female genital mutilation Female genital cutting.

female sexual arousal disorder According to the DSM-IV, the essential feature of this condition is a persistent or recurrent inability to attain, or to maintain until completion of the sexual activity, an adequate vaginal lubrication-swelling response of sexual excitement. In order to establish this diagnosis, the disturbance must cause marked distress or interpersonal difficulty, and the difficulty cannot be attributed to a medical condition, substance abuse, or medications. SEE: *male erectile disorder*.

feminine (fēm'ī-nīn) Concerning or being of the female sex.

feminism [L. *femininus*] **1.** The development of female secondary sexual characteristics in a man. **2.** A political philosophy whose aim is to advance the

standing of women in society. SEE: *gynecomastia*.

feminization The normal development of female secondary sexual characteristics, or the pathological development of these in a man.

testicular f. The phenotypic appearance of female sexual characteristics in a person who is genetically male (i.e., whose sex chromosomes are XY). This rare condition is caused by cell receptor defects that prevent testosterone and dihydrotestosterone from acting on somatic tissues. The external genitalia are rudimentary, and the testicles may be in the abdomen.

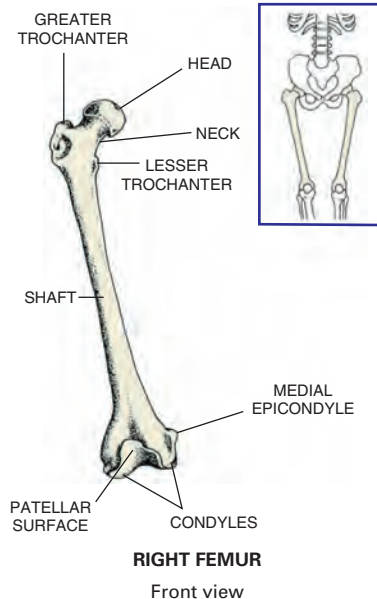
femoral (fēm'or-äl) [L. *femoralis*] Pert. to the femur.

femoral reflex Extension of the knee and flexion of the foot resulting from irritation of the skin over the upper anterior third of the thigh.

femoral vein A continuation of the popliteal vein upward toward the external iliac vein.

femto- [Danish *femten*, fifteen] In the International System of Units (SI), a prefix that signifies 10^{-15} . Thus, a femtogram is 10^{-15} g.

femur (fē'mūr) *pl.* **femora** [L.] The thigh bone. It extends from the hip to the knee and is the longest and strongest bone in the skeleton. SEE: *ilus*.



femur length measurement An assessment made during a fetal ultrasound that uses the length of the femur to estimate the growth of the fetus, especially to see if there is evidence of intrauterine growth retardation (IUGR).

fenestra (fē-nēs'trā) *pl.* **fenestrae** [L., window] **1.** An aperture frequently closed by a membrane. **2.** An open area, as in the blade of an obstetrical forceps.

fenestral (-träl), *adj.*

f. cochleae Round window.

f. vestibuli Oval window.

fenestrated (fēn'ē-strät-ēd) Having openings.

fenestrated tracheostomy tube A double-cannulated tracheostomy tube that allows patients to breathe through the mouth or nose when the inner cannula is removed. The tube has an opening in the posterior wall of the outer cannula above the inflatable cuff.

fenestration (fēn'ē-strā'shūn) **1.** The condition of having a fenestra. **2.** An operation in which an artificial opening is made into the labyrinth of the ear. This procedure is performed to treat deafness associated with otosclerosis. **3.** An operation to open the mucoperiosteum and alveolar plate of bone over the root of an infected tooth to remove the inflammatory exudate and relieve pain.

feng shui (fūng shwäy) An ancient Chinese art of interior and architectural design, the object of which is to create a soothing and healthful living environment, one that is in accord with the ch'i (energy or life force).

fennel (fēn'īl) A perennial herb (*Foeniculum vulgare*) grown for its foliage, seeds, and anise-like flavor. It is also widely used as a digestive aid, e.g., in infantile colic, and used as a potential source of estrogen-like compounds. Known side effects of exposure to fennel in some agricultural workers include asthma, rhinitis, and conjunctivitis.

feral (fēr'ül) [L. *fera*, wild animal] Existing in a wild, untamed, and undomesticated state.

ferment (fēr-mēnt', fēr'mēnt) [L. *fermentum*] **1.** To decompose. **2.** A substance capable of inducing oxidative decomposition in other substances. **3.** An obsolete term for an enzyme.

fermentation (fēr'mēn-tā'shūn) The oxidative decomposition, under anaerobic conditions, of complex substances through the action of enzymes or ferments, produced by microorganisms. Bacteria, molds, and yeasts are the principal groups of organisms involved. Fermentations of economic importance are those involved in the production of alcohol, alcoholic beverages, lactic and butyric acids, and bread.

alcoholic f. Production of ethyl alcohol from carbohydrates, usually through the action of yeasts.

amylolytic f. Hydrolysis of starch with the formation of sugar mixtures.

autolytic f. Disintegration of tissues after death due to enzymes present in the tissues.

butyric f. Formation of butyric acid

from bacterial action on carbohydrates under anaerobic conditions.

citric acid f. Formation of citric acid from the action of molds on carbohydrates.

invertin f. Conversion of cane sugar into glucose and fructose.

lactic f. Formation of lactic acid from carbohydrates by bacterial action. The genera *Streptococcus* and *Lactobacillus* are the forms usually involved. Bacterial action is responsible for the souring of milk.

oxalic acid f. Formation of oxalic acid from carbohydrates by the action of certain molds, esp. *Aspergillus*.

propionic acid f. Formation of propionic acid from carbohydrates by the action of certain bacteria.

viscous f. Production of gelatinous material by different forms of bacilli.

fermentation tube A U-shaped culture tube open at one end. If gas is produced by the bacteria cultured, the level of fluid decreases in the side of the tube with the closed end.

fermium (fēr'mē-ūm) [Enrico Fermi, It. U.S. physicist and Nobel Prize winner, 1901–1954] SYMB: Fm. A radioactive element with atomic number 100 and an atomic weight of 257.

ferning, fern pattern (fēr'n'ing) **1.** The palm leaf (arborization) pattern that mid-cycle cervical mucus assumes when it is placed in a thin layer on a glass slide and allowed to dry. The pattern, caused by crystallization of the mucus as it dries, depends on the concentration of electrolytes, esp. sodium chloride, which in turn depends on the amount of estrogen in the mucus. Smears of cervical mucus may be helpful in determining when a woman has ovulated. The mucus has a beaded pattern at other times in the menstrual cycle. SYN: *cervical mucus*. **2.** Arborization found on microscopic examination of a sample of dried vaginal fluid at term; it confirms the rupture of membranes.

-ferous [L. *ferre*, to bear] Suffix meaning *producing*.

ferri-, ferro- [L. *ferrum*, iron] Prefixes meaning *iron*.

ferric (fēr'ik) **1.** Pert. to iron. SYN: *ferruginous*. **2.** Denoting a compound containing iron in its trivalent form.

f. chloride FeCl₃, used principally in tincture form as an astringent.

ferritin (fēr'ī-tin) An iron-phosphorus-protein complex containing about 23% iron. It is formed in the intestinal mucosa by the union of ferric iron with a protein, apoferritin. Tissues store iron in this form, principally in the reticulo-endothelial cells of the liver, spleen, and bone marrow.

ferrochelatase (fēr'ō-kē'lā-tās) Heme synthetase.

ferrokinetics (fēr'rō-kī-nēt'iks) [+ Gr.

kinesis, movement] The study of the absorption, use, storage, and excretion of iron.

ferroportin (fēr'ō-pōr'tin) [+ L. *portare*, to carry] An iron-transporting molecule that spans cell membranes in the upper gastrointestinal tract and many other organs. Excessive expression of ferroportin by cells can result in iron overload.

ferroprotein (fēr'ō-prō'tē-in) A protein combined with an iron-containing radical. Ferroproteins are important oxygen-transferring enzymes (e.g., nicotinamide adenine dinucleotide dehydrogenase, cytochrome oxidase).

ferrotherapy (fēr'ō-thēr'ā-pē) [+ Gr. *therapeia*, treatment] The use of iron in treating anemia.

ferrous (fēr'ūs) [L. *ferrum*, iron] **1.** Pert. to iron. SYN: *ferruginous*. **2.** Denoting a compound containing bivalent iron.

f. fumarate C₄H₂FeO₄, an iron preparation used to treat anemias.

f. gluconate C₁₂H₂₂FeO₁₄, an iron preparation occurring as a yellowish powder or granules. It is used to treat iron deficiency anemia.

ferrum (fēr'ūm) [L., iron] Iron.

fertile (fēr'til) [L. *fertilis*] Capable of reproduction.

fertile period The period of time in the reproductive cycle of the female that begins a few days prior to ovulation and ends with ovulation, during which she is most likely to conceive.

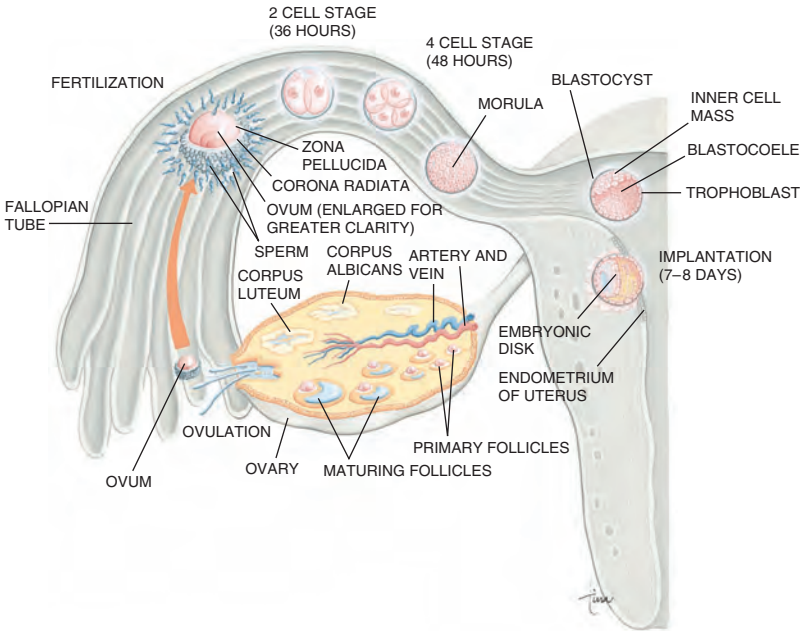
fertility (fēr-til'ī-tē) The quality of being productive or fertile.

fertilization (fēr-til'ī-zā'shūn) [L. *fertilis*, reproductive] The process that begins with the penetration of the secondary oocyte by the spermatozoon and is completed with the fusion of the male and female pronuclei. This usually takes place in the fallopian tube. Viable spermatozoa have been found in the tube 48 hr after the last coitus. After the ovum is fertilized and the diploid chromosome number is restored in the zygote, cell division begins. The blastocyst then enters the uterus, where it may implant for continued nurture and development. SEE: *illus.*

heterologous f. Assisted fertilization of a woman's ova with donor sperm. SEE: *in vitro f.*; *artificial insemination*.

homologous f. Artificial fertilization of a woman's ovum by her husband's sperm. The ovum and sperm are united while both are outside the body and then are placed intravaginally during the optimum time for fertilization.

in vitro f. ABBR: IVF. Laboratory-produced conception, used to enable pregnancy in infertile women when sperm access to ova is prevented by structural defects in the fallopian tubes or other factors, or in combination with her partner's sterility. After drug-



OVULATION, FERTILIZATION, AND EARLY EMBRYONIC DEVELOPMENT

induced follicle maturation, a sample of ova and follicular fluid is removed surgically and mixed with a specimen of the partner's sperm for incubation. The resulting zygote is introduced into the woman's uterus for implantation. SEE: *embryo transfer*; *GIFT*; *ZIFT*.

FESS *functional endoscopic sinus surgery*.

fester (fēs'tēr) [L. *fistula*, ulcer] To become inflamed and suppurate.

festinant (fēs'ti-nānt) Increasing in speed; accelerating.

festination (fēs'ti-nā'shūn) [L. *festinatio*] Festinating gait.

festoon (fēs-toon') [L. *festus*, festal] **1.** A carving that resembles scalloping or festooning in the base material of a denture and simulates the natural indentations of the gums. **2.** To carve or reproduce the natural shape or architecture of the gums around teeth or dentures. **festooned** (-toon'd'), *adj.*

FET *forced expiratory time*.

fetal (fē'tāl) Pert. to a fetus.

fetal activity diary A periodic record used to count and compare fetal movements at different times. The woman may record the number of fetal movements in a given time (e.g., 1 hr), the average number of movements occurring during the same length of time at different times during the day, or the amount of time needed for a specified number of movements to occur (e.g., 10). SEE: *Cardiff Count-to-Ten*.

fetal alcohol effects Fetal alcohol syndrome.

fetal alcohol syndrome ABBR: FAS. Birth defects in an infant born to a mother who consumed alcoholic beverages during gestation. Characteristic findings include a small head with multiple facial abnormalities: small eyes with short slits, a wide, flat nasal bridge, a midface that lacks a groove between the lip and the nose, and a small jaw related to maxillary hypoplasia. Affected children often exhibit persistent growth retardation, hyperactivity, and learning deficits and may have signs and symptoms of alcohol withdrawal a few days after birth. SEE: *Nursing Diagnoses Appendix*.

SYMPTOMS: Birth defects that result from FAS are marked by abnormalities in growth, central nervous system function, and facial characteristics. Facial abnormalities detected at birth may become less obvious as the child continues to grow. Even more serious, however, are the developmental delays that affect the child's behaviors, social skills, and learning. Included are hyperactivity, poor social skills and judgment, impulsiveness, poor ego or self-image, sensory processing problems, and high levels of anxiety. Mental retardation due to the abnormal migration of neural and glial cells during cell differentiation may be the cause of an IQ below 79 at age 7. It may seriously impair the child's po-

tential. Poor fine motor function (weak grasp and poor hand-to-mouth coordination) adds to the child's functional defects.

PREVENTION: The patient should be taught that when she drinks, her baby also drinks, as alcohol crosses into the baby's bloodstream and affects its developing organs and tissues. No amount of alcohol is known to be safe for the developing fetus; thus, all health care providers should make ongoing efforts to educate women who are planning pregnancy or are pregnant to abstain completely from alcohol. They should suggest effective contraception and referral to abstinence treatment programs to individuals with known alcohol problems. The father's drinking does not directly affect his unborn child; however, his drinking may influence his partner to drink.

PATIENT CARE: Initial infant care is related to clinical problems that include increased respiratory effort, poor sucking ability, irritability, and hypotonia. A patent airway is maintained, and the infant's respiratory effort is monitored, with ventilatory assistance provided if required. Seizure activity must be assessed, treated, and prevented with medical management. The infant's weight and fluid balance are assessed and recorded. The mother is taught feeding techniques that promote taking and retaining nutrients sufficient for growth. As necessary, the infant's nares and mouth are suctioned, and gavage feedings are provided.

Family members are taught about the child's special needs. They are helped to recognize and eventually accept the child's impairments and to be aware of their effects on the child's future. Parents and other family members are encouraged to voice their concerns. A social worker evaluates the parents' needs and refers them to appropriate community resources and national support organizations. Including the child in the mother's support program improves results for both of them.

fetal assessment Estimating the current status of the fetus. SEE: *amniocentesis; biophysical profile.*

fetal demise Fetal death. SEE: *Nursing Diagnoses Appendix.*

fetal development The growth and maturation of the fetus in utero. This is divided into three periods: the preembryonic period begins with conception and ends on gestational day 14; the embryonic period encompasses gestational weeks 3 through 8; and the remainder of the pregnancy is known as the fetal period. Body organs and systems arise from three primary germ layers (ectoderm, mesoderm, and endoderm) and rudimentary formation of all organ sys-

tems is completed by gestational week 16. Systems maturation essential to extrauterine survival begins during week 24 with the formation of pulmonary surfactant. Two critical events occur between weeks 26 and 29: the pulmonary vasculature becomes capable of gas exchange and the central nervous system becomes capable of controlling respiration. SYN: *fetal maturation.* SEE: *birth, preterm.*

fetal echogenic bowel An abnormality of the fetal bowel, sometimes seen on prenatal ultrasound, in which the bowel has a brightness similar to that seen in bone. Most instances of echogenic bowel are not associated with any fetal or neonatal disease, but some are seen in diseases and conditions such as aneuploidy, cystic fibrosis, cytomegalovirus infection, and intrauterine growth retardation.

fetal heart rate monitoring The techniques used to determine the heart rate of the fetus. They include auscultation, use of an electronic device, or Doppler ultrasound. SEE: *deceleration; Doppler echocardiography; fetal monitoring in utero.*

fetal maturation Fetal development.

fetal monitoring in utero The techniques used to obtain information on the physical condition of the fetus. They include recording the fetal electrocardiogram, respiratory rate, and, by invasive techniques, blood gas and pH data. SEE: *amniocentesis; chorionic villus sampling; deceleration; Doppler echocardiography; fetal heart rate monitoring; fetal (vibratory) acoustic stimulation.*

fetal origins hypothesis The controversial hypothesis that chronic adult diseases, e.g., hypertension, result from undernutrition of the fetus.

fetal period In human gestation the stage of prenatal development beginning after the eighth week and ending at birth.

fetal scalp blood sampling The process of obtaining a small amount of blood from the fetal scalp for pH testing. When the monitor recording suggests fetal compromise during labor, the physician or nurse-midwife may elect to perform this procedure. The normal finding for fetal pH is at or above 7.25. Findings between 7.20 and 7.24 indicate a preacidotic state; if the pH is below 7.20, acidosis is present.

fetal tissue transplant A controversial experimental technique in which tissue from a dead fetus, severed umbilical cord, or placenta is grafted into a patient in an attempt to treat or cure disease.

fetal viability The ability of a fetus to survive outside of the womb. Historically, a fetus was considered to be capable of living at the end of gestational week 20 when the mother had felt fetal move-

Development of Fetal Tissue

Ectoderm	Mesoderm	Endoderm
Nervous tissue	Bone, cartilage, and other connective tissues	Epithelium of respiratory tract except nose; digestive tract except mouth and anal canal; bladder except trigone
Sense organs		
Epidermis, nails, and hair follicles	Male and female reproductive tracts	
		Proximal portion of male urethra
Epithelium of external and internal ear, nasal cavity and sinuses, mouth, anal canal	Heart, blood vessels, and lymphatics	Female urethra
	Kidneys, ureters, trigone of bladder	Liver
Distal portion of male urethra	Pleura, peritoneum, and pericardium	Pancreas
	Skeletal muscle	

ment (quickening) and the fetal heart tones could be auscultated with a fetoscope. In actuality, even with prompt and intensive neonatal support, a preterm fetus of less than 23 weeks' gestation has little chance of surviving outside of the womb. SEE: *viabile*.

feticide (fē'tī-sīd) [*f* + *cidus*, kill] Killing of a fetus. SEE: *infanticide*.

fetid (fē'tīd) [*L. fetidus*, stink] Rank or foul in odor.

fetish (fē'tīsh) [Portug. *feitico*, charm, sorcery] **1.** An object, such as an idol or charm, that is thought to have mysterious, magical, and supernatural power. **2.** In psychiatry, the love object of a person who suffers from fetishism.

fetishism (fē'tīsh-, fēt'īsh-izm) [*f* + Gr. *-ismos*, condition] **1.** Belief in some object as possessing power or capable of being a stimulus. **2.** Erotic stimulation or sexually arousing fantasies involving contact with nonliving objects, such as an article of dress or a braid of hair.

fetochorionic (fē'tō-kor-ē-ōn'īk) [*L. fetus* + Gr. *chorion*, membrane] Pert. to the fetus and the chorion, or chorionic membrane, of the placenta.

fetoglobulin (fē'tō-glōb'ū-līn) Fetoprotein.

fetography (fē-tōg'rā-fē) Radiography of the fetus in utero. This procedure has been virtually replaced by ultrasound.

fetology (fē-tōl'ō-jē) [*f* + Gr. *logos*, word, reason] Study of the fetus.

fetometry (fē-tōm'ē-trē) [*L. fetus* + Gr. *metron*, measure] Estimation of fetal size (e.g., biparietal diameter and crown-rump length), age, and growth, typically using ultrasonography.

fetoplacental (fē'tō-plā-sēn'tāl) [*f* + *placenta*, a flat cake] Pert. to the fetus and its placenta.

fetoprotein (fē'tō-prō'tēn) An antigen present in the human fetus and in certain pathological conditions in adults.

The amniotic fluid level can be used to evaluate fetal development. Elevated serum levels are found in adults with certain kinds of liver diseases. SEE: *alpha-fetoprotein*.

fetor (fē'tor) [*L.*] Stench; an offensive odor.

f. hepaticus A mousy odor in the breath of persons with severe liver impairment. SEE: *hepatic coma*.

f. oris Halitosis.

fetoscope (fē'tō-skōp) **1.** An optical device, usually flexible and made of fiber-optic materials, used for direct visualization of the fetus in the uterus. SEE: *embryoscopy*; *fetoscopy*. **2.** Historical name for stethoscope used to auscultate fetal heart sounds.

fetoscopy (fē-tōs'kō-pē) Direct visualization of the fetus in the uterus through a fetoscope. SEE: *embryoscopy*.

fetotoxic (fē'tō-tōk'sīk) [*L. fetus*, fetus, + Gr. *toxikon*, poison] Poisonous to the fetus. Materials considered potentially fetotoxic include alcohol, morphine, cocaine, salicylates, coumarin anticoagulants, sedatives, tetracyclines, thiazides, tobacco smoke, and large doses of vitamin K. SEE: *teratogenic*; *thalidomide*.

fetotoxin [+ Gr. *toxikon*, poison] An infrequently used synonym for a teratogen, i.e., a substance that damages a developing fetus.

fetus (fē'tūs) [*L.*] **1.** The latter stages of the developing young of an animal within the uterus or within an egg. **2.** The developing human, in utero, after completion of the eighth gestational week. Before that time it is called an embryo. SEE: *table*.

f. amorphus A shapeless fetal anomaly, scarcely recognizable as a fetus.

calcified f. A fetus that has died in utero and become hardened by calcium salts. SYN: *lithopedion*.

harlequin f. A newborn with abnormal skin that resembles a thick horny armor, divided into areas by deep red fissures. Affected infants die within a few days. The condition is also known as ichthyosis fetalis and ichthyosiform erythroderma, which were once regarded as separate diseases but are now known to represent different degrees of severity of the same entity. SYN: *ichthyosis congenita*; *ichthyosis fetalis*.

f. in fetu Parasitic f.

mummified f. A dead fetus that has become dried and shriveled after resorption has failed to occur.

f. papyraceus In a twin pregnancy, a dead fetus pressed flat by the development of the living twin.

parasitic f. A small imperfect fetus, called a parasite, contained within the body of another fetus, the autosite. SYN: *fetus in fetu*. SEE: *dermoid cyst*.

FEV forced expiratory volume.

FEV₁ forced expiratory volume in 1 sec.

fever [L. *febris*] 1. Abnormal elevation of temperature. The normal temperature taken orally ranges from about 97.6° to 99.6°F, although there is individual variation. Rectal temperature is 0.5° to 1.0°F higher than oral temperature. Normal temperature fluctuates during the day and is lowest in the morning and highest in the late afternoon; these variations are maintained during a fever. The expended basal energy is estimated to be increased about 12% for each degree centigrade of fever. SYN: *pyrexia*. SEE: *basal energy expenditure*; *temperature*.

ETIOLOGY: Fever is resetting at a higher level the temperature that the body seeks to maintain. It is caused by the release of interleukin-1 (IL-1), interleukin-2 (IL-2), and tumor necrosis factor from white blood cells (esp. macrophages), secretion of acute phase proteins, and redistribution of the blood away from the skin by the autonomic nervous system. The body cools itself and returns its temperature to normal range by diaphoresis (sweating). Elevated temperature caused by inadequate thermoregulatory responses during exercise in very hot weather is called hyperthermia; the set point is not increased. Infections, drugs, tumors, breakdown of necrotic tissue, CNS damage, and collagen diseases are the underlying causes of fevers. Despite common beliefs, fever is not harmful except in patients who cannot tolerate its hypermetabolic effects, some older patients in whom it can cause delirium, and children with a history of febrile seizures.

PATIENT CARE: Patients with febrile illnesses frequently seek professional medical attention. Fever is often an important indicator of infections or inflam-

mations that may cause significant injury if left untreated. Diagnosing the cause of a fever may lead to specific therapies that limit the duration of an illness, prevent secondary organ damage or, in some instances, death. The suppression of fever, however, is controversial. Some believe that fever helps to eradicate infecting organisms that cannot survive in a hot environment. Nonetheless, medications such as acetaminophen, aspirin, and other nonsteroidal anti-inflammatory drugs can lower body temperatures in febrile patients and are commonly used for that purpose esp. if the body temperature exceeds 101°F (38.5°C). Whether this usage results in improvements in survival or decreases in morbidity is unknown. In some settings (e.g., the care of the hospice patient with a fever) withholding an antipyretic drug is considered by most health care providers inadequate symptom management. In other settings (e.g., in patients with malignant hyperthermia or heatstroke), giving fever-suppressing treatment represents a standard of care. To date, however, controlled trials of withholding antipyretics in many illnesses have not been performed.

Fever suppression is also typically recommended for those who have suffered stroke or persistent seizures; however, proof of the effectiveness of lowering the body temperature of stroke victims is based on laboratory data rather than clinical effectiveness. Fever suppression in young children with viral and bacterial infections often provides a source of comfort; yet some researchers have speculated about adverse effects of this very common practice (e.g., whether fever suppression in children and autistic disorders are linked). When the choice is made to suppress a fever, it is probably most comfortable to give antipyretic drugs on a regular basis (every 4 or 6 hr) rather than intermittently. Intermittent dosing of antipyretics may produce alternating bouts of chills and sweats, which most patients find unpleasant. Some patients may never mount a fever; this is particularly true of people over 65, who may have serious treatable infections without elevations of body temperature. In older patients, the first indication of inflammatory or infectious illnesses may be a cough, lethargy, anorexia, or alterations in mental status.



Aspirin and other salicylates are contraindicated for use as antipyretics or analgesics in children because of their association with an increased risk of Reye's syndrome. Public and parental education should be provided to make cer-

tain this knowledge is widely disseminated.

2. A disease characterized by an elevation of body temperature. Specific diseases that contain the word "fever" and in which fever is a significant symptom are placed under the first word. SEE: e.g., *rheumatic fever*; *typhoid fever*; *yellow fever*.

brain f. Meningitis.

childbed f. Puerperal sepsis.

continuous f. A sustained fever, as in scarlet fever, typhus, or pneumonia, with a slight diurnal variation.

dengue f. SEE: *dengue*.

drug f. Elevated body temperatures caused by the administration of a drug. Because fevers are more often caused by infections, rheumatological illnesses, or malignancies, the diagnosis of drug fever may be overlooked initially.

factitious f. Fever produced artificially by a patient. This is done by artificially heating the thermometer or by self-administered pyrogenic substances. An artificial fever may be suspected if the pulse rate is much less than expected for the degree of fever noted. This diagnosis should be considered in all patients in whom there is no other plausible explanation for the fever. Patients who pretend to have fevers may have serious psychiatric problems. SEE: *factitious disorder*; *malingering*; *Munchausen syndrome*.

induced f. Fever produced artificially to treat certain diseases such as central nervous system syphilis. Sustained fever of 105°F (40.5°C), or even higher, maintained for 6 to 8 or 10 hr may be induced by medical diathermy or injection of malarial parasites.

intermittent f. Fever in which symptoms disappear completely between paroxysms. SEE: *malaria*; *undulant fever*.

neutropenic f. Fever associated with an abnormally low neutrophil level, usually caused by infection. This condition is treated with empirical antibiotic therapy pending the results of cultures. Neutropenia may be caused by many diseases and conditions, including chemotherapy, radiation exposure, aplastic anemia, bone marrow infiltration from malignancy, and complications of bone marrow transplantation. The risk of potentially life-threatening infection is substantial when the absolute neutrophil count is below 500/mm³.

periodic f. Familial Mediterranean fever.

phlebotomus f. Sandfly fever.

relapsing f. Borreliosis.

remittent f. A pattern of fever that varies over a 24-hr period but does not return to normal. SEE: *malaria*.

f. of unknown origin ABBR: FUO.

An illness of at least 3 weeks' duration with fever exceeding 38.3°C on several occasions and diagnosis not established after 1 week of hospital investigation. The main causes are systemic and localized infections, neoplasms, or collagen-vascular diseases (e.g., rheumatoid arthritis, disseminated lupus erythematosus, and polyarteritis nodosa). Less common causes are granulomatous disease, inflammatory disease of the bowel, pulmonary embolization, drug fever, cirrhosis, and rare conditions such as Whipple's disease. Diseases such as AIDS, chronic fatigue syndrome, or Lyme disease are occasionally the cause of FUO. Some cases remain undiagnosed.

fever blister SEE: under *blister*.

feverfew (fee'vēr-fū) A perennial herb (*Tanacetum parthenium*) grown as an ornamental plant and promoted to treat rheumatologic illnesses and to prevent migraines.

fenofenadine (fēk"sō-fēn'ī-dēn) A piperidine, administered orally to treat colds and coughs, relieve symptoms of seasonal allergic rhinitis, and to manage chronic idiopathic urticaria. Its therapeutic classes are allergy, cold, and cough remedies and antihistamines.

FFB flexible fiberoptic bronchoscope.

F.F.D. focal-film distance.

ffn Fetal fibronectin.

FH₄ 5,6,7,8-tetrahydrofolic acid (folacin).

FHPE Focused history and physical examination.

fiat (fī'āt) [L.] Let there be made, a term used in writing prescriptions.

fiber [L. *fibra*] **1.** A threadlike or filmlike structure, as a nerve fiber. **2.** A neuron or its axonal portion. **3.** An elongated threadlike structure. It may be cellular as nerve fiber or muscle fiber, or may be a cellular product, as collagen, elastic, oxytalan, or reticular fiber. **4.** A slender cellulosic structure derived from plants such as cotton. SEE: *rayon, purified*.

afferent f. A nerve fiber that carries sensory impulses to the central nervous system from receptors in the periphery.

cholinergic f. Any preganglionic fiber, postganglionic parasympathetic fiber, postganglionic sympathetic fiber to a sweat gland, or efferent fiber to skeletal muscle.

circular f. Collagen bundles in the gingiva that surround a tooth.

dietary f. The components of food that resist chemical digestion, including cellulose, hemicellulose, lignin, gums, mucilages, and pectin. Dietary fibers are classified according to their solubility in water.

Water-insoluble fibers include cellulose, lignin, and some hemicelluloses. These substances can soften and increase the bulk of the bowel movement. Natural gel-forming fibers found in

fruits and vegetables such as gums, mucilages, and some hemicelluloses are water soluble. Most foods of plant origin contain both soluble and insoluble dietary fiber. Many disease processes including constipation, diabetes mellitus, gallstones, hemorrhoids, high blood pressure, irritable bowel syndrome, and obesity have been shown to be ameliorated by a high-fiber diet. There are epidemiological data supporting the existence of an inverse relationship between the disease and dietary fiber consumption. The relation between fiber intake and colorectal cancer is complex; some studies suggest that fiber intake is protective, while others suggest that it is not.

Foods rich in fiber include whole-grain foods, bran flakes, beans, fruits, leafy vegetables, nuts, root vegetables and their skins.

afferent f. A nerve fiber that carries motor impulses from the central nervous system to effector organs.

gingival f. Collagen fibers that support the marginal or interdental gingiva and are adapted to the tooth surface.

inhibitory f. A nerve fiber that carries impulses to decrease heart rate.

insoluble f. Any dietary fiber that does not dissolve in water. Insoluble dietary fiber includes hemicellulose, cellulose, and lignin. An example is wheat bran.

intercolumnar f. An intercrural fiber, part of the superficial inguinal ring.

interradicular f. The collagen fibers of the periodontal ligament in the interdental area, attaching the tooth to alveolar bone.

intrafusal muscle f. The structural component of the muscle spindle, made up of small skeletal muscle fibers at either end and a central noncontractile region where the sensory receptors are located.

man-made f. A synthetic fiber made from chemicals (e.g., rayon or polyester). SYN: *synthetic fiber*.

mossy f. Any of the numerous afferent fibers to the cerebellar cortex. The fibers give off many collaterals, each ending in a tuft of branches.

motor f. Any of the axons of motor neurons that innervate skeletal muscles.

muscle f. SEE: *muscle fiber*.

myelinated f. A nerve fiber whose axon (dendrite) is wrapped in a myelin sheath.

nerve f. SEE: *nerve fiber*.

nonmedullated f. Unmyelinated f.

oxytalan f. Bundles of thin, acid-resistant fibrils found in the periodontium.

principal f. The major fiber groups of the functioning periodontium. They at-

tach the tooth to the bone and adjacent teeth.

propriospinal f. Axons that connect regions of the spinal cord.

Purkinje f. SEE: under *Purkinje, Johannes E. von*.

soluble f. Any dietary fiber that dissolves in water. Examples include most fruit and vegetable fibers, such as pectins as well as barley, cereal grains, cornmeal, and oats.

transseptal f. Any of the collagenous fibers that extend between the teeth and are embedded in the cementum of adjacent teeth.

unmyelinated f. A nerve fiber that lacks a myelin sheath, although a neurilemma may be present in the peripheral nervous system.

zonular f. One of the interlacing fibers of the zonula ciliaris.

fiberglass Glass spun into fine fibers. It is used in the building industry for insulation. The fibers are irritating to the skin.

fiber-illumination (fī'bēr-īl-loo'mīn-ā'shūn) The transmission of light to an object through fiberoptic cables.

fiberoptics (fī'bēr-ōp'tīks) The transmission of light through flexible glass or plastic fibers by reflections from the side walls of the fibers. This permits transmission of visual images around sharp curves and corners. Devices that use fiberoptic materials are useful in endoscopic examinations.

fiberscope (fī'bēr-skōp) A flexible endoscope that uses fiberoptics for visualization.

fibrates (fī'brāts) A group of carboxylic acid compounds with hydrophobic and hydrophilic domains. They are used clinically to lower serum lipid levels, esp. elevated triglyceride levels.

fibremia (fī-brē'mē-ā) [f + Gr. *haima*, blood] Fibrin formed in the blood, causing embolism or thrombosis. SYN: *ino-semia*.

fibril (fī'brīl) [L. *fibrilla*] **1.** A small fiber. **2.** A very small filamentous structure, often the component of a cell or a fiber.

muscle f. Myofibril.

nerve f. Neurofibril.

fibrilla (fī-brīl'ā) *pl.* **fibrillae** [L.] A fibril or small fiber.

fibrillar, fibrillary (fī'brī-lār, fī'brī-lār'ē) Pert. to or consisting of fibrils.

fibrillated (fī'brī-lāt'd) [L. *fibrilla*, little fiber] Composed of minute fibers.

fibrillation (fī'brīl-ā'shūn) **1.** Formation of fibrils. **2.** Quivering or spontaneous contraction of individual muscle fibers. **3.** An abnormal bioelectric potential occurring in neuropathies and myopathies.

atrial f. ABBR: AF. The most common cardiac dysrhythmia, affecting as many as 5 – 10% of people age 70 and

over. It is marked by rapid, irregular electrical activity in the atria, resulting in ineffective ejection of blood into the ventricles and an irregular ventricular response (apical pulse rate). Blood that eddies in the atria may occasionally form clots that may embolize (esp. to the brain, but also to other organs). As a result AF is an important risk factor for stroke. In the U.S., about 75,000 strokes occur each year in patients with AF. AF may also contribute to other diseases and conditions, including congestive heart failure, dyspnea on exertion, and syncope.

ETIOLOGY: AF may occur in otherwise healthy persons with no structural heart disease (*lone AF*) (e.g., during stress or exercise). It may also develop *secondary* to alcohol withdrawal; in patients with underlying arrhythmias (such as tachybrady syndrome or Wolff-Parkinson-White syndrome); after cardiac surgery; during cocaine intoxication; in hypertensive urgencies, hypoxia, or hypercarbia (carbon dioxide retention); during myocardial infarction; in pericarditis and pulmonary embolism; or as a consequence of congestive heart failure, COPD, sepsis, or thyrotoxicosis or other metabolic disorders. Chronic AF, also known as *persistent*, *permanent*, or *sustained AF*, usually occurs in patients with structural abnormalities of the heart, such as cardiomyopathies; enlargement of the left atrium; mitral valve disease; or rheumatic heart disease. *Paroxysmal AF* is AF that occurs intermittently and resolves spontaneously. *Recurrent AF* is a term used to describe two or more episodes of AF occurring in the same person.

SYMPTOMS: Some patients may not notice rapid or irregular beating of their heart, even though the ventricular rate rises to 200 bpm. Most patients, however, report some of the following symptoms at slower heart rates (100 bpm or greater): dizziness, dyspnea, palpitations, presyncope, or syncope.

DIAGNOSIS: Patients who present with their first episode of atrial fibrillation are typically evaluated with thyroid function tests, cardiac enzymes, a complete blood count, and blood chemistries. In patients with a cardiac murmur or evidence of congestive heart failure, echocardiography is typically performed.

TREATMENT: The acutely ill (unstable) patient with a rapid ventricular response ($>150/m$) and signs or symptoms of angina pectoris, congestive heart failure, hypotension, or hypoxia should be prepared for immediate cardioversion. Patients who are stable and tolerate the rhythm disturbance without these signs or symptoms are typically treated first with drugs to slow the heart rhythm

(e.g., calcium-channel blockers, beta blockers, or digoxin). For most patients with atrial fibrillation with a rapid ventricular response, controlling the rapid heart rate alleviates symptoms. Electrical or chemical cardioversion of initial episodes of atrial fibrillation may successfully restore sinus rhythm, often for a period of several months to as long as a year but does not affect morbidity or mortality. Anticoagulation (e.g., with warfarin) markedly reduces the risk of stroke and should be given for several weeks before, and about a week after, elective cardioversion, and to patients in chronic AF who do not return to sinus rhythm with treatment. Patients who elect not to use anticoagulants for chronic AF, or in whom anticoagulants pose too great a risk of bleeding, usually are given 325 mg of aspirin daily. AF can also be treated with radiofrequency catheter ablation, or with surgical techniques to isolate the source of the rhythm disturbance in the atria or pulmonary veins. SEE: *ablation*.

PATIENT CARE: The acutely ill patient is placed on bedrest and monitored closely, with frequent assessments of vital signs, oxygen saturation, heart rate and rhythm, and 12-lead electrocardiography. Supplemental oxygen is supplied and intravenous access established. Preparations for cardioversion (if necessary) and the medications prescribed for the patient are explained. Patients should be carefully introduced to the risks, benefits, and alternatives to stroke prevention with anticoagulation. Stroke is one of the most serious complications for patients with atrial fibrillation. The risk of embolic stroke in AF is about 5% annually without anticoagulation but lower with it. However, the use of anticoagulants increases the risk of bleeding. Patients treated with anticoagulants should maintain an International Normalized Ratio (INR) in the 2.0 to 3.0 range. Regular assessment of the INR reduces the hazard of serious bleeding.

lone atrial f. Atrial fibrillation that is not caused by or associated with underlying disease of the heart muscle, heart valves, coronary arteries, pulmonary circulation, or thyroid gland. Prognosis seems better for this type of atrial fibrillation than for that which results from anatomical or metabolic abnormalities.

paroxysmal atrial f. Intermittent episodes of atrial fibrillation.

ventricular f. ABBR: VFIB. A treatable, but lethal dysrhythmia present in nearly half of all cases of cardiac arrest. It is marked on the electrocardiogram by rapid, chaotic nonrepetitive waveforms; and clinically by the absence of effective circulation of blood (pulseless-

ness). Rapid defibrillation (applying unsynchronized electrical shocks to the heart) is the key to treatment. Basic measures, such as opening the airway and providing rescue breaths and chest compressions, should be undertaken until the defibrillator is available. **SEE: illus; defibrillation; advanced cardiac life support.**

fibrillin (fī'brīl-in) A protein constituent of connective tissue. It is present in skin, ligaments, tendons, and in the aorta. In Marfan's syndrome, there is reduced content of microfibrils that contain fibrillin. **SEE: elastin.**

fibrillogenesis (fī-brīl'ō-jěn'ē-sīs) Formation of fibrils.

fibrin (fī'brīn) [L. *fibra*, fiber] A whitish, filamentous protein formed by the action of thrombin on fibrinogen. The conversion of fibrinogen to fibrin is the third and final stage of blood clotting. The fibrin is deposited as fine interlacing filaments which entangle red and white blood cells and platelets, the whole forming a coagulum, or clot. **SEE: coagulation, blood. fibrinous, adj.**

fibrin-fibrinogen degradation products

A group of soluble protein fragments produced by the proteolytic action of plasmin on fibrin or fibrinogen. These products impair the hemostatic process and are a major cause of hemorrhage in intravascular coagulation and fibrinogenolysis.

fibrin glue Fibrinogen concentrate combined with bovine thrombin. It may be applied topically to stop bleeding, esp. during surgery. It also may be injected into a variety of fistulae with some degree of success. Autologous fibrinogen (as cryoprecipitate) mixed with calcium chloride and bovine thrombin will result in fibrin glue. Commercially available is fibrin sealant composed of human plasma and bovine-derived components.

fibrinocellular (fī'brī-nō-sēl'ū-lār) Composed of fibrin and cells, as in certain exudates.

fibrinogen (fī-brīn'ō-jěn) [ʹ + Gr. *gennan*, to produce] A protein, also called factor I, synthesized by the liver and present in blood plasma that is converted into fibrin through the action of thrombin in the presence of calcium ions. Fibrin forms the clot. **SEE: blood coagulation; coagulation factor.**

fibrinogenic, fibrinogenous (fī'brīn-ō-

jěn'ik, fī-brī-nōj'ō-nūs) Producing fibrin.

fibrinogenolysis (fī'brī-nō-jěn-nōl'ī-sīs) [ʹ + ʹ + *lysis*, dissolution] Decomposition or dissolution of fibrin.

fibrinogenopenia (fī-brīn'ō-jěn'ō-pē'nē-ā) [ʹ + Gr. *gennan*, to produce, + *penia*, poverty] Reduction in the amount of fibrinogen in the blood, usually the result of a liver or coagulation disorder.

fibrinoid (fī'brī-noyd) [ʹ + Gr. *eidos*, form, shape] Resembling fibrin.

fibrinoid change Alteration in connective tissues in response to immune reactions. The tissue becomes swollen, homogeneous, and bandlike.

fibrinoid material A fibrinous substance that develops in the placenta, increasing in quantity as the placenta develops. Its origin is attributed to the degenerating decidua and trophoblast. It forms an incomplete layer in the chorion and decidua basalis and also occurs as small irregular patches on the surface of the chorionic villi. In late pregnancy it may have a striated, or canalized, appearance and is then termed *canalized fibrinoid*.

fibrinolysis (fī'brīn-ōl'ī-sīs) The breakdown of fibrin in blood clots, and the prevention of the polymerization of fibrin into new clots. The principal physiological activator of the fibrinolytic system is tissue plasminogen activator. It converts plasminogen in a fibrin-containing clot to plasmin. The fibrin polymer is degraded by plasmin into fragments that are then scavenged by monocytes and macrophages. This process begins immediately after a clot forms. It can be stimulated by administering fibrinolytic drugs, such as recombinant tissue plasminogen activator. **fibrinolytic** (-ō-līt'ik), *adj.*

fibrinopenia (fī'brīn-ō-pē'nē-ā) [ʹ + Gr. *penia*, poverty] Fibrin and fibrinogen deficiency in the blood.

fibrinopeptide (fī'brī-nō-pēp'tīd) The substance removed by thrombin from fibrinogen during blood clotting.

fibrinosis (fī-brī-nō'sīs) [ʹ + Gr. *osis*, condition] Excess of fibrin in the blood.

fibrin sealant A biological agent used to help control bleeding in those injuries or surgeries in which cautery, ligation, or suturing do not provide adequate hemostasis.



VENTRICULAR FIBRILLATION

fibrin split products The materials released into the bloodstream when the crosslinked fibrin in a blood clot is digested by plasmin.

fibrinuria (fī'brīn-ū'rē-ā) [f + Gr. *ouron*, urine] Passage of fibrin in the urine.

fibro- [L. *fibra*] Combining form meaning *fiber*; *fibrous tissues*.

fibroadenia (fī'brō-ā-dē'nē-ā) [L. *fibra*, fiber, + Gr. *aden*, gland] Fibrous degeneration of glandular tissue.

fibroadenoma (fī'brō-ād'ē-nō'mā) [f + " + *oma*, tumor] An adenoma with fibrous tissue forming a dense stroma.

fibroadipose (fī'brō-ād'ī-pōs) [f + *adeps*, fat] Containing fibrous and fatty tissue.

fibroangioma (fī'brō-ān'jē-ō'mā) [f + Gr. *angeion*, vessel, + *oma*, tumor] A fibrous tissue angioma.

fibroareolar (fī'brō-ā-rē'ō-lā) Fibrocellular.

fibroblast (fī'brō-blāst) [f + Gr. *blastos*, germ] Any cell from which connective tissue develops; it produces collagen, elastin, and reticular protein fibers. SYN: *desmocyte*.

fibroblast growth factor Polypeptides that stimulate wound healing, new blood vessel growth, and skeletal muscle development. Overactivity of these factors has been associated with neoplasia.

fibroblastoma (fī'brō-blās-tō'mā) [f + " + *oma*, tumor] A tumor of connective tissue, or fibroblastic, cells.

fibrocalcific (fī'brō-kāl-sif'ik) Fibrous and partially calcified.

fibrocarcinoma (fī'brō-kār'sī-nō'mā) [f + Gr. *karkinos*, cancer, + *oma*, tumor] A carcinoma in which the trabeculae are resistant and thickened with granular degeneration of the cells.

fibrocartilage (fī'brō-kār'ti-lij) [f + *cartilago*, gristle] A type of cartilage in which the matrix contains thick bundles of white or collagenous fibers. It is found in the intervertebral disks.

fibrocellular (fī'brō-sēl'ū-lār) [f + *cellula*, little cell] Containing fibrous and cellular tissue. SYN: *fibroareolar*.

fibrochondritis (fī'brō-kōn-dri'tis) [f + Gr. *chondros*, cartilage, + *itis*, inflammation] Inflammation of fibrocartilage.

fibrochondroma (fī'brō-kōn-drō'mā) [f + " + *oma*, tumor] A tumor of fibrous tissue and cartilage.

fibrocyst (fī'brō-sist) [f + Gr. *kystis*, cyst] A fibrous tumor that has undergone cystic degeneration or has accumulated fluid in the interspaces.

fibrocystic (fī'brō-sis'tik) 1. Consisting of fibrocysts. 2. Fibrous with cystic degeneration.

fibrocystic disease of the breast A non-specific diagnosis for a condition marked by palpable lumps in the breasts, usually associated with pain

and tenderness, that fluctuate with the menstrual cycle. At least 50% of women of reproductive age have palpably irregular breasts caused by this condition. SYN: *cystic mastitis*. SEE: *breast self-examination*.

Women with fibrocystic breast disease have a two to five times greater risk of developing breast cancer. Some women with this disease have atypical hyperplasia in the lesion. If these patients also have a family history of breast cancer, their risk of developing breast cancer is greatly increased. They should practice breast self-examination once a month, about a week after the menstrual period, have a clinician breast exam every 6 months, and if indicated, mammography once a year or other screening tests as recommended by their health care providers. Any palpable, distinct, or dominant mass requires immediate evaluation.

TREATMENT: Some women obtain relief by reducing fat intake in the diet to less than 25%, limiting salt intake premenstrually, eliminating caffeine, foods containing methylxanthines, tobacco products, and alcohol, or by taking complementary remedies such as vitamin E supplements. Occasionally providers may prescribe danazol, an androgenic (male) hormone. Patients with benign symptomatic nodularity or mastalgia often respond well to low-dose oral contraceptives.

PATIENT CARE: Emotional support is provided for women who have a heightened awareness and fear of developing breast cancer. Patient teaching includes discussing and demonstrating breast self-examination, with emphasis placed on the importance of monthly self-exams, periodic mammography, and annual examinations by a health care professional. The accuracy of the patient's self-exam is evaluated by asking her to locate any currently palpable lumps and to describe the present contour and texture (feel) of her breasts (mapping).

If pain and tenderness are bothersome, suggestions may include using aspirin or other nonsteroidal anti-inflammatory over-the-counter drugs and wearing a well-fitting brassiere day and night.

fibrocystic disease of the pancreas Cystic fibrosis.

fibrocystoma (fī'brō-sis-tō'mā) [f + Gr. *kystis*, cyst, + *oma*, tumor] A fibroma combined with a cystoma.

fibrocyte (fī'brō-sit) [f + Gr. *kytos*, cell] A mature, older fibroblast.

fibrodysplasia (fī'brō-dis-plā'sē-ā) [f + Gr. *dys*, bad, + *plassein*, to form] Abnormal development of fibrous tissue.

fibroelastic (fī'brō-ē-lās'tik) [f + Gr. *elastikos*, elastic] Pert. to connective

tissue containing both white nonelastic collagenous fibers and yellow elastic fibers.

fibroelastosis (fī'brō-ē'lās-tō'sis) Overgrowth of fibroelastic tissue.

endocardial f. Fibroelastosis of the endocardium. It leads to cardiac failure.

fibroenchondroma (fī'brō-ēn'kōn-drō'mā) [*"* + *Gr. en, in, + chondros, cartilage, + oma, tumor*] A benign cartilaginous tumor containing fibrous elements.

fibroepithelioma (fī'brō-ēp'ī-thē'lē-ō'mā) [*"* + *Gr. epi, upon, + thele, nipple, + oma, tumor*] A benign tumor containing fibrous and epithelial elements.

fibroid (fī'broyd) [*"* + *Gr. eidos, form, shape*] **1.** Containing or resembling fibers. SEE: *degeneration*. **2.** A benign tumor of the uterine myometrium. SEE: *uterine leiomyoma*.

fibroidectomy (fī'broyd-ēk'tō-mē) [*"* + *"* + *ektome, excision*] Surgical removal of a fibroid tumor.

fibrolipoma (fī'brō-lī-pō'mā) [*"* + *Gr. lipos, fat, + oma, tumor*] Lipofibroma.

fibroma (fī-brō'mā) *pl.* **fibromata** [*"* + *Gr. oma, tumor*] A fibrous, encapsulated connective tissue tumor. It is irregular in shape, slow in growth, and has a firm consistency. Pressure or cystic degeneration may cause pain. It may affect the periosteum, jaws, occiput, pelvis, vertebrae, ribs, long bones, or sternum. **fibromatous** (-mā-tūs), *adj.*

f. of breast A benign, nonulcerative, painless breast tumor.

interstitial f. A tumor in the muscular wall of the uterus that may grow inward and form a polypoid fibroid, or outward and become a subperitoneal fibroid. SEE: *uterine f.*

intramural f. A tumor located in muscle tissue of the uterus between the peritoneal coat and endometrium.

submucous f. A fibroma encroaching on the endometrial cavity. It may be either sessile or pedunculated.

subserous f. A fibroma, often pedunculated, lying beneath the peritoneal coat of the uterus.

uterine f. Uterine leiomyoma.

fibromatosis (fī'brō-mā-tō'sis) [*L. fibra, fiber, + Gr. oma, tumor, + osis, condition*] The simultaneous development of many fibromata.

f. colli Congenital muscular torticollis.

gingival f. An inherited condition marked by hypertrophy of the gums before the eruption of the teeth. Hypertrichosis is usually present.

palmar f. Dupuytren's contracture.

fibromectomy (fī'brō-mēk'tō-mē) [*"* + *Gr. oma, tumor, + ektome, excision*] Removal of a fibroma.

fibromembranous (fī'brō-mēm'brā-nūs)

[*"* + *membrana, web*] Having both fibrous and membranous tissue.

fibromuscular (fī'brō-mūs'kū-lār) [*"* + *musculus, muscle*] Consisting of muscle and connective tissue.

fibromyalgia (fī'brō-mī-āl'jē-ä) [*"* + *Gr. mys, muscle, + algos, pain*] Chronic and frequently difficult to manage pain in muscles and soft tissues surrounding joints. It is more common in women than men and affects about six million Americans. Symptoms sometimes include fatigue and mood and sleep disturbances. Efforts to classify this condition resulted in the American College of Rheumatology criteria for classification of fibromyalgia, published in 1990. SYN: *fibromyositis; fibrositis*. SEE: table.

PATIENT CARE: Fibromyalgia is a condition in which objective findings are limited, but subjective fatigue, pain, and distress are often significant. Essential to its management are reassurance that it does not cause harm, cognitive behavioral therapy, and reasonable participation in physical activities or physical therapy to prevent deconditioning. Muscle aches may be eased by massage, and stretching and yoga help to maintain range of motion. Drug therapies include oral pregabalin, topical capsaicin, anti-inflammatories, antidepressants, muscle relaxants, trigger point injections, and/or narcotic analgesics. Referral to a rheumatologist, physiatrist, psychologist, psychiatrist, or pain management therapist is sometimes necessary.

fibromyalgia impact questionnaire ABBR: FIQ. A 10-item self-report questionnaire used to assess the current health status of women diagnosed with fibromyalgia syndrome.

fibromyoma (fī'brō-mī-ō'mā) [*"* + *"* + *oma, tumor*] **1.** A fibrous tissue myoma. **2.** A fibroid tumor of the uterus that contains more fibrous than muscle tissue.

fibromyomectomy (fī'brō-mī-ō-mēk'tō-mē) [*"* + *"* + *ektome, excision*] Removal of a fibromyoma from the uterus, leaving that organ in place.

fibromyositis Fibromyalgia.

fibromyotomy (fī'brō-mī-ōt'ō-mē) [*"* + *"* + *tome, incision*] Surgical incision of a fibroid tumor.

fibromyxoma (fī'brō-mīk-sō'mā) [*"* + *Gr. myxa, mucus, + oma, tumor*] An encapsulated fibrous tumor composed of large fibroblasts in loose connective tissue.

fibromyxosarcoma (fī'brō-mīk'sō-sār-kō'mā) [*"* + *"* + *sarkos, flesh, + oma, tumor*] **1.** A sarcoma containing fibrous and myxoid tissue. **2.** A sarcoma that has undergone mucoid degeneration.

fibronectin (fī'brō-nēk'tin) Any of a group of opsonic proteins present in

The American College of Rheumatology 1990 Criteria for Classification of Fibromyalgia*

1. History of widespread pain

Definition: Pain is considered widespread when all the following are present: pain in the left side of the body, the right side of the body, above the waist, and below the waist. In addition, axial skeletal pain (cervical spine, anterior chest, thoracic spine, or low back) must be present. In this definition, shoulder and buttock pain is considered as pain for each involved side. "Low back" pain is considered lower segment pain.

2. Pain in 11 of 18 tender point sites on digital palpation

Definition: On digital palpation, pain must be present in at least 11 of the following 18 tender point sites:

Occiput—bilateral, at the suboccipital muscle insertions

Low cervical—bilateral, at the anterior aspects of the intertransverse spaces at C5–7

Trapezius—bilateral, at the midpoint of the upper border

Supraspinatus—bilateral, at origins, above the scapular spine near the medial border

Second rib—bilateral, at the second costochondral junctions, just lateral to the junctions on upper surfaces

Lateral epicondyle—bilateral, 2 cm distal to the epicondyles

Gluteal—bilateral, in upper outer quadrants of buttocks in anterior fold of muscle

Greater trochanter—bilateral, posterior to the trochanteric prominence

Knee—bilateral, at the medial fat pad proximal to the joint line

Digital palpation should be performed with an approximate force of 4 kg. For a tender point to be considered "positive," the subject must state that the palpation was painful. "Tender" is not to be considered "painful."

* For classification purposes, patients are considered to have fibromyalgia if both criteria are satisfied. Widespread pain must have been present for at least 3 months. The presence of a second clinical disorder does not exclude the diagnosis of fibromyalgia.

SOURCE: American College of Rheumatology, Multicenter Criteria Committee, *Arthritis Rheum* 1990; 33(2):160–172, with permission.

blood plasma and extracellular matrix that are involved in wound healing and cell adhesion. The presence of fetal fibronectin in the cervical and vaginal secretions may be a marker for subsequent development of preterm labor. SEE: *fetal fibronectin assay*.

fibroneuroma (fī'brō-nū-rō'mă) [n + Gr. *neuron*, nerve, + *oma*, tumor] Neurofibroma.

fibro-odontoma (fī'brō-ō'dōn-tō'mă) A rare benign tumor of the oral cavity, typically found in the posterior mandible of children.

fibro-osteoma (fī'brō-ōs-tē-ō'mă) [n + Gr. *osteon*, bone, + *oma*, tumor] A tumor containing bony and fibrous elements. SYN: *osteofibroma*.

fibropapilloma (fī'brō-păp-ĭ-lō'mă) [n + *papilla*, nipple, + Gr. *oma*, tumor] A mixed fibroma and papilloma sometimes occurring in the bladder.

fibroplasia (fī'brō-plă'sē-ă) [n + Gr. *plasis*, a molding] The development of fibrous tissue, as in wound healing or by other stimulating factors, e.g., as retrolental fibroplasia in the neonate due to the administration of excessive oxygen.

retrolental f. ABBR: RLF. Retinopathy of prematurity.

fibroplastic (fī'brō-plăs'tĭk) [n + Gr. *plassein*, to form] Giving formation to fibrous tissue.

fibropurulent (fī'brō-pūr-ū-lēnt) [n + *purulentus*, festering] Pert. to pus that contains flakes of fibrous tissue.

fibrosarcoma (fī'brō-sār-kō'mă) [L. *fibra*, fiber, + Gr. *sarkos*, flesh, + *oma*, tumor] A spindle-celled sarcoma containing a large amount of connective tissue.

fibrose (fī'brōs) To form or produce fibrous tissue (e.g., a scar).

fibroserous (fī'brō-sē'rūs) [n + *serosus*, serous] Containing fibrous and serous parts, such as the pericardium.

fibrosis (fī-brō'sis) [n + Gr. *osis*, condition] The repair and replacement of inflamed tissues or organs by connective tissues. The process results in the replacement of normal cells by fibroblasts (and eventually, the replacement of normal organ tissue by scar tissue).

arteriocapillary f. Arteriolar and capillary fibroid degeneration.

diffuse interstitial pulmonary f. Idiopathic pulmonary f.

idiopathic pulmonary f. The formation of scar tissue in the parenchyma of the lungs, following inflammation of the alveoli. The disease results in difficulty breathing caused by impaired gas exchange. SYN: *diffuse interstitial pulmonary f.*; *pulmonary f.*; *Hamman's syndrome*.

SYMPTOMS: Dyspnea, cough, exer-

tional fatigue, and generalized weakness are common. Signs of the illness include pulmonary crackles, finger clubbing, cyanosis, and evidence of right ventricular failure (such as lower-extremity swelling). The disease typically progresses to end-stage lung disease and death within 7 years of diagnosis.

DIAGNOSIS: A biopsy of the lung is needed to make the diagnosis.

TREATMENT: Corticosteroids (such as prednisone) may be helpful in 10% to 20% of patients. Lung transplantation can be curative if a donor organ is available.

postfibrinosis f. Development of fibrosis in a tissue in which fibrin has been deposited.

premacular f. Macular pucker.

proliferative f. Formation of new fibrous tissue from connective tissue cells.

pulmonary f. Idiopathic pulmonary f.

f. uteri Diffuse growth of fibrous tissue throughout the uterus.

fibrositis (fi-brō-sī'tis) [" + Gr. *itis*, inflammation] Fibromyalgia.

fibrotic (fi-brōt'ik) Marked by or pert. to fibrosis.

fibrous Composed of, containing, resembling, or separable into fibers.

fibrous glass (fi'brūs) Manufactured filaments or woolly products (insulation) made from glass or sand. Also known as glass fibers or fiberglass, these products are known irritants to the eyes, respiratory tract, and skin. Some evidence links animal exposure to glass wool products with cancer, but the relevance of this evidence to human populations is uncertain.

fibrous plaque (fi'brīs plāk) SEE: *arteriosclerosis*.

fibula (fib'ū-lā) [L., pin] The outer and smaller bone of the leg from the ankle to the knee, articulating above with the tibia and below with the tibia and talus. It is one of the longest and thinnest bones of the body. **fibular, adj.**

FIC John E. Fogarty International Center (of the National Institutes of Health)

ficin (fi'sin) [L. *ficus*, fig] Sap from the fig tree. It contains an enzyme capable of hydrolyzing proteins.

Fick, Adolf Eugen (fik) German physician, 1829–1901.

F. equation Fick principle.

F's. law The rule stating that diffusion through a tissue membrane is directly proportional to the cross-sectional area, driving pressure, and gas coefficient and inversely proportional to tissue thickness.

F. method A method of determining cardiac output by calculating the difference in oxygen content of mixed venous and arterial blood. This figure is then

divided into the total oxygen consumption.

F. principle In respiratory physiology, the rule stating that blood flow equals the amount of a substance absorbed in an organ divided by the difference in the amount of the substance entering and leaving the organ. Usually the substance is oxygen or a dye. SYN: *Fick equation*.

FICS *Fellow of the International College of Surgeons*.

FID *flame ionization detector*.

fiduciary abuse (fi-doo'shē-ēr'ē, dū') [L. *fiduciaris*, held in trust] Unlawful appropriation and misuse of money held in custody on behalf of a dependent.

field [AS. *feld*] A specific area in relation to an object.

auditory f. The space or distance from the individual within which he or she hears sounds.

high-power f. The portion of an object seen when the high-magnification lenses of a microscope are used.

low-power f. The portion of an object seen when the low-magnification lenses of a microscope are used.

useful f. of view ABBR: UFOV. A test of visual attention that measures the space in which an individual can receive information rapidly from two separate sources. It is a strong predictor of accidents in older drivers. Training can expand the useful field of view and increase the visual processing speed of an elderly person.

fieldwork Studies and practical experience gained during the direct observation and care of patients. It is used to supplement and broaden the education of students, usually in addition to academic study performed in the classroom, home, or library.

fifth cranial nerve Trigeminal nerve.

fifth disease Erythema infectiosum.

fight-or-flight reaction of Cannon [Walter B. Cannon, U.S. physiologist, 1871–1954] The generalized response to an emergency situation. This includes intense stimulation of the sympathetic nervous system and the adrenal gland. The heart and respiratory rates, blood pressure, and blood flow to muscles are increased. This response prepares the body to either flee or fight.

FIGO staging system The staging system for cancer of the cervix uteri developed by the International Federation of Gynecology and Obstetrics.

figure (fig'ū-rāt) [L. *figuratum*, figured] Having a rounded, curved, circular, or ringed shape. The term is used to describe rashes that leave elaborately embroidered markings on the skin.

figure [L. *figura*] 1. A body, form, shape, or outline. 2. A number.

figure-ground The perceptual difference between an object and its surroundings.

filament (fil'ă-měnt) [L. *filamentum*]

1. A fine thread. 2. A threadlike coil of tungsten found in the x-ray tube that is the source of electrons.

axial f. A filament forming the central axis of the flagellum of a spermatozoon.

intermediate f. ABBR: IF. Slender proteins found in all eukaryotic cells, measuring about 8 – 12 nm in diameter. Along with microtubules and microfilaments they form the skeletal structure of cells (the cytoskeleton). Examples of intermediate filaments are keratins and vimentin.

filamentous (fil'ă-měnt'ūs) Made up of long, interwoven or irregularly placed threadlike structures.

filar (fi'lār) [L. *filum*, thread] Filamentous.

Filaria (fil-ă-rē-ă) [L. *filum*, thread] Term formerly applied to a genus of nematodes belonging to the superfamily Filarioidea.

F. bancrofti *Wuchereria bancrofti*.

F. loa *Loa loa*.

F. medinensis *Dracunculus medinensis*.

F. sanguinis hominis *Wuchereria bancrofti*.

filaria (fil-ă-rē-ă) *pl. filariae* [L. *filum*, thread] A long thread-shaped nematode belonging to the superfamily Filarioidea. The adults live in vertebrates. In humans, they may infect the lymphatic vessels and lymphatic organs, circulatory system, connective tissues, subcutaneous tissues, and serous cavities. Typically, the female produces larvae called microfilariae, which may be sheathed or sheathless. They reach the peripheral blood or lymphatic vessels, where they may be ingested by a blood-sucking arthropod (a mosquito, gnat, or fly). In the intermediate host, they transform into rhabditoid larvae that metamorphose into infective filariform larvae. These migrate to the proboscis and are deposited in or on the skin of the vertebrate host. SEE: *elephantiasis*. **filarial** (fi-lār'e-ăl), *adj.*

filariasis (fil-ă-rī'ă-sīs) [F + Gr. *-iasis*, condition] Parasitic infection with any of the slender worms of the genus *Brugia* or *Wuchereria*. SEE: *elephantiasis*.

Bancroft's f. SEE: *Bancroft's filariasis*.

filaricide (fi-lār'i-sīd) [F + *caedere*, to kill] Something that destroys *Filaria*.

filaricidal (-sīd'ăl), *adj.*

Filarioidea (fi-lār'ē-oy'dē-ă) A superfamily of filarial nematodes that parasitize many animal species, including humans. SEE: *filariasis*.

file (fil) 1. A metal device with a roughened surface. It is used for shaping bones and teeth. 2. In computing, data stored in a specifically designated area of the computer's memory.

filgrastim (phil-grās'stīm) Granulocyte colony-stimulating factor.

filiform (fil'ī-form) [F + *forma*, form]

1. In biology, pert. to a growth that is uniform along the inoculation line in stab or streak cultures. 2. Hairlike; filamentous.

filler (fil'ēr) 1. In plastic surgery any substance inserted into another to give it a plumper shape or contour. 2. In dentistry and orthopedics a porous material used in bone cements, resins, or other bonding materials to improve their performance, e.g., bonding strength, elution rates, or resistance to wear in the body.

fillet (fil'ět) [Fr. *filet*, a band] 1. A loop of thread, cord, or tape used to provide traction or suspension of tissue during surgery or obstetrical delivery. 2. Laminiscus.

filling (fil'ing) [AS. *fyllan*, to fill] 1. A material inserted into a cavity preparation. Common materials include amalgam, acrylics, resins, and glass ionomers. 2. The operation of filling tooth cavities. SYN: *restoration*.

film 1. A thin skin, membrane, or covering. 2. A thin sheet of material, usually cellulose and coated with a light-sensitive emulsion, used in taking photographs. 3. In microscopy, a thin layer of blood or other material spread on a slide or coverslip.

base f. A layer of polyester or other suitable material that supports the radiographical film emulsion.

laser f. A single emulsion material used in dry imaging systems to reproduce images through electronic control of a laser light directly onto the film.

plain f. A simple x-ray image of a body part, taken, e.g., from the front, back, side, or an oblique angle.

spot f. A radiograph of a small anatomical area.

x-ray f. A special photographic film with a sensitive emulsion layer that blackens in response to the light from intensifying screens. The emulsion has silver halide crystals immersed in gelatin. *Single-emulsion film* has the emulsion on one side of the cellulose base. It is used for digital, mammographic, and extremity imaging, in which high detail is necessary. *Duplitized film* has the emulsion on both sides of the cellulose base. It is used for general-purpose radiological studies.

film badge A badge containing film that is sensitive to x-rays. It is used to determine the cumulative exposure to x-rays of persons who work in radiology.

film speed The sensitivity of a photographic medium (e.g., a radiograph) to light or radiation. The film speed is determined by: the size of its silver halide crystals; the thickness of the emulsion; and the presence of radiosensitive dyes.

Films are described as "fast" if the film requires little radiation to produce an image and "slow" if more radiation is needed.

filopodia Bundles of actin filaments that project from the cell surface.

filovariocosis (fī'vō-vār-i-kō'sis) [f' + *varix*, a dilated vein, + Gr. *osis*, condition] Dilatation or thickening of the axis of a nerve.

Filovirus (fīl'ā-vī'rūs, fīl') A family of enclosed, negative-stranded RNA viruses that can cause fatal hemorrhagic fevers. They include Marburg and Ebola viruses. SEE: *Ebola virus hemorrhagic fever*; *Marburg virus disease*.

filter [L. *filtrare*, to strain through] **1.** To pass a liquid through any porous substance that prevents particles larger than a certain size from passing through. **2.** A device for filtering liquids, light rays, or radiations. SEE: *absorption*; *osmosis*. **3.** Material, such as aluminum or molybdenum, inserted between the radiation source and the patient to absorb low-level radiation that would increase the dose.

Berkefeld f. SEE: *Berkefeld filter*.

compensating f. In radiography, a filter that shields less dense areas to produce a more nearly uniform radiographic image.

high efficiency particulate air f. ABBR: HEPA filter. An air filter capable of removing 99.7% of particles greater than 0.3 μm in diameter.

infrared f. A filter that permits passage of only infrared waves of a certain wavelength.

membrane f. A filter made from biologically inert cellulose esters, polyethylene, or other porous materials.

Millipore f. Trademark name of a filter usually composed of cellulose acetate with controlled pore size that separates particles above specific sizes from the solutions that flow through.

optical f. A device that passes only a portion of the visible light spectrum. Absorption filters absorb the unwanted wavelengths. Interference filters employ the wave effects of constructive and destructive superposition to pass or inhibit appropriate wavelengths.

Pasteur-Chamberland f. An unglazed porcelain filter capable of retaining bacteria and some viruses. Either pressure or suction is required to force or draw the liquid through the filter.

umbrella f. A filter placed in a blood vessel to prevent emboli from passing that point. It has been used in the vena cava to prevent emboli in the veins from reaching the lungs.

vena cava f. A wire apparatus inserted through a catheter into the inferior vena cava to prevent pulmonary emboli.

wedge f. A filter used in radiography

and radiation therapy to vary the intensity of the x-ray beam. This compensates for differences in the thicknesses of the parts being exposed to radiation.

Wood's f. An ultraviolet light source used to diagnose some fungal and bacterial skin diseases.

filterable [L. *filtrare*, to strain through] Capable of passing through the pores of a filter.

filtering In neuropsychology, devoting selective focus to certain stimuli while ignoring or minimizing others.

filtrate (fīl'trāt) The fluid that has been passed through a filter. The residue is the precipitate.

glomerular f. The fluid that passes from the blood through the capillary walls of the glomeruli of the kidney. It is similar to plasma but with far less protein; urine is formed from it.

filtration (fīl-trā'shūn) The process of removing particles from a solution by allowing the liquid portion to pass through a membrane or other partial barrier. This contains holes or spaces that allow the liquid to pass but are too small to permit passage of the solid particles. SEE: *filter*.

membrane differential f. ABBR: MDF. The removal of high-molecular-weight plasma proteins and lipoproteins from circulating blood to increase the flow to microcirculatory blood vessels. SYN: *rheophoresis*.

f. of x-ray photons The absorption of some longer-wavelength, low-energy x-ray photons by an absorbing medium placed in the path of the beam. Materials used for x-ray absorption include aluminum, copper, molybdenum, and zinc.

filtration slits The spaces between the pedicels on the glomerular basement membrane through which water, glucose, amino acids, and other chemicals pass as they become renal filtrate.

filum (fī'lūm) *pl.* *fila* [L.] A threadlike structure.

f. terminale A long, slender filament of connective tissue at the end of the spinal cord.

fimbria (fīm'brē-ā) *pl.* *fimbriae* [L., fringe] **1.** Any structure resembling a fringe or border. **2.** A pilus.

f. tubae The fringelike portion at the abdominal end of a fallopian tube.

fimbriate, fimbriated (fīm'brē-āt', fīm'brē-āt'ēd) **1.** Having finger-like projections. **2.** Fringed.

fimbriocoele (fīm'brē-ō-sēl') [f' + Gr. *kele*, tumor, swelling] A hernia including the fimbriated portion of the oviduct.

Finegoldia magna (fīm'gōld'ē-ā mǎg'nā) The preferred name for the species of anaerobic gram-positive cocci formerly known as *Peptostreptococcus magna*. It is a potential cause of soft tissue

abscess, endocarditis, or joint or wound infection.

fine motor skill Motor skills that require greater control of the small muscles than large ones, esp. those needed for hand-eye coordination, and those that require a high degree of precision in hand and finger movement. Examples of these motor skills include handwriting, sewing, and fastening buttons. It is important to note that most movements require both large and small muscle groups, and that although there is considerable overlap between fine and gross motor skills, a distinction between the two is useful in rehabilitation settings, special education, adapted physical education tests, motor development tests, and industrial and military aptitude tests.

fineness The proportion of pure gold in a gold alloy.

finger [AS.] Any of the five digits of the hand.

baseball f. Mallet finger

clubbed f. Clubbing.

dislocation of f. Displacement of a finger bone. This occurs only at a joint. If there has been a crushing injury, it should be treated as a fracture until radiography has been performed. Dislocations of a finger usually are easily diagnosed and quite easily reduced. They may be caused by blows, falls, and similar accidents.

First, it is important to ascertain that there is no fracture. Then the patient should be asked to steady and support the wrist (or have somebody else do so) for countertraction. The finger is grasped beyond the dislocated muscles and tendons and, with the free hand, the dislocated bone is slipped into place. A splint is applied from the tip of the finger well into the palm of the hand. The splint may be made of plastic, of tongue depressors, or temporarily of heavy cardboard.



No attempt should be made to reduce a dislocation of any finger joint until radiography has ruled out the possibility of fracture.



hammer f. Mallet f.

hippocratic f. Clubbing.

jersey f. A traumatic avulsion of the insertion of the flexor digitorum profundus, caused by a forceful extension motion during an active muscular contraction. It is commonly seen in football players. As a tackler grabs a defender's jersey, the defender pulls the jersey out of the tackler's hand.

mallet f. A flexion deformity of the distal joint of a finger, caused by avulsion of the extensor tendon. SYN: *baseball finger*; *hammer finger*.

seal f. A painful cellulitic infection of a finger caused by a species of mycoplasma, sometimes occurring in arctic hunters or fishers. It is treated with tetracycline antibiotics.

webbed f. A congenital condition in which some or all of the fingers are fused; syndactylism.

finger cot A protective covering for a finger. It is usually made of plastic, rubber, metal, or leather. The injured finger is protected from trauma during the healing process.

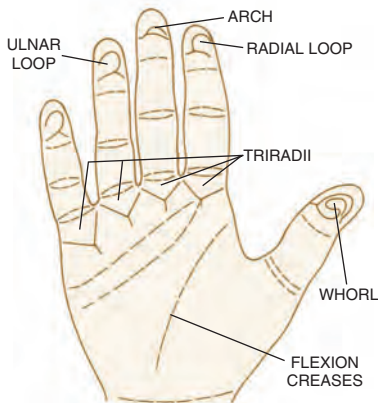
finger ladder A finger ladder is a wall-climbing device that can provide a patient with objective reinforcement and motivation for performing shoulder ROM. ROM can be performed to achieve shoulder flexion (patient facing the ladder, and "climbing" to increase shoulder flexion) or shoulder abduction (patient facing sideways; adjustment in arm position must be made to accommodate scapular rotation needed to achieve full abduction).

finger nail SEE: *nail*.

fingerprint 1. A smudge made when oils from the distal portions of the finger come into contact with an object. Fingerprints are used in forensics for personal identification. 2. A unique sequence of nucleotides in a gene, used to identify specific organisms or individuals. SEE: *illus.*



DERMATOGLYPHIC AREAS OF THE HAND



FINGERPRINTS

finger separator Finger spreader.

finger spelling A method of communication used by persons with hearing or visual impairment in which words are

spelled out letter by letter rather than depicted with single signs as in American Sign Language. Finger spelling can be done visually as well as tactually.

finger spreader An orthotic device, usually made of foam rubber, used to hold the thumb and fingers in extension while maintaining the normal arches of the hand. SYN: *finger separator*.

finger spring A device for assisting extension or flexion of finger joints.

finger sweep Placing a finger in the mouth or pharynx of a person with an obstructed upper airway in an attempt to clear a visible foreign body from the airway. Blind finger sweeps, that is, using the hand to clear objects that are not seen, are not recommended.



The examiner should wear a glove and use a crossed-fingers technique while attempting to clear foreign bodies from the upper airway because of the risk of injury to the hand from accidental biting by the patient.

finger tip The most dorsal segment of the finger, beyond the nailbed.

finger-to-finger test A test for coordination of the movements of the upper extremities. The patient is asked to touch the tips of the fingers of one hand to the opposite fingertips.

finger-to-nose test A test of cerebellar function wherein the patient is asked, while keeping the eyes open, to touch the nose with the finger and remove the finger, and repeat this rapidly. The test is done by using a finger of each hand successively or in concert. How fast and well this is done is recorded. This test assesses the function of the cerebellum.

finger trapping Using an adjacent digit to provide passive range of motion to an affected (injured, paralyzed) digit.

finite Having limits or boundaries.

Finkelstein's test (fing'kīl-stīnz') [H. Finkelstein, Am. Surgeon, 1865–1939] A test used to assist in the diagnosis of de Quervain's disease. The patient tucks the thumb in a closed fist, and the examiner deviates the fist ulnarly. Pain indicates a positive result.

FiO₂ *fractional concentration of inspired oxygen*.

fire [AS. *fyrr*] 1. Flame that produces heat. 2. Fever.

St. Anthony's f. Former term for erysipelas.

firearm (fir'ärm") A small, portable gun (e.g., a pistol or a rifle) or handheld weapon that uses explosive materials to propel an object toward a person, place, or target at high speed. More firearm-related injuries and deaths occur in the U.S. than in any other industrialized nation. Most of these are among young

males, esp. those between 15 and 24 years old.

fire-damp Methane, CH₄, found in coal mines.

firewall A set of programs that protects the resources of a private computer network from users of other networks. It screens the messages that attempt to enter or leave the network and permits or denies access to outside users based on pre-programmed rules.

first aid The administration of immediate care to an injured or acutely ill patient before the arrival of a physician or ALS unit and transport to either a physician's office or hospital emergency department. First aid is not a substitute for definitive care. SEE: *basic life support*; *burn*; *cardiopulmonary resuscitation*; *Standard Precautions Appendix*.

first cranial nerves The nerves supplying the nasal olfactory mucosa. They consist of delicate bundles of unmyelinated fibers, the fila olfactoria, which pass through the cribriform plate and terminate in the olfactory bulb. The fila are the central processes of bipolar receptor neurons of the olfactory mucous membrane. SYN: *olfactory nerves*.

first-dollar coverage (fürst'döl'ir köv'i-r-ij) A type of medical insurance in which all costs of care are reimbursed by the insurer, without copayments, deductibles, or other out-of-pocket payments by the insured.

first intention healing Healing that takes place when wound edges are held or sutured together without the formation of obvious granulation tissue. SEE: *healing*.

first responder 1. The first individual to arrive at the scene of an emergency. Many communities have made an effort to train public safety personnel (e.g., police and fire department) or other volunteers to respond to trauma and medical emergencies and provide CPR and first aid. 2. The U.S. Department of Transportation training curriculum designed for the first arriving personnel on the scene of a medical emergency or traumatic event. The focus of this training is to assess and manage life-threatening emergencies.

Fishberg concentration test (fish'bërg) [A. M. Fishberg, U.S. physician, 1898–1992] An obsolete test of the ability of the kidneys to produce urine of high specific gravity.

Fisher's exact test [R. A. Fisher 1890–1962, British mathematician] A test used to determine the statistical significance of findings generated from small sets of data.

fish oil A dietary supplement used to prevent heart disease. Although controlled trials of its effects have had some inconsistent results, trials of secondary prevention (i.e., trials that measure

whether second heart attacks can be reduced in patients with a previous history of myocardial infarction) have generally shown that fish oil is effective. It has been shown not to help prevent sudden death in patients who have implanted cardioverter defibrillators. Fish oil concentrates provide omega-3 and omega-6 fatty acids, which reduce inflammation mediated by arachidonic acid.

fish poisoning SEE: under *poisoning*.

fishskin disease A skin disease characterized by increase of the horny layer with scaling and dryness. SYN: *ichthyosis*.

fission (fish'ün) [L. *fissio*] **1.** Splitting into two or more parts. **2.** Bombardment or splitting of the nucleus of a heavy atom to release energy and neutrons.

binary f. Asexual reproduction, or cell division, in prokaryotic cells. The cell enlarges, duplicates its chromosome, and produces a transverse septum to form two identical daughter cells.

fissiparous (fī-sĭp'ä-rūs) [L. *fissus*, cleft, + *parere*, to bring forth] Reproducing by fission.

fissura (fis-ū'rä) *pl.* **fissuræ** [L.] Fissure.

fissure (fish'ūr) [L. *fissura*] **1.** A groove, natural division, cleft, slit, or deep furrow in the brain, liver, spinal cord, and other organs. SYN: *fissura*; *sulcus*. **2.** An ulcer or cracklike sore. **3.** A break in the enamel of a tooth. **fissural, adj.**

anal f. A painful linear ulcer on the margin of the anus. It is a common problem in infancy and fairly common in constipated adults.

PATIENT CARE: Conservative, non-operative care heals most anal fissures. Patients should be advised to drink a lot of water to lubricate stools, adopt a high-fiber diet, and take a stool softener to ease the passage of stool. Sitting in a warm bath several times a day may help relax the anal sphincters. Medicated creams or ointments may provide topical anesthesia to the anus.

Patients who do not improve with medical therapies may require local injection of botulinum toxin to relax the sphincters or surgery to repair chronic fissures.

anterior median f. In the spinal cord, the groove that runs along the ventral midline.

calcarine f. The fissure extending from the occipital end of the cerebrum to the occipitoparietal fissure.

central f. Rolando's f.

cerebellar fissure A fissure that consists of five deep horizontal (transverse) grooves that separate the cerebellum into its lobes and lobules.

Henle's f. SEE: under *Henle, Friedrich J.*

hippocampal f. The fissure extending from the posterior part of the corpus callosum to the tip of the temporal lobe of the brain.

horizontal f. Transverse f. (3).

inferior orbital f. The fissure at the apex of the orbit through which the infraorbital blood vessels and maxillary branch of the trigeminal nerve pass.

interparietal f. The intraparietal sulcus.

occipitoparietal f. The fissure between the occipital and parietal lobes of the brain.

palpebral f. The opening separating the upper and lower eyelids.

portal f. The opening into the undersurface of the liver. It continues into the liver as the portal canal.

Rolando's f. SEE: *Rolando's fissure*.

f. of Sylvius, Sylvian fissure The deep fissure along the side of the cerebral hemisphere separating the parietal lobe (above) from the temporal lobe (below) of the cerebrum. SYN: *lateral sulcus*.

transverse f. **1.** The fissure between the cerebellum and cerebrum. **2.** The fissure on the lower surface of the liver that serves as the hilum transmitting vessels and ducts to the liver. **3.** The fissure that divides the upper right lobe of the lung from the middle right lobe. SYN: *horizontal fissure*.

umbilical f. The anterior portion of the longitudinal fissure of the liver. It contains the round ligament, the obliterated umbilical vein.

fistula (fis'tū-lä) [L., *fistula*, pipe] An abnormal tubelike passage from a normal cavity or tube to a free surface or to another cavity. It may result from a congenital failure of organs to develop properly, or from abscesses, injuries, radiation, malignancies, or inflammatory processes that erode into neighboring organs. **fistulous** (-lūs), *adj.*

anal f. A fistula near the anus.

arteriovenous f. A fistula between an artery and a vein.

biliary f. A fistula through which bile is discharged after a biliary operation.

blind f. A fistula open at only one end.

branchial f. An open branchial cleft.

bronchopleural f. An abnormal opening between the pleural space and an airway in the lung.

cervical f. **1.** An abnormal opening into the cervix uteri. **2.** An opening in the neck leading to the pharynx, resulting from incomplete closure of the branchial clefts.

complete f. A fistula with both external and internal openings.

congenital pulmonary arteriovenous f. A direct communication of a pulmonary artery with a pulmonary vein within the lung. This congenital condi-

tion allows blood to bypass the oxygenation process in the lungs.

craniusinus f. A fistula between the intracranial space and a paranasal sinus.

enterovaginal f. An abnormal canal between the bowel and vagina.

fecal f. A fistula in which there is a discharge of feces through the opening.

gastric f. A tract from the stomach to the abdominal wall or another internal organ, such as the small or large bowel.

horseshoe f. A perianal fistula in which the tract goes around the rectum and communicates with the skin at one or more points.

incomplete f. A fistula with only one opening, which leads to the skin (i.e., it does not communicate with an internal cavity or organ).

metroperitoneal f. An abnormal connection between the uterine and peritoneal cavities.

obstetric f. A complication of excessively prolonged labor and childbirth in which the blood supply to the vagina is interrupted, leading to tissue death and the development of a tract between the vagina and the large bowel or the urinary bladder.

oroantral f. A communicating tract between the oral cavity and the maxillary sinus, occasionally resulting from the extraction of the first or second molar. It may become infected. Treatment varies with the size of the defect. Small lesions heal spontaneously; larger ones may be repaired with flap surgery or with prostheses.

parotid f. A fistula from the parotid gland to the skin surface.

perilymphatic f. A canal through which inner ear fluid may leak into the middle ear that may produce sudden hearing loss, tinnitus, or vertigo. The lesion, which can arise congenitally, after trauma, or by erosion, is one of the few examples of sensorineural hearing loss that can be repaired with surgery to the cochlear aqueduct.

perineovaginal f. An opening from the vagina through the perineum.

pilonidal f. A sinus tract related to a pilonidal cyst.

rectovaginal f. An opening between the rectum and the vagina.

thyroglossal f. A midline fistula just above the thyroid that connects the openings in the skin to a persistent embryonic thyroglossal duct.

tracheoesophageal f. A congenital defect linking the trachea and the esophagus, resulting from failure of the lungs to separate from the gastrointestinal tract during embryological development. Surgery is needed to prevent recurring episodes of aspiration pneumonia in the newborn.

umbilical f. An abnormal congenital

passageway between the umbilicus and the gut. It is usually due to nonclosure of the urachal duct.

ureterovaginal f. A fistula between the ureter and the vagina.

vesicouterine f. An abnormal connection between the urinary bladder and the uterus.

vesicovaginal f. An abnormal connection between the urinary bladder and the vagina, usually resulting from surgical trauma, irradiation, or malignancy.

fistulatome (fis'tū-lă-tōm") [" + Gr. *tome*, incision] An instrument for incising a fistula.

fistulectomy (fis'tū-lĕk'tō-mē) [" + Gr. *ektome*, excision] Excision of a fistula.

fistulization (fis'tū-lī-ză'shūn) [L. *fistula*, pipe] The process of becoming fistulous by extension of an inflammatory process from one tissue organ to another.

fistuloenterostomy (fis'tū-lō-ĕn-tĕr-ōs'tō-mē) [" + Gr. *enteron*, intestine, + *stoma*, mouth] A surgical connection of a fistula into the intestine (e.g., biliary fistula).

fit (fit) [AS. *fitt*] **1.** A sudden attack, convulsion, or paroxysm. SEE: *convulsion*. **2.** Modification of one structure to that of another, as in dental restoration.

fitness, biological The ability of an individual to produce children who survive to adult life and are themselves able to reproduce.

fitness, physical SEE: *physical fitness*.

fix **1.** To treat tissues chemically so that the components and products of the cells are preserved for staining and microscopic examination. **2.** Slang for a dose of a drug of abuse. **3.** In film processing, the step that stops the development action, removes the undeveloped silver halide crystals, and makes the image permanent.

fixation [L. *fixatio*] **1.** The act of holding or fastening in a rigid position. The act of immobilizing or making rigid. **2.** Rigidity or immobility. **3.** A phase of Freudian psychosexual development in which the libido is arrested at an early or presexual level. **4.** Staining of microscopic specimens for examination. **5.** The process of making a film-recorded image permanent.

binocular f. Focusing of both eyes on an object.

complement f. A common blood assay used to determine if antigen-antibody reactions have occurred. Complement that combines with the antigen-antibody complex becomes inactive and is unable to lyse (kill) red blood cells in vitro. The degree of complement fixation is determined by the number of red blood cells destroyed, which indicates the amount of free complement not bound to the antigen-anti-

body complexes. Complement fixation can measure the severity of an infection because it helps indicate the extent and effectiveness of antigen-antibody reactions occurring in the body. SEE: *complement*.

external f. The use of external devices, such as pins, in fractured bone segments to keep them in place.

f. of eyes Movement of the eyes so that the visual axes meet and the image of an object falls on corresponding points of each retina. This provides the most acute visualization of the object.

field of f. The widest limits of vision in all directions within which the eyes can fixate.

internal f. The use of internal wires, screws, or pins applied directly to fractured bone segments to keep them in place.

fixative (fik'sā-tiv) [L. *fixus*, fastened]

1. A substance that firms or makes rigid. 2. A substance used to preserve normal and pathological specimens for gross examination or for the sectioning and preparation of microscope slides.

fixed-dose combination (fikst' dōs')

Combining two or more drugs in one capsule or tablet, in order to simplify drug regimens and improve compliance.

fixer (fik'sēr) A reagent that stops the development of a radiographic image, removes undeveloped silver halide crystals, and hardens the emulsion. The typical fixer consists of a clearing agent, preservative, hardener, and acidifier.

Fl fluid.

flaccid (fläk'sid) [L. *flaccidus*, flabby] Relaxed; flabby; having defective or absent muscular tone.

flagella (flä-jël' ä) [L.] Pl. of flagellum.

flagellant (fläj'ë-länt) [L. *flagellum*, whip] 1. Pert. to a flagellum. 2. Pert. to stroking in massage. 3. One who practices flagellation.

flagellate (fläj'ë-lät) 1. Having one or more flagella. 2. A protozoon with one or more flagella.

flagellation (fläj'ë-lä'shün) 1. Whipping. 2. Massage by strokes. 3. A form of sexual behavior in which the libido is stimulated by whipping oneself, being whipped, or whipping someone else. 4. The arrangement of flagella on the surface of a microorganism.

flagelliform (flä-jël'ï-form) [f + *forma*, shape] Shaped like a flagellum.

flagellum (flä-jël'üm) pl. **flagella** [L., whip] A threadlike structure that provides motility for certain bacteria and protozoa (one, few, or many per cell) and for spermatozoa (one per cell).

flag sign A peculiar change in hair color in which the hair becomes discolored in a band perpendicular to its long axis. This is seen in kwashiorkor and indicates a period of severe malnutrition.

flammable Burning easily.

flange (flänj) 1. A border that projects above the main structure. 2. In dentistry, the part of an artificial denture that extends from the embedded teeth to the border of the denture.

flank [O. Fr. *flanc*] The part of the body between the ribs and the upper border of the ilium. The term also refers loosely to the outer side of the thigh, hip, and buttock. SEE: *latus*.

flap [Dutch *flappen*, to strike] 1. A mass of partially detached tissue. 2. A mass of partially detached tissue incurred by accidental trauma used in plastic surgery of an adjacent area or in covering the end of a bone after resection. 3. An uncontrolled movement seen in some diseases. SEE: *asterixis*.

amputation f. A flap of skin used to cover the end of a part left after an amputation.

island f. A skin flap or myocutaneous tissue in which the edges are free but the center is attached and contains the vascular supply.

jump f. A skin flap moved from place to place by successively cutting one end and attaching it to a new site once vascularity is established on the stationary portion.

mucoperiosteal f. A flap of mucosal tissue, including the underlying periosteum, reflected from the bone during oral surgery.

pedicle f. A partially detached piece of tissue that is attached on one end to a source of blood. The other end may be surgically connected to a site from which a new blood supply may develop. SYN: *pedicle graft*. SEE: *jump f.*

periodontal f. A section of soft tissue surgically separated from underlying bone and removed or repositioned to eliminate periodontal pockets or to correct mucogingival defects.

skin f. A flap containing only skin.

sliding f. Horizontal movement of a flap to cover a nearby denuded area.

tube f. A variety of pedicle flap which is fashioned into a tubular configuration. SEE: *pedicle f.*

flare 1. A flush or spreading area of redness that surrounds a line made by drawing a pointed instrument across the skin. It is the second reaction in the triple response of skin to injury and is due to dilatation of the arterioles. SEE: *triple response*. 2. An exacerbation of any inflammatory condition or disease, such as the sudden worsening of rheumatoid arthritis or systemic lupus erythematosus (SLE).

flaring, nasal Dilatation of the nostrils during inspiration; a sign of respiratory distress.

flash 1. A hot flash. A flush accompanied by a sensation of heat. It is common during menopause. SYN: *hot flush*. SEE:

menopause. **2.** Excess material from a mold.

flashback The return of imagery and/or hallucinations after the immediate effects of a traumatic or hallucinogenic experience.

flash method 1. A means of pasteurizing milk by rapidly raising its temperature to 178°F (80.1°C), maintaining it there for a few minutes, and rapidly chilling it until the temperature is 40°F (4.4°C). SEE: *pasteurization.* **2.** A fast low-angle shot method of obtaining magnetic resonance images.

flask [LL. *flasco*] A small bottle with a narrow neck.

flatfoot Abnormal flatness of the sole and the arch of the foot. This condition may exist without causing symptoms or interfering with normal function of the foot. The inner longitudinal and anterior transverse metatarsal arches may be depressed. This condition may be acute, subacute, or chronic. SYN: *pes planus*; *splayfoot*. SEE: *illus*.



FLATFOOT (PES PLANUS)

spasmodic f. Flatfoot in which the foot is held everted by spasmodic contraction of the peroneal muscle.

flatness Resonance heard on percussion over solid organs or when there is fluid in the thoracic cavity.

flatplate (flăt'plăt) A radiograph requiring a frontal projection of the abdomen or other body part with the patient supine.

flatulence (flăt'ū-lěns) [L. *flatulentus*] Excessive gas in the stomach and intestines. SEE: *distention*; *gastrointestinal decompression*; *paralytic ileus*; *Wangensteen tube*. **flatulent** (fläch'ū-lěnt), *adj.*

PATIENT CARE: Initial assessment should include auscultation of bowel sounds, percussion, and observation and measurement of abdominal girth. The patient is questioned about the presence and location of any pain or cramping and the passage of flatus. Bowel sounds are assessed and abdominal girth measured. If the situation is acute in onset or associated with severe

pain or altered vital signs, x-rays or other investigative studies may be ordered. If the condition is deemed functional, ambulation is encouraged to increase peristalsis. If the patient cannot ambulate or if ambulation is ineffective, the patient is turned from side to side (or as permitted by activity restrictions). If the gaseous accumulation is thought to be intracolonic, laxative suppositories or enemas may be given to help the patient expel flatus and to relieve gaseous distention. If the patient is able to eat, medications containing simethicone may provide some degree of relief. If bowel sounds decrease or abdominal distention increases (as demonstrated by percussion, abdominal girth measurement, and increasing patient discomfort) and flatus is not passed, a diagnosis of ileus is suggested.

flatus (flā'tūs) [L., a blowing] **1.** Gas in the digestive tract. **2.** Expelling of gas from a body orifice, esp. the anus. The average person excretes 400 to 1200 cc of gas each day. The gas passages may average a dozen a day in some persons and up to a hundred in others. Flatus from the lower intestinal tract contains hydrogen, methane, skatoles, indoles, carbon dioxide, and small amounts of oxygen and nitrogen. SEE: *borborygmus*; *eructation*.

Foods known for their ability to cause excess intestinal gas include beans, peas, lentils, cabbage, onions, Brussels sprouts, bananas, apples, raisins, apricots, high-fiber cereals, whole wheat products, milk and milk products, and sorbitol present in some dietetic foods.

TREATMENT: Some persons can control excess intestinal gas by avoiding foods they have found to be flatulogenic. Others in whom there is no distinct relationship to foods should be reassured that flatulence, although sometimes socially awkward or embarrassing, is not detrimental to health.

Administration of the enzyme alpha-D-galactosidase derived from *Aspergillus niger* may be effective in treating intestinal gas or bloating due to eating a variety of grains, cereals, nuts, and seeds of vegetables containing sugars such as raffinose or verbacose. This includes oats, wheat, beans, peas, lentils, foods containing soy, pistachios, broccoli, Brussels sprouts, cabbage, carrots, corn, onions, squash, and cauliflower.

vaginal f. Expulsion of air from the vagina. Air can enter the vagina during sexual intercourse.

flatus tube A rectal tube to facilitate expulsion of flatus. It formerly was used in cases of severe distention or before a saline enema.

flatworm (flăt'worm) A worm belonging to the phylum Platyhelminthes.

flavescent (flā-věs'ěnt) Yellowish.

Flavimonas oryzihabitans (flā'vī-mō'nās, vim'ō, ō-rī'zī-hāb'ī-tāns) [L. *flavus*, tawny, yellow + Gr. *monas*, unit; L. fm. Gr. *oryza*, rice + L. *habitare*, to inhabit] SEE: under *Pseudomonas*.

flavin (flā'vīn) One of a group of natural water-soluble pigments occurring in milk, yeasts, bacteria, and some plants. All contain the flavin or isoalloxazine nucleus and are yellow. Flavin is present in riboflavin and nicotinamide adenine dinucleotide dehydrogenase.

flavin adenine dinucleotide ABBR: FAD. A hydrogen carrier in the citric acid cycle of cell respiration; it is a derivative of riboflavin.

flavism (flā'vīzm) [L. *flavus*, yellow, + Gr. *-ismos*, condition] Having a yellow tinge.

Flavivirus (flā'vī-vī'rūs) A genus of RNA viruses of the family Flaviviridae, previously called arboviruses. In this genus are the agents of yellow fever, West Nile and St. Louis encephalitis, and dengue fever. The vectors are usually mosquitoes.

Flavobacterium (flā'vō-bāk-tē'rē-ŭm) A genus of gram-negative, rod-shaped bacteria found in soil and water. In culture the bacteria produce an orange-yellow pigment. Members of the genus rarely cause human infections. When they do, they typically infect immunosuppressed or critically ill patients. One species, *Flavobacterium meningosepticum* is esp. virulent for premature infants, in whom it causes a potentially fatal meningitis.

flavone (flā'vōn) C₁₅H₁₀O₂; the chemical from which the natural colors of many vegetables are derived.

flavoprotein (flā'vō-prō'tēn) One of a group of conjugated proteins that contain nicotinamide adenine dinucleotide (NAD) phosphate and NAD dehydrogenase, enzymes that are essential in cellular respiration.

flavor (flā'vor) 1. The quality of a substance that affects the sense of taste. It may also stimulate the sense of smell. 2. A material added to a food or medicine to improve its taste.

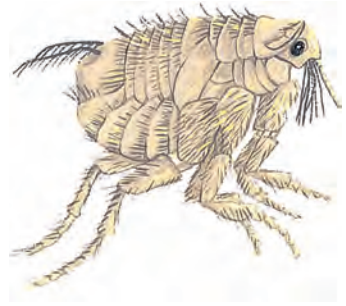
flaxseed (flāks'sēd) The seed of *Linum usitatissimum*. SYN: *linseed*.

flaxseed oil (flāks'sēd'ō) [AS. *fleax*, linen + *sæd*, seed] Oil extracted from the seeds of the flax plant (*Linum usitatissimum*), used as a nutritional supplement. Flaxseed oil contains alpha-linolenic acid, an essential omega-3 fatty acid promoted for its effect in preventing heart disease, inflammatory bowel disease, and arthritis. SEE: *essential fatty acid*; *flaxseed*; *linolenic acid*.

fl. dr. *fluidram*.

flea (fiē) [AS. *flea*] Any insect of the order Siphonaptera. Fleas are wingless, suck blood, and have legs adapted for

jumping. Usually they are parasitic on warm-blooded animals including humans. Fleas of the genus *Xenopsylla* transmit the plague bacillus (*Yersinia pestis*) from rats to humans. Fleas may transmit other diseases such as tularemia, endemic typhus, and brucellosis. They are intermediate hosts for cat and dog tapeworms. SEE: *illius*.



FLEA

Xenopsylla (orig. mag. ×15)

f. bite SEE: under *bite*.

cat f. *Ctenocephalides felis*.

chigger f. *Tunga penetrans*. SYN: *chiggers*; *jigger*.

dog f. *Ctenocephalides canis*.

human f. *Pulex irritans*.

rat f. *Xenopsylla cheopis*.

flea infestation The harboring of fleas, esp. in a home with dogs or cats. It is possible to kill the flea population by treating the house for 24 hr by using naphthalene, permethrins, and other substances.



Any plants, pets, or humans could suffer adverse effects if they remain in the house during the treatment period. The house should be thoroughly ventilated afterwards to remove the fumes.

fleece of Stilling A meshwork of white fibers that surrounds the dentate nucleus of the cerebellum.

Fleming, Sir Alexander (flēm'īng) A Scottish physician, 1881–1955, who in 1945, along with Ernst B. Chain and Sir Howard W. Florey, was awarded the Nobel Prize in medicine and physiology for the discovery of penicillin.

flesh [AS. *flaesc*] The soft tissues of the animal body, esp. the muscles. SEE: *carnivorous*; *meat*.

goose f. *Cutis anserina*.

proud f. A fleshy, polyp-shaped hemangioma that may develop at the site of a wound. It bleeds easily and is usually tender. SYN: *pyogenic granuloma*.

Fletcher factor (flēch'ēr) A blood clotting factor, prekallikrein.

fletcherism (flĕch'ĕr-ĭzm) [Horace Fletcher, U.S. dietician, 1849–1919] Taking small amounts of food at a time. These small bites are chewed for a prolonged period prior to swallowing. SEE: *psomophagia*.

flex (flĕks) [L. *flexus*, bent] **1.** To contract, as a muscle; to increase the angle of a joint (flexion). **2.** To fold the bones and soft tissues of a joint from a more or less straightened condition into a V-shaped position.

Flexeril SEE: *cyclobenzaprine*.

flexibilitas cerea (flĕks'ĭ-bĭl'ĭ-tās sĕ'rĕ-ă) [L.] Waxy flexibility.

flexibility [L. *flexus*, bent] **1.** Adaptability. **2.** The quality of bending without breaking; . SYN: *pliability*.

relative f. Increased mobility or frequency of movement in a joint adjacent to a body part with restricted mobility, such as an injured muscle, bone, capsule, tendon, or ligament. This can be a normal relationship between segments, but it can cause pathology and impairments. Relative flexibility can account for overuse, sprain, or strain of a joint due to stiffness in an adjacent joint. For example, lumbar spine strain due to short hamstrings limits hip motion.

waxy f. A cataleptic state in which limbs retain any position in which they are placed. It is characteristic of cataleptic patients. SYN: *flexibilitas cerea*.

flexible, adj.

flexile (flĕks'ĭl) [L. *flexus*, bent] Pliant, flexible.

flexion (flĕk'shŭn) [L. *flexio*] **1.** The act of bending or condition of being bent in contrast to extension. SEE: *antecurvature*; *illus*. **2.** Decrease in the angle between the bones forming a joint.



FLEXION

Flexion of the lower extremity

flexor (flĕks'or) [L.] A muscle that brings two bones closer together, causing flexion of the part or a decreased angle of the joint. Opposed to extensor.

flexure (flĕk'shĕr) [L. *flexura*] A bend. **anorectal flexure** The sharp forward bend at the anorectal junction as the rectum passes through the pelvic dia-

phragm muscles. This acute bend, which is normally maintained by the puborectalis sling muscles, helps to keep feces in the rectum. During defecation the pelvic diaphragm muscles relax (so the puborectalis sling relaxes) and the sharp bend between rectum and anus straightens; this makes the passage of feces from rectum to anus easier.

duodenojejunal f. A sharp curve at the meeting point of the jejunum and duodenum. The duodenojejunal flexure hangs from the diaphragm by a thin muscle, the suspensory muscle of the diaphragm.

hepatic f. The bend of the colon under the liver; the junction of the ascending and transverse colon. SYN: *right colic flexure*.

left colic f. Splenic flexure.

right colic f. Hepatic f.

sigmoid f. An S-like curve (in the left iliac fossa) of the descending colon as it joins the rectum. Former name for sigmoid colon. SEE: *colon* for *illus*.

splenic f. The bend of the colon near the spleen; the junction of the transverse and descending colon. The splenic ficture is suspended from the diaphragm by the phrenocolic ligament, which passes over the lower part of the left kidney. SYN: *left colic flexure*.

flicker The visual sensation of alternating intervals of brightness caused by rhythmic interruption of light stimuli.

flicker phenomenon A sensation of continuous light caused by an intermittent light stimulus produced at a certain rate.

Flinders island spotted fever (flĭn'dĕrz) [Name of an island off northeast Tasmania] ABBR: FISF. A febrile spotted fever transmitted to humans by the bite of *Ixodes* ticks infected with *Rickettsia honei*. It is found primarily in Victoria and Tasmania, Australia, and is similar to Rocky Mountain Spotted Fever in the U.S.

flip-flop A condition in which the reduction in fraction of inspired oxygen to reduce hypoxemia in infants causes a persistent and greater-than-expected decrease in oxygen tension (PaO₂).

FLO *floculation*.

floater (flō'tĕr) [AS. *flotian*, float] A translucent speck that passes across the visual field. Floaters vary in size and shape. They are due to small bits of protein or cells floating in the vitreous. Most people have these benign materials in their eyes. They can also be associated with posterior vitreous detachments, retinal hemorrhages, inflammation, or detachment SEE: *muscae volitantes*.

floating [AS *flota*, a raft] **1.** Moving about; out of normal location. **2.** A staffing arrangement in which one may be asked to work on any of several hospital

wards or units, depending on the immediate needs of the health care institution. **3.** In anatomy, free; unattached.

floating ribs The 11th and 12th ribs, which do not articulate with the sternum.

floccillation, floccitation (flōk'sī-lā'shūn, -tā'shūn) [L. *floccilatio*] Semiconscious picking at bedclothes in association with fever, stupor, and delirium. SYN: *carphology*.

floccose (flōk'ōs) [L. *floccosus*, full of wool tufts] In biology, pert. to a growth consisting of short and densely but irregularly interwoven filaments.

flocculence (flōk'ū-lēns") Resemblance to shreds or tufts of cotton.

flocculent (flōk'ū-lēnt) **1.** Resembling tufts or shreds of cotton. **2.** Pert. to a fluid or culture containing whitish shreds of mucus.

flocculus (flōk'ū-lūs) *pl.* **flocculi** [L., little tuft] **1.** A small tuft of woollike fibers. **2.** A lobe below and behind the middle peduncle of the cerebrum on each side of the median fissure. **floccular, adj.**

Flonase SEE: *fluticasone*.

flood **1.** A pathological uterine hemorrhage. **2.** Excessive menstrual bleeding.

flooding (flūd'ing) **1.** A colloquial term for excessive menstrual flow. **2.** In treating phobias, repeated exposure to the disturbing ideas, situations, or conditions until these no longer produce anxiety.

floor [AS *flor*] The surface that forms the lower limit of a cavity or space, as the floor of the cranial cavity, fourth ventricle, mouth, nasal fossa, pelvis, or a cavity preparation in a tooth.

pelvic f. The pelvic diaphragm and the perineal muscles.

floppy-valve syndrome Mitral valve prolapse.

flora [L. *flor*, flower] **1.** Plant life as distinguished from animal life. **2.** Microbial life occurring or adapted for living in a specific environment, such as the intestinal, vaginal, oral, or skin flora. SEE: *fauna*.

intestinal f. Bacteria present in the intestines. The colon of the fetus is sterile, but bacteria are acquired during vaginal birth and subsequently from people and the environment. These bacteria produce vitamins, esp. vitamin K, and inhibit the growth of pathogens. Certain antibiotics may reduce the number and kinds of bacteria present. SEE: *Clostridium difficile*.

normal f. Microorganisms including bacteria, protozoa, and fungi that are found on or in specific areas of the body. The skin and mucous membranes of the oral cavity, intestines, upper respiratory tract, and vagina have specific, permanent flora. They are harmless, even beneficial, in their usual sites, and they

inhibit the growth of pathogens, but they can cause infection if they are introduced into unusual sites. If the proportions of the various microorganisms are disrupted, one species may overgrow, as does *Candida* when bacterial flora are diminished by antibiotics. SYN: *resident flora*. SEE: *colitis*, *pseudomembranous*; *infection*; *microorganism*.

The largest concentration of bacteria in humans is in the colon, where more than 400 genera may coexist. In the colon, anaerobic bacteria outnumber aerobic bacteria 1000:1, and there may be 10^{11} per g of fecal material. The anaerobic gram-positive lactobacilli may be concentrated in the vagina at the 10^5 to 10^8 /ml level, but 20% of women have no detectable anaerobes in the vagina. In dental plaque and gingival sulci, the bacteria may reach a concentration of 10^{12} /ml.

resident f. Normal flora.

transient f. Microbes inhabiting a body surface or cavity for a brief period of time, usually as a result of their promotion and selection by antibiotic therapy, chemotherapy, hospitalization, illness, or surgery.

Flor-Essence A tea containing anti-inflammatory, antioxidant, and immunostimulatory chemicals. It is not approved as a treatment for cancer by the U.S. Food and Drug Administration.

florid (flōr'id) [L. *floridus*, blossoming] **1.** Bright deep-red. The term describes skin coloration. **2.** Complete or full-bodied, as in an illness that is in full flower.

floss **1.** A waxed or unwaxed tape or thread used to clean and remove plaque between teeth and below the gumline. SYN: *dental f.* **2.** To use dental floss or tape to remove plaque and calculus from the otherwise inaccessible dental surfaces between teeth.

dental f. Floss (1).

flour [L. *flor*, flower] Finely ground meal obtained from wheat or other grain; any soft fine powder.

Flovent SEE: *fluticasone*.

flow [AS. *flowan*, to flow] **1.** Movement of a gas or liquid. **2.** The act of moving or running freely.

laminar f. Laminar air flow.

peak f. The maximum volume of air that can be expelled from the lungs during a vigorous exhalation. Its measurement is used to determine the degree of respiratory impairment in patients with obstructive lung diseases.

turbulent f. A movement of gas in disorderly currents, associated with high velocity and high density with increased tubing diameter.

flow cell A type of optical cell employed in photometers and cell counters through which the sample and any stan-

dards are passed for detection. SEE: *cytometry*.

flowmeter A device for measuring the movement of a gas or liquid. It is used esp. in monitoring the use of anesthetic gases.

flow state An altered state of consciousness in which the mind functions at its peak, time may seem distorted, and a sense of happiness prevails. In such a state the individual feels truly alive and fully attentive to what is being done. This state is distinguished from strained attention, in which the person forces himself to perform a task in which he has little interest.

floxuridine (fłöks-ūr'ī-dēn) An antimetabolite used to treat solid cancers (e.g., adenocarcinomas).

fl. oz. *fluid ounce*.

flu (floo) **1.** Influenza. **2.** An imprecise term for any respiratory or gastrointestinal illness.

bird f. Avian influenza.

Fluarix (floo'ä-rīks) Influenza virus vaccine, trivalent, types A and B.

fluconazole (floo-kōn'ī-zōl") A systemic antifungal administered orally or intravenously to treat fungal infections caused by susceptible organisms. Such conditions include oropharyngeal and esophageal candidiasis, serious systemic candidal infections, urinary tract infections, peritonitis, and cryptococcal meningitis. SYN: *Diflucan*.

fluctuant (flūk'chū-ánt) Varying or unstable. SEE: *fluctuation*.

fluctuation (flūk'chū-ā'shūn) [L. *fluctuatio*] **1.** A variation from one course to another. **2.** A wavy impulse felt during palpation. It is produced by vibration of body fluid (e.g., the contents of an abscess).

flucytosine (flū-sī'tō-sēn") An antifungal drug used to treat candida, cryptococci, and other fungi. It is used with amphotericin B to improve the efficacy of therapy against cryptococcal meningitis.

fludeoxyglucose (floo'dē-ōk'sē-gloo'kōs) A fluorinated, radiographically visible glucose molecule used in positron emission tomography (PET scanning) to demonstrate the glucose uptake of tissues. During the evaluation of mass lesions suspected of being cancerous, high fludeoxyglucose uptake strongly suggests malignancy.

fluence (floo'ēns) [L. *fluere*, to flow] In radiation oncology, the number of photons per unit area. Fluence is one of several modifiable factors in the treatment of diseased tissues with radiation.

fluency (floo'ēn-sē) The ease and efficiency of speech; the production of speech without pauses, lapses, or hesitation. **fluent**, *adj.*

fluid [L. *fluidus*] A nonsolid, liquid, or gaseous substance. SEE: *secretion*.

allantoic f. Fluid found in the fetal

membrane that develops from the yolk sac.

amniotic f. A clear fluid that surrounds the fetus in the amniotic sac. Its primary functions are to suspend and protect the growing fetus, allow freedom of movement, maintain even constant temperature, and aid normal development of the fetal lungs. Volume increases from about 50 ml at 12 gestational weeks to around 800 ml at 38 weeks. The fluid is constantly being circulated by the fetus swallowing fluid, urinating, and inhaling/exhaling fluid during fetal respiration. Samples of amniotic fluid may be collected (amniocentesis) to identify fetal chromosomal abnormalities, state of health and maturity. SEE: *amniocentesis*; *oligohydramnios*; *polyhydramnios*.

ascitic f. Clear, pale, straw-colored fluid occurring in ascites. The fluid is normally sterile; its specific gravity is normally 1.005 to 1.015; the cellular content is less than 250 white blood cells per cubic millimeter, and its protein content is low. Cancer, heart failure, liver failure, peritonitis, and tuberculosis may alter the amount or character of ascites.

body f. A fluid found in one of the fluid compartments of the body. The principal fluid compartments are intracellular and extracellular. A much smaller segment, the transcellular, includes fluid in the tracheobronchial tree, the gastrointestinal tract, and the bladder; cerebrospinal fluid; and the aqueous humor of the eye. The chemical composition of fluids in the various compartments is carefully regulated. In a normal 154 lb (70 kg) adult human male, 60% of total body weight (i.e., 42 L) is water; in a normal adult female is 55% of total body weight is water (39 L). SEE: *acid-base balance*; *fluid replacement*; *fluid balance*.

Bouin's f. SEE: *Bouin's fluid*.

cerebrospinal f. ABBR: CSF. The sodium-rich, potassium-poor tissue fluid of the brain and spinal cord, which supplies nutrients and removes waste products; it is also a watery cushion that absorbs mechanical shock to the central nervous system. SYN: *spinal fluid*. SEE: *lumbar puncture*.

FORMATION: The fluid is formed by the choroid plexuses of the lateral and third ventricles. That of the lateral ventricles passes through the foramen of Monro to the third ventricle, and through the aqueduct of Sylvius to the fourth ventricle. There it may escape through the central foramen of Magendie or the lateral foramina of Luschke into the cisterna magna and to the cranial and spinal subarachnoid spaces. It is reabsorbed through the arachnoid villi into the blood in the cranial venous

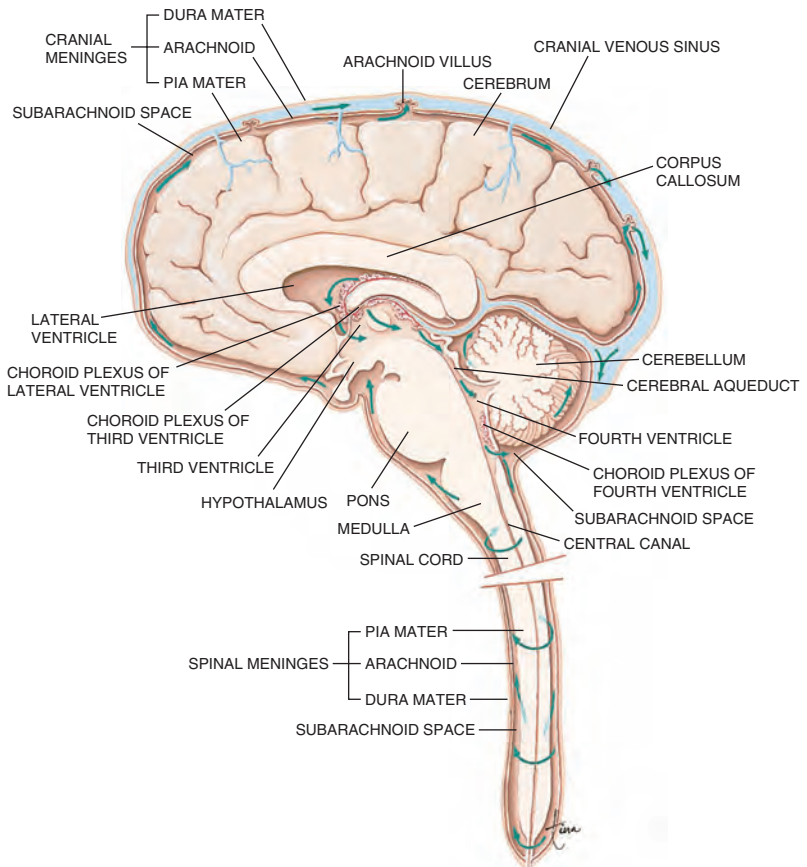
sinuses, and through the perineural lymph spaces of both the brain and the cord. **SEE: illus. (Formation, Circulation, and Reabsorption of Cerebrospinal Fluid).**

CHARACTERISTICS: The fluid is normally watery, clear, colorless, and almost entirely free of cells. The initial pressure of spinal fluid in a side-lying adult is about 100 to 180 mm of water. On average, the total protein is about 15 to 50 mg/dl, and the concentration of glucose is about two-thirds the concentration of glucose in the patient's serum. Its pH, which is rarely measured clinically, is slightly more acidic than the pH of blood. Its concentration and alkaline reserve are similar to those of blood. It does not clot on standing. Turbidity suggests an excessively high number of cells in the fluid, typically white blood cells in infections such as meningitis or red blood cells in intracerebral hemor-

rhage. **SEE: illus. (Cerebrospinal Fluid Specimens).**

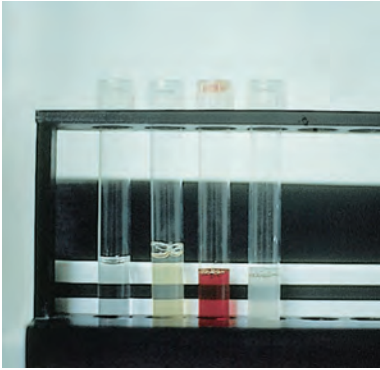
CSF may appear red following a recent subarachnoid hemorrhage or when the lumbar puncture that obtained the CSF caused traumatic injury to the dura that surround the fluid. Centrifugation of the fluid can distinguish between these two sources of blood in the spinal fluid: the supernatant is usually stained yellow (xanthochromic) only when there has been a recent subarachnoid hemorrhage.

Many conditions may cause increases in CSF total protein: infections, such as acute or chronic meningitis; multiple sclerosis (when oligoclonal protein bands are present); Guillain-Barré syndrome; and chronic medical conditions like cirrhosis and hypothyroidism (when diffuse hypergammaglobulinemia is present). The concentration of glucose in the CSF rises in uncontrolled diabetes mellitus and drops



CEREBROSPINAL FLUID

Formation, circulation, and reabsorption of CSF



CEREBROSPINAL FLUID SPECIMENS

(Left to right) normal, xanthochromic, hemolyzed, cloudy

precipitously in meningitis, sarcoidosis, and some other illnesses. Malignant cells in the CSF, demonstrated after centrifugation or filtering, are hallmarks of carcinomatous meningitis.

MICROORGANISMS: The CSF is normally sterile. Meningococci, streptococci, *Haemophilus influenzae*, *Listeria monocytogenes*, and gram-negative bacilli are recovered from the CSF only in cases of meningitis. Syphilitic meningitis is usually diagnosed with serological tests for the disease, such as the venereal disease research laboratory (VDRL) test, the rapid plasma reagin (RPR) test, or the fluorescent treponemal antibody test. Cryptococcal infection of the CSF may be demonstrated by India ink preparations, or by latex agglutination tests. Tuberculous meningitis may sometimes be diagnosed with Ziehl-Neelsen stains, but more often this is done with cultures. These last three infections (syphilis, cryptococcosis, and tuberculosis) are much more common in patients who have acquired immunodeficiency syndrome (AIDS) than in the general population.

crevicular f. Gingival sulcular f.

extracellular f. The body fluid outside of cells. It includes the interstitial (tissue) fluid, plasma, and cerebrospinal fluid. Water is the common solvent of all these fluids. Approximately one third of all body water is extracellular and one fourth of the extracellular fluid is plasma.

extravascular f. All the body fluids outside the blood vessels. They include tissue fluid, fluids within the serous and synovial cavities, cerebrospinal fluid, and lymph.

gingival f. Gingival sulcular f.

gingival sulcular f. ABBR: GSF. In dentistry, the fluid that seeps through the gingival epithelium. It increases with gingival inflammation. Cellular elements within GSF include bacteria, desquamated epithelial cells, and leukocytes. Electrolytes and some organic compounds are also present. SYN: *crevicular fluid*; *gingival fluid*.

interstitial f. Tissue fluid; the fluid between cells, in tissue spaces.

intracellular f. The potassium-rich, sodium-poor watery solution inside cells. Approx. 55-75% of total body water is intracellular.

intraocular f. Fluid within the anterior and posterior chambers of the eye. SYN: *aqueous humor*.

intravascular f. That portion of the total body fluid contained within blood and lymphatic vessels.

pleural f. Fluid secreted by serous membranes in the pleurae that reduces friction during respiratory movements of the lungs. When excessive pleural fluid is secreted and not absorbed, a pleural effusion accumulates. SEE: *ilus*.

seminal f. Semen.

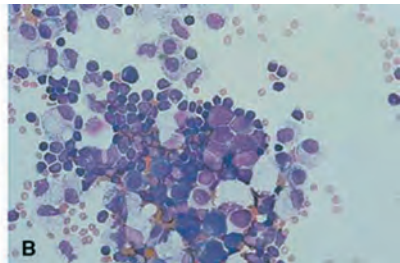
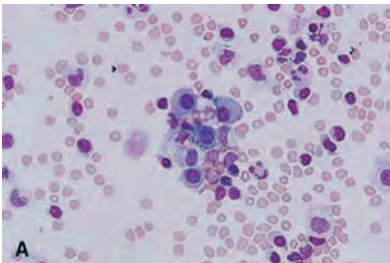
serous f. Fluid secreted by serous membranes that reduces friction in the serous cavities (pleural, pericardial, and peritoneal).

spinal f. Cerebrospinal f.

synovial f. SEE: *synovial fluid*.

fluid balance SEE: *under balance*.

fluid balance, readiness for enhanced A pattern of equilibrium between fluid



PLEURAL FLUID

(A) Normal fluid with lymphocytes and monocytes (orig. mag. $\times 500$), (B) small cell carcinoma in fluid (orig. mag. $\times 500$)

volume and chemical composition of body fluids that is sufficient for meeting physical needs and can be strengthened. SEE: *Nursing Diagnoses Appendix*.

fluidextract, fluidextractum (floo'îd-ëk'străkt, floo'îd-ëk-străk'tüm) [L. *fluidus*, fluid, + *extractum*, extract] A solution of the soluble constituents of vegetable drugs in which each cubic centimeter or milliliter represents 1 g of the drug. Fluidextracts contain alcohol as a solvent or preservative. Many of them form precipitates when water is added.

fluidized therapy (floo'î-dîzd' thér'ă-pē) The use of small solid particles suspended within moving air to treat pain or prevent or treat pressure sores.

fluidotherapy (floo'îd-ô-thér'ă-pē) [" + "'] The application of warmed cellulose particles suspended in forced dry air to heat an injured or painful body part, esp. prior to muscle strengthening or range-of-motion exercises.

fluidounce (floo'îd-owns') SYMB: f3. An apothecaries' measure of fluid volume, equal to 8 fluidrams or 29.57 ml.

fluidram (floo'î-drām') SYMB: f3. An apothecaries' measure of fluid volume, equal to 3.697 ml.

fluid replacement Administration of fluids by any route to correct fluid and electrolyte deficits. The deficit may be physiological, as in dehydration due to perspiring in a hot, dry climate during hard physical labor or sports, or due to inadequate intake of fluids. It may be pathological, as in traumatic or septic shock, acute respiratory distress syndrome, severe vomiting or diarrhea or both, or metabolic and endocrine conditions such as diabetic ketosis, chronic renal failure, and adrenal insufficiency. SEE: *intravenous infusion* for illness; *central venous catheter*; *central line*; *intravenous infusion*; *oral rehydration therapy*; *solution*.

The goal of fluid replacement is to correct fluid, electrolyte, and acid-base imbalances. The oral route of replacement is used if possible. The intravenous, intraperitoneal, or subcutaneous routes are also used, with the intravenous route being used most frequently. Fluids may be isotonic, hypotonic, or hypertonic; may contain certain crystalloids (e.g., sodium, potassium, chloride, or calcium); or may contain osmotically active substances (e.g., glucose, protein, starch, or a synthetic plasma volume expander such as dextran or hetastarch). The composition, rate of administration, and route depend on the clinical condition being treated.



A critically ill patient receiving fluid replacement should be monitored frequently to be certain that fluid overload is prevented and that the solution is flowing and not extravasating. This

is esp. important in treating infants, small children, and the elderly.

fluid retention Failure to eliminate fluid from the body because of renal, cardiac, or metabolic disease, or combinations of these disorders. Excess dietary salt can contribute to fluid retention. A low-sodium diet is a helpful adjunct to treatment. The advisability of using diuretics, angiotensin-converting enzyme inhibitors, and/or other drug therapies depends on the functional state of the kidneys, heart, and liver.

fluid volume, deficient [hyper/hypotonic] Decreased intravascular, interstitial, and/or intracellular fluid. This refers to dehydration with changes in sodium. SEE: *Nursing Diagnoses Appendix*.

fluid volume, deficient [isotonic] Decreased intravascular, interstitial and/or intracellular fluid. This refers to dehydration, water loss alone without change in sodium. SEE: *Nursing Diagnoses Appendix*.

fluid volume, excess The state in which an individual experiences increased isotonic fluid retention. SEE: *Nursing Diagnoses Appendix*.

fluid volume, risk for deficient At risk for experiencing vascular, cellular, or intracellular dehydration. SEE: *Nursing Diagnoses Appendix*.

fluid volume, risk for imbalance A risk of a decrease, increase, or rapid shift from one to the other of intravascular, interstitial, and/or intracellular fluid. This refers to the loss, gain, or both of body fluids. SEE: *Nursing Diagnoses Appendix*.

fluke (flook) [AS. *floc*, flatfish] A parasitic worm belonging to the class Trematoda, phylum Platyhelminthes. Those parasitic in humans belong to the order Digenea. Most flukes have complex life cycles including asexual reproductive forms that live in a mollusc (snail or bivalve). Stages of a typical fluke include adult, egg, miracidium, sporocyst, redia, cercaria, and metacercaria.

blood f. A fluke of the genus *Schistosoma*, including *S. haematobium*, *S. mansoni*, and *S. japonicum*. Adults live principally in the mesenteric and pelvic veins. They cause schistosomiasis.

intestinal f. One of several species of flukes infesting the intestine in humans. They include *Gastrodiscoides hominis*, *Fasciolopsis buski*, *Heterophyes heterophyes*, and *Metagonimus yokogawai*.

liver f. One of several species of fluke infesting the liver and bile ducts. Those infesting humans include *Clonorchis sinensis*, *Fasciola hepatica*, *Dicrocoelium dendriticum*, and *Opisthorchis felinus*. Adult liver flukes infest biliary and pancreatic ducts. The eggs pass from the

body with the feces and continue their development in snails of the subfamily Buliminae (family Hydrobiidae). Cercariae emerge and infest numerous species of freshwater fishes in which they encyst. Infestation results from eating raw fish containing encysted metacercariae.

lung f. A fluke that infests lung tissue. Only one species, *Paragonimus westermani*, is common in humans.

flumina pilorum (floo'mi-nā pi-lō'rūm) [L., rivers of hair] **1.** The curved lines along which the hairs of the body are arranged, esp. in the fetus. **2.** Hairs lying in the same direction.

FluMist Influenza vaccine, live, intranasal.

fluo- Combining form meaning *flow*.

fluorapatite, fluoroapatite (floo-rāp', floo'ā-rō-āp'ā-tīt') A compound formed when tooth enamel is treated with appropriate concentrations of the fluoride ion. The modified hydroxyapatite is less acid soluble and therefore resistant to caries. Fluorapatite is formed in bone and in enamel and dentin of teeth when fluoride is taken systemically. SYN: *fluorhydroxyapatite*.

fluorescein-dilaurate test An indirect test of pancreatic function in which fluorescein bound to dilaurate is given orally to a patient and its excretion in the urine is measured. Patients with markedly abnormal pancreatic function fail to excrete the fluorescent tracer in the urine.

fluorescein sodium (floo'ō-rēs'ē-īn) An orange-colored vegetable dye used to examine the eye. Typically, it is used to make visible defects in the corneal epithelium, such as those seen in dry eyes and corneal abrasions and ulcers. Intravenously injected fluorescein is used in retinal angiography to diagnose vascular leakage in the retina.

fluorescence (floo'ō-rēs'ēnts) The emission of a longer wavelength light by a material exposed to a shorter wavelength light. Fluorescent materials, such as flourospar, the first material found to have this property, emit light only while a light is shining on them.

fluorescence in situ hybridization ABBR: FISH. A process in which a small section of fluorescently labeled DNA (a DNA probe) is linked with (hybridized to) the DNA from a chromosome of interest. This technique is used to identify the location of specific genes on chromosomes or areas in which chromosomes have been damaged or duplicated. FISH is used in amniocentesis to analyze retrieved fetal cells for evidence of specific genetic anomalies such as trisomy.

fluorescence polarization immunoassay ABBR: FPIA. A means of identifying and quantifying the amount of an anti-

gen in a specimen in which a fluorescently labeled antibody is mixed with a sample thought to contain the antigen is exposed to polarized light. Bound fluorescently labeled antibody reacts to polarized light in a characteristic fashion not demonstrated by unbound antibody, allowing for identification and measurement of the ligand.

fluorescent (floo-ō-rēs'ēnt) **1.** In biology, having one color by transmitted light and another by reflected light. **2.** Luminous when exposed to other light rays.

fluorescent polarization immunoassay ABBR: FPIA. An antigen-antibody analysis using fluorescent-tagged antigens. The technique is based on the principle that antigens, which are small molecules, rotate rapidly and therefore emit randomly polarized fluorescence, whereas antigens bound to antibodies, which are large molecules, rotate slowly and produce highly polarized fluorescence. When many unbound antigens are present, there will be less polarized light.

fluorescent screen A sheet of cardboard, paper, or glass coated with a material that fluoresces visibly, such as calcium tungstate. It is used in fluoroscopy, in which electromagnetic radiation cause the object being examined to cast a shadow.

fluorescent treponemal antibody-absorption test ABBR: FTA, FTA-ABS. A test for syphilis using the fluorescent antibody technique that is used to confirm a positive rapid plasma reagin, or Venereal Disease Research Laboratory test.

fluorhydroxyapatite (floo-hī'drōk-sē-āp'ī-tīt', floo-ā-hī') Fluorapatite.

fluoridation (floo'or-i-dā'shūn) The addition of fluorides to a water supply to prevent dental caries. The development of dental caries in the deciduous and permanent teeth can be decreased by providing fluoride as a supplement in the drinking water, as a topical application to the teeth, or as a daily medication. There are several important considerations. Fluoride that exceeds the daily dose discolors the teeth if a child ingests fluoride while the teeth are developing (i.e., from birth to 8 or 10 years). If a woman consumes fluoridated water during pregnancy, the deciduous teeth of the fetus, which begin to mineralize during the fourth or fifth month in utero, incorporate that compound and become more resistant to caries. In the adult tooth, when enamel has lost mineral (white spot lesion), fluoride greatly enhances the remineralization, because it leads to the precipitation of calcium phosphate.

The most commonly used method of administering fluoride is by providing drinking water that contains between

0.7 and 1.2 parts per million, depending on the climate. In rural areas without a central water supply, fluoridation of the school's water supply is an alternative to community water fluoridation. Because children spend only 5 to 7 hours a day in school, the advisable concentration of fluoride in the school water supply should be 4.5 times the optimal level recommended for the community water fluoridation for that locale. Persons exposed to chronically high levels of fluoride may develop fluorosis. Acute intoxication with extremely high doses of fluoride may be fatal.



Children drinking fluoridated water should not receive supplemental fluoride medication.

fluoride (floo'ō-rīd) A compound of fluorine, usually with a radical; a salt of hydrofluoric acid. Three preparations of fluoride-containing compounds are available for topical application to teeth for the prevention of decay. They are stannous fluoride, sodium fluoride, and acidulated phosphate fluoride. Considerable evidence shows that fluoride compounds prevent dental caries.



Topical fluoride applications are toxic if swallowed. Seek medical care immediately.

acidulated phosphate f. ABBR: APF. A fluoride compound used to prevent dental caries, available in solution and gel. It has often been used by dental professionals as a cariostatic agent.

sodium f. SEE: under *sodium*.

stannous f. An unstable acidic fluoride solution, SnF_2 , used to prevent dental caries. It has traditionally been used in some dentifrices and has a bitter, metallic taste.

fluoride dental treatment The application of a fluoride solution or gel to the teeth as a means of controlling or preventing caries. SEE: *dental sealant*.

fluorine (floo'ō-rēn, floo'rēn) SYMB: F. A gaseous chemical element, atomic weight 18.9984, atomic number 9. It is found in the soil in combination with calcium. SEE: *fluoridation*.

fluoroacetate (floo'or-ō-ās'ē-tāt) A salt of fluoroacetic acid. SEE: *Poisons and Poisoning Appendix*.

fluorocarbon (floo-or'ō-kār'bōn) A general term for a hydrocarbon in which some of the hydrogen atoms have been replaced with fluorine. The use of such compounds in aerosol sprays was discontinued because of an adverse effect on the ozone layer of the earth's atmosphere.

fluorochrome (floo'ōr-ō-krōm") A color-

ing agent that adds a fluorescent glow to an object, e.g., in the staining of microscopic specimens for analysis. A common use of fluorescent stains is to identify acid-fast bacteria, such as *Mycobacterium tuberculosis*.

fluorometer (floo-or-ōm'ē-tēr) **1.** A device for determining the amount of radiation produced by x-rays. **2.** A device for adjusting a fluoroscope to establish the location of the target more accurately and to produce an undistorted image or shadow. **3.** A clinical laboratory instrument used in many types of immunochemistry assays (e.g., fluorescent polarization immunoassay).

fluorophores (floo'r-ā-fōr, floo'r-ā-rā) A substance that tends to fluoresce, such as fluorescein.

fluoroquinolone (floo-ō-kwīn'ō-lōn) A class of antimicrobial agents that kill bacteria by inhibiting their DNA gyrase and topoisomerase enzymes. Antibiotics of this class include ciprofloxacin, levofloxacin and moxifloxacin.



Pregnant women should not take these antibiotics because of their adverse effects on the developing fetus. Fluoroquinolone use is associated with tendon rupture.

fluoroscope (floo'or-ō-skōp) A device consisting of a fluorescent screen, mounted either separately or in conjunction with an x-ray tube, that shows the images of objects interposed between the tube and the screen. It has been replaced by the image intensifier for performing fluoroscopic studies.

fluoroscopy (floo-or'ōs'kō-pē) Examination of the body using a fluoroscope. Fluoroscopy is used in clinical medicine to provide real-time images of moving objects—e.g., to evaluate the motion of the diaphragm in a patient suspected of having phrenic nerve paralysis; or to visualize the movement of needles or catheters when they are placed inside the body (during cannulation of vessels or lumbar puncture).

fluorosis (floo-ō-sīs, floo'rā-) [" + "] Chronic fluorine poisoning, sometimes marked by mottling of tooth enamel. It may result from excessive exposure to fluorides from dietary, waterborne, and supplemental sources.

fluoxetine hydrochloride (floo-ōks'ī-tēn") A drug used in the treatment of depression, bulimia, and obsessive-compulsive disorder. It is an inhibitor of serotonin reuptake in the central nervous system.

flush [ME. *flusshen*, to fly up] **1.** Sudden redness of the skin. **2.** Irrigation of a cavity, or a device such as a feeding tube, with water.

hot f. Flash.

malar f. A bright-colored flush over

the malar area and cheekbones. It may be associated with any febrile disease.

fluticasone (floo-tī'kā-sōn") A corticosteroid administered in an aerosol inhaler to treat and prevent asthma. It is also used as a nasal spray to treat seasonal allergic rhinitis, nasal polyps, and other chronic inflammatory conditions; and topically to manage allergic and immunological skin problems. Its therapeutic classes are antiasthmatics, corticosteroids, and allergy, cold, and cough remedies.

flutter [AS. *floterian*, to fly about] A tremulous movement, esp. of the heart, as in atrial and ventricular flutter.

atrial f. A cardiac dysrhythmia marked by rapid (about 300 beats per minute) regular atrial beating, and usually a regular ventricular response (whose rate may vary depending on the conduction of electrical impulses from the atria through the atrioventricular node). On the electrocardiogram, the fluttering of the atria is best seen in leads II, III, and F as "sawtooth" deflections between the QRS complexes. Atrial flutter usually converts to sinus rhythm with low-voltage direct current (DC) cardioversion or atrial pacing.

SYMPTOMS: Patients may be asymptomatic, esp. when ventricular rates are less than 100 bpm. During tachycardic episodes, patients often report palpitations, dizziness, presyncope, or syncope.

TREATMENT: Radiofrequency catheter ablation of the responsible circuit eliminates the arrhythmia about 90% of the time.

diaphragmatic f. Rapid contractions of the diaphragm. They may occur intermittently or be present for an extended period. The cause is unknown.

mediastinal f. Abnormal side-to-side motion of the mediastinum during respiration.

ventricular f. Ventricular contractions of the heart at 250 beats per minute, creating a high-amplitude, sawtooth pattern on the surface electrocardiogram. The rhythm is lethal unless immediate life support and resuscitation are provided.

Flutter device A handheld device designed to facilitate clearance of mucus in hypersecretory lung disorders. Exhalation through the Flutter results in oscillations of expiratory pressure and airflow, which vibrate the airway walls, loosening mucus, decrease the collapsibility of the airways, and accelerate airflow. This facilitates movement of mucus up the airways. SEE: *cystic fibrosis*.

flutter-fibrillation Cardiac dysrhythmia alternating between atrial fibrillation and atrial flutter, or showing a pattern that is difficult to distinguish during routine cardiac monitoring.

Fluvirin Influenza virus vaccine, trivalent, types A and B.

flux [L. *fluxus*, a flow] **1.** An excessive flow or discharge from an organ or cavity of the body. **2.** In physics, the flow rate of liquids, particles, or energy. **3.** In dentistry, an agent that lowers the fusion temperature of porcelain and metals. **4.** In metallurgy, a substance used to increase the fluidity of a molten metal and to prevent or reduce its oxidation. **5.** A substance that deoxidizes, cleans, and promotes the union of surfaces to be brazed, soldered, or welded together.

Fluzone (floo'zōn") Influenza virus vaccine, trivalent, types A and B.

fly [AS. *fleoge*] An insect belonging to the order Diptera, characterized by sucking mouth parts, one pair of wings, and complete metamorphosis, such as the housefly, horsefly, or deerfly. The term is sometimes applied to insects belonging to other orders. SEE: *Diptera*.

black f. A fly of the genus *Simulium* whose bites often cause local bleeding and pain.

bluebottle f. A fly of the Calliphoridae family that delivers a painful and venomous sting. It breeds in dung or the flesh of dead animals.

flesh f. The Sarcophagidae.

screwworm f. A fly belonging to the families Calliphoridae and Sarcophagidae.

Spanish f. Cantharides.

tsetse f. SEE: *tsetse fly*.

warble f. Dermatobia.

Fm Symbol for the element fermium.

f.m. L. *fiat mistura*, let a mixture be made. This abbreviation is used in prescription writing.

fMRI *Functional magnetic resonance imaging*.

FNR *False-negative ratio*.

foam (fōm) [AS. *fam*] A mixture of finely divided gas bubbles interspersed in a liquid.

foam stability test Shake test.

foamy virus Spumavirus.

FOBT *Fecal occult blood test*.

focal (fō'kāl) Pert. to a focus.

focal disease A disease located at a specific and distinct area such as the tonsils, adenoids, or a boil.

focal infection Infection occurring near a focus, such as the cavity of a tooth.

focal neuropathy Any nerve disease or injury, e.g., carpal tunnel syndrome or peroneal nerve palsy, that affects a single nerve.

focal spot The area on the x-ray tube target that is bombarded with electrons to produce x-radiation.

foci (fō'sī) [L.] Pl. of focus.

focus pl. **foci** [L. *focus*, hearth] **1.** The point of convergence of light rays or sound waves. **2.** The starting point of a disease process.

real f. The point at which convergent rays intersect.

virtual f. The point at which divergent rays would intersect if extended backward.

FOD *focus-object distance.* The distance from the target of an x-ray tube to the surface being radiographed.

fog Droplets suspended in a gas, as minute water droplets in air.

fogging **1.** A method of testing vision, used particularly in testing myopia and in postcycloplegic examination, in which accommodation is relaxed by overcorrection. **2.** A method of intense application of an insecticide. The solution is nebulized and appears in the air as a mist. **3.** Unwanted density on radiographic film resulting from exposure to secondary radiation, light, chemicals, or heat.

fogging effect Transient difficulty in visualizing an ischemic stroke with computed tomography (CT) or magnetic resonance (MR) imaging, typically occurring about 10 days after the stroke.

fogo selvagem (fō'gō, goo sēl-vā'zhēm) [Portuguese, literally "wild fire"] ABBR: FS. An autoimmune disease that causes blistering of the skin of the head, neck or trunk, esp. when the skin is rubbed (Nikolsky's sign). It often causes a burning dysesthesia, from which its popular name is derived. The disease is typically found in Brazil or Colombia and has been associated with chronic or recurrent exposure to black flies. SYN: *endemic pemphigus foliaceus*.

foil A thin, pliable sheet of metal. In dentistry, various types of gold foil are used for restoring teeth.

folicin (fōl'ă-sin) Folic acid.

folate Folic acid.

fold [AS. *fealdan*, to fold] A ridge; a doubling back. SYN: *plica*.

amniotic f. The folded edge of the inner fetal membrane where it rises over and finally encloses the embryo of birds, reptiles, and some mammals.

aryepiglottic f. The ridgelike lateral walls of the entrance to the larynx.

axillary fold On the surface of the side of the trunk, the anterior or posterior ridge of the axilla. The anterior axillary fold is the border of the pectoralis major muscle. The posterior fold is the border of the latissimus dorsi muscle and the underlying teres major muscle.

circular f. Circular plica.

epicanthal f. Epicanthus.

gastric f. Any of the folds of mucosa, mostly longitudinal, in the empty stomach. SEE: *ruga*.

gluteal f. The linear crease in the skin that separates the buttocks from the thighs. This fold marks the lower

limits of the gluteus maximus muscle (and its overlying fat).

lacrima f. A valvelike fold in the lower part of the nasolacrimal duct.

mucobuccal f. The line of flexure where the oral mucosa passes from the maxilla or mandible to the cheek; the vestibule.

mucoabial f. The line of flexure where the oral mucosa passes from the maxilla or mandible to the lip.

mucosal f. A fold of mucosal tissue.

nail f. A groove in the cutaneous tissue surrounding the margins and proximal edges of the nail.

palmate f. Any of the longitudinal ridges along the cervical canal of the uterus.

semilunar f. of conjunctiva The fold of conjunctiva at the inner angle of the eye.

transverse f. of rectum Any of the three permanent folds projecting into the lumen of the rectum. SYN: *Houston's valve*.

urogenital f. SEE: *ridge, urogenital*.

ventricular f. One of the false vocal cords, superior to the true vocal cords. SYN: *vestibular fold*.

vestibular f. Ventricular fold.

Foley catheter (fō'lē) [Frederic W. B. Foley, U.S. urologist, 1891–1966] A urinary tract catheter with a balloon attachment at one end. After the catheter is inserted, the balloon is inflated. Thus the catheter is prevented from leaving the bladder until the balloon is emptied.



Indwelling urinary catheters are the most important cause of hospital-acquired infections in the U.S.

folia (fō'lē-ă) [L.] Pl. of folium.

folie (fō-lē') [Fr.] Psychosis.

f. à deux The sharing and reinforcement of a delusion, usually of the paranoid type, at the same time by two closely associated persons.

f. du doute Abnormal doubts about ordinary acts and beliefs; inability to decide on a definite course of action or conduct.

f. du pourquoi Unreasonable and unrelenting questioning.

f. gémellaire Psychosis occurring in twins.

folicinic acid The active form of folic acid. It is used in counteracting the effects of folic acid antagonists, and in treating anemia due to folic acid deficiency.

folium (fō'lē-ŭm) *pl.* **folia** [L., leaf] A thin, broad, leaflike structure.

follicle (fōl'i-kl) [L. *folliculus*, little bag] A small secretory sac or cavity. **follicular, adj.**

atretic f. An ovarian follicle that has undergone degeneration or involution.

dental f. **1.** The connective tissue

structure that encloses the developing tooth within the substance of the jaw before tooth eruption. **2.** The dental sac and its contents.

graafian f. SEE: *graafian follicle*.

hair f. An invagination of the epidermis that forms a cylindrical depression, penetrating the corium into the connective tissue that holds the hair root. Sebaceous glands, which secrete sebum, and tiny muscles (arrectores pili), which cause the hair to stand, are attached to these follicles.

lymph f. The densely packed collection of lymphocytes and lymphoblasts that make up the cortex of lymph glands.

maturing f. SEE: *graafian follicle*.

nabothian f. A dilated cyst of the glands of the cervix uteri.

ovarian f. A spherical structure in the cortex of the ovary consisting of an oogonium or an oocyte and its surrounding epithelial (follicular) cells. The follicles are of three types. The first type, or primary follicle, consists of an oogonium and a single layer of follicular cells. In the second type, or growing follicle, cells proliferate, forming several layers, and the first maturation division occurs. The third type, the vesicular (graafian) follicle, possesses a cavity (antrum) containing the follicular fluid (liquor folliculi). The oocyte lies in the cumulus oophorus, a mass of cells on the inner surface. The cells lining the follicle constitute the stratum granulosum. The follicle is a secretory structure producing estrogen and progesterone. SEE: *corpus luteum*.

primordial f. An ovarian follicle consisting of the ovum enclosed in a single layer of cells.

sebaceous f. Sebaceous gland.

thyroid f. A spherical or oval subunit of the thyroid gland, made of cuboidal epithelium, which contains colloid and the thyroglobulin and iodine from which thyroxine and triiodothyronine are synthesized.

vesicular f. A follicle containing a cavity; a mature ovarian (graafian) follicle.

follicular (fō-lik'ū-lār) Pert. to a follicle or follicles.

follicular occlusion triad A collective term used for three related forms of localized skin abscess: hidradenitis suppurativa, acne conglobata, and dissecting cellulitis of the scalp.

folliculitis (fō-lik'ū-lī'tis) [L. *folliculus*, little bag, + Gr. *itis*, inflammation] Inflammation of a follicle or follicles.

f. barbae A deep-seated infection of the hair follicles of the beard—usually caused by staphylococcal or fungal infection. SYN: *syccosis barbae*.

f. decalvans Purulent follicular inflammation of the scalp resulting in per-

manent irregular alopecia and scarring. This rare disease occurs mostly in men. The cause is unknown.



hot tub f. An inflammation of the hair follicles caused by *Pseudomonas aeruginosa*, occurring after exposure to contaminated bath, spa, or swimming pool water. The infection resolves without treatment in about 14 days.

keloïdal f. Chronic dermatitis with production of hard papules that join together to form hypertrophied scars.

folliculogenesis, induction of (fō-lik'ū-lō-jěn'ē-sis) Stimulation of follicle development with drugs (e.g., clomiphene) or hormones (e.g., gonadotropins). SEE: *assisted reproductive technologies; clomiphene citrate; in vitro fertilization; gamete intrafallopian transfer*.

folliculoma (fō-lik'ū-lō'mā) [" + Gr. *oma*, tumor] A tumor of the ovary originating in a graafian follicle in which the cells resemble those of the stratum granulosum.

folliculose (fō-lik'ū-lōs) Composed of follicles.

folliculosis (fō-lik'ū-lō'sis) [" + Gr. *osis*, condition] The presence of an abnormal number of lymph follicles.

folliculus (fō-lik'ū-lūs) *pl.* **folliculi** [L.] A follicle.

Folling's disease Phenylketonuria.

follistatin (fōl'is-tā'tin) [*folli(cle)* + "] A protein that regulates the actions of activins in the body. It antagonizes the effects of many members of the transforming growth factor family of cytokines. One function of follistatin is to decrease the secretion of FSH.

follow-up (fōl'ō-ūp) The continued care or monitoring of a patient after the initial visit or examination.

Folstein Mini Mental Status Exam, Folstein Mini Mental State Exam A screening test used to assess cognitive function in individuals suspected of delirium or dementia. The test assesses orientation, registration, recall, speech, and language. A perfect score is 30 correct answers. Scores below 24 are generally considered to indicate cognitive impairment. However, since scores are affected by age and education level, normed scores provide more accurate assessment.

fomentation (fō'měn-tā'shūn) [L. *fomentatio*] A hot, wet application for the relief of pain or inflammation. It is used primarily in complementary and alternative medicine. SEE: *dressing, hot moist; stupe*.

fomepizole 4-methylpyrazole A drug used as an antidote for ethylene glycol (antifreeze) poisoning.

fomes, fomite (fō'mēz) *pl.* **fomites** [L., tinder] Any substance that adheres to and transmits infectious material.

fomites (fō'mī-tēz) Pl. of fomes.

Fontana's spaces (fōn-tā'nāz) [Felice

Fontana, It. scientist, 1730–1805] The spaces between the processes of the ligamentum pectinatum of the iris. These convey the aqueous humor.

fontanel, fontanelle (fōn'tā-nēl') [Fr. *fontanelle*, little fountain] An ossified membrane or soft spot lying between the cranial bones of the skull of a fetus or infant. **SEE: ilius.**

anterior f. The diamond-shaped junction of the coronal, frontal, and sagittal sutures; it becomes ossified within 18 to 24 months.

posterior f. The triangular fontanel at the junction of the sagittal and lambdoid sutures; ossified by the end of the first year.

Fontan procedure (fon-tān) [Francois Maurice Fontan, Fr. surgeon, b. 1929] A procedure used to repair complex congenital heart defects such as a single ventricle, that prevent oxygen from reaching the systemic circulation. The superior vena cava (SVC) is divided adjacent to its entry to the right atrium; the pulmonary trunk is divided close to the pulmonary valve and both ends are closed. The distal and cardiac ends of the divided SVC are anastomosed to the right pulmonary artery. The inferior vena cava is connected to the atrial orifice of the SVC, usually by means of a vascular prosthesis. This procedure may be modified.

food [AS. *fōda*] Any material, including water, that provides the nutritive requirements of an organism to maintain growth and physical well-being. For people, food includes carbohydrates, fats, proteins, vitamins, and minerals.

SEE: carbohydrate; digestion; fat(2); nutrition; protein; stomach.

bioengineered f. Genetically modified food.

f. chain **SEE: under chain.**

contamination of f. The presence, introduction, or development of infectious or toxic material in food. Food may be contaminated by bacteria (*Salmonella*, *E. coli*, *Listeria*), viruses (hepatitis A, Norwalk), protozoa (*Giardia*), worms (tapeworms and roundworms), molds (*Aspergillus*), or toxins (botulinum, staphylococcal enterotoxin).

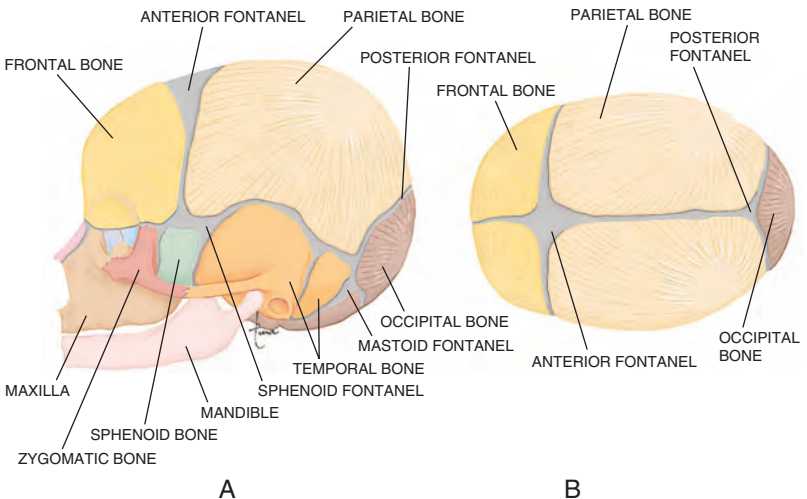
convenience f. Food in which one or more steps in preparation have been completed before the product is offered for retail sale. Examples include frozen vegetables, bake mixes, heat-and-serve foods as well as ready-to-eat foods.

dietetic f. Food in which the nutrient content has been modified for use in special diets, esp. for diabetics.

enriched f. A processed food that has lost nutrients during milling, grinding, pasteurization or other processes, and then had those nutrients added back to the marketed product. Two examples of vitamins commonly used in food enrichment are vitamins B₁ and B₂, thiamine and riboflavin, respectively.

fast f. Commercially available, ready-to-eat meals (such as hamburgers, hot dogs, pizza, fried chicken, or french fries) with a high fat content, little fiber, and minimal quantities of vitamins or calcium.

functional f. 1. Food products with additives for which, following FDA approval, health claims can be made. 2. A



FONTANELS OF INFANT SKULL

(A) Lateral view, (B) superior view

food that has a defined health benefit for the person who consumes it.

genetically modified f. Any crop or agricultural product altered by biological engineering for drought resistance, increased growth, resistance to pests or pesticides, prolonged shelf-life, altered textures or flavors, or other economically desirable characteristics. Promoters of genetically modified foods point to their improved yields (which may have a beneficial impact on agricultural profits or world hunger). Opponents of genetic modification have raised concerns about its effects on ecosystems, human food allergies, and religious dietary laws. SYN: *bioengineered food*.

junk f. A colloquial term for food that has limited nutritional value. Typically it refers to foods high in salt, sugar, fat, or calories, with low nutrient content. These include most salted snack foods, candy, gum, most sweet desserts, fried fast food, and carbonated beverages.

medical f. A food formulated by the selective use of nutrients and manufactured for the dietary treatment of a specific condition.

organic f. A crop or animal product cultivated with specific guidelines that limit the use of petrochemicals, radiation, or genetically engineered technologies in its agriculture.

f. rendering The conversion of the waste products of animal butchery into feeds, bone meal, tallows, oils, and fertilizer. Rendered feed products are sometimes the source of animal and human infections.

risky f. Foods that are contaminated, or more likely than most other foods to be contaminated with bacteria, carcinogens, or toxins.

textured f. Food products manufactured from various nutritional components made to resemble conventional protein-source foods, such as meat, seafood, or poultry, in texture.

food adulterant A substance that makes food impure or inferior, such as toxins, organisms, pesticide residues, radioactive fallout, any poisonous or deleterious substance, or any substance added to increase bulk or weight.

Food and Drug Administration ABBR: FDA. In the U.S., an official regulatory body for foods, drugs, cosmetics, and medical devices. It is a part of the U.S. Department of Health and Human Services.

food and drug interactions The impact of nutrients on the absorption, distribution, metabolism or excretion of medications. Alkaloids in potatoes may influence the effects of anesthetics; excess intake of vegetables rich in vitamin K may interfere with the action of anticoagulants; prolonged use of antacids may cause phosphate depletion; consump-

tion of grapefruits or grapefruit juice may influence the half-life of some anti-retroviral drugs.

food ball Phytobezoars.

food-borne disease ABBR: FBD. Illnesses caused by the ingestion of contaminated or toxic nutrients. Among the food-borne diseases are infectious diarrheas (e.g., those caused by *Salmonella*, *Shigella*, cholera, *Escherichia coli*, *Campylobacter*); helminth diseases (e.g., those caused by beef, pork, or pike tapeworms); protozoan infections (e.g., giardiasis); food poisoning (toxins produced by *Bacillus cereus*, *Staphylococcus aureus*, *Clostridium botulinum*, mushrooms, or ciguatera); and viral illnesses (esp. hepatitis A).

Proper selection, collection, preparation, and serving of food can reduce the risk of food-borne disease, esp. if combined with regular inspections of food-service facilities and periodic evaluations of food-service workers.

DISEASE TRENDS: An increase in food-borne illnesses has been seen in recent decades, probably as a result of increases in foreign trade and travel and the increased consumption of raw foods.

food exchange A grouping of commonly used foods according to similarities in composition so that such foods may be used interchangeably in diet planning.

food frequency questionnaire ABBR: FFQ. A tool used in clinical and research nutrition designed to identify the types and quantities of nutrients ingested by a subject.

Food Guide Pyramid Recommendations developed by the U.S. Department of Agriculture for planning a balanced diet. Foods are divided into six groups: bread, cereal, rice, and pasta; fruits; vegetables; milk, yogurt, and cheese; meat, poultry, fish, dry beans, eggs, and nuts; and fats, oils, and sweets. The guide recommends the number of servings for each food group. SEE: *Nutrition Appendix*.

Food Guide Pyramid for the Elderly A modification of the original Food Guide Pyramid, for those over age 70. At its base is eight servings of water, and at its peak is the recommendation for supplements of calcium, vitamin D, and vitamin B₁₂. SEE: *Nutrition Appendix*.

Food Guide Pyramid for Young Children A modification of the original Food Guide Pyramid intended to provide guidance to adults about nutritional choices for children aged 2 to 6. The pyramid illustrates the importance of eating balanced meals with a variety of food choices including daily consumption of grains and vegetables; moderate intake of fruits, dairy products, and meats; and limited use of fatty foods and sweets. Images placed around the pyramid show children running and play-

ing ball, thus emphasizing the importance of regular physical activity as a component of a healthy lifestyle. SEE: *Nutrition Appendix*.

food hypersensitivity reaction SEE: *food allergy*.

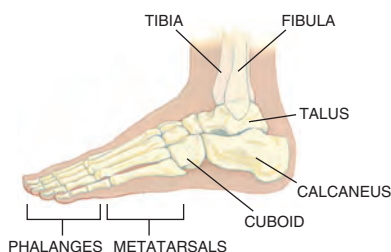
food intolerance An abnormal, nonimmunological response to ingested food. The basis for the intolerance may be pharmacological, enzymatic, metabolic, or toxic. Pharmacological intolerance is the body's reaction to a component of the food that produces druglike effects; enzymatic intolerance results in an inability to digest a food because of an inadequate production or the absence of an enzyme necessary for its digestion; metabolic intolerance is due to the effect of the food on the person's metabolism; and food toxicity is due to toxins in the food or released by microorganisms contaminating the food.

food label The information provided on a food package indicating the various nutrients, calories, and additives present in the food. U.S. Food and Drug Administration regulations mandate the listing of total fats, calories from fat, cholesterol, saturated fats, total carbohydrates, sugars, sodium, potassium, protein, vitamin and minerals, among other nutritional components.

food poisoning SEE: *under poisoning*.

food requirements The need for various amounts and types of food according to a person's use of energy. It is calculated that an average healthy man (154 lb or 70 kg) performing light to moderate muscular work requires 2700 kcal/day, while an average healthy woman (128 lb or 58 kg) requires 2000 kcal/day. These needs are met through the intake of carbohydrate, protein, and fat. An estimation of the protein requirement for the average adult is 1 g of protein per day for each kilogram of their ideal weight. Generally, a woman requires fewer calories per day than a comparably active man because of her smaller build. Sedentary individuals generally require fewer calories. On a body weight basis, children and pregnant women require more calories than predicted to support growth and development. Febrile patients have an increased basal energy expenditure of about 12% for each degree centigrade of fever. It is generally agreed that a diet that is rich in fruits, vegetables, legumes, and whole grains and has adequate minerals (including calcium) and vitamins is superior to diets that are rich in fats and sugars. SEE: *calorie*; *diet*; *energy expenditure*, *basal*; *nutrition*; *Recommended Daily Dietary Allowances Appendix*.

foot pl. feet [AS. *foet*] ABBR: ft. The terminal part of the leg below the ankle. The bones of the foot include the tarsals, metatarsals, and phalanges. SEE: *illus.*; *leg* for *illus.*; *skeleton*.



BONES OF FOOT AND ANKLE

Left foot, lateral view

arches of f. The four vaulted structures in the foot: the internal (medial) longitudinal, the outer (lateral) longitudinal, and two transverse.

athlete's f. A scaling, cracked, or macerated rash, typically found between the toes and usually caused by a fungal skin infection (e.g., tinea), although bacteria may also be involved. The rash is usually mildly itchy. SYN: *dermatophytosis*; *tinea pedis*. SEE: *illus.*; *Nursing Diagnoses Appendix*.



ATHLETE'S FOOT

TREATMENT: The feet, esp. the webbing between the toes, should be carefully dried after bathing. Well-ventilated shoes and absorbent socks should be worn. Topically applied antifungal drugs, such as terbinafine, effectively treat the condition except when maceration is prominent and bacterial infection is also present. In these instances, oral antibiotics are needed.

cleft f. A condition in which a cleft extends between the digits to the metatarsal region, usually due to a missing digit and metatarsal.

immersion f. A condition of the feet, resulting from prolonged immersion in cold water, in which pain and inflammation are followed by swelling, discoloration, and numbness.

Madura f. SEE: *Madura foot*.

march f. An insidious fracture of one of the metatarsal bones of the foot. SEE: *march fracture*.

trench f. Degeneration of the skin of the feet due to prolonged exposure to

moisture. The condition, which resembles frostbite, may be prevented by ensuring that clean, dry socks are worn at all times. The feet do not have to be exposed to cold to develop this condition.

foot and mouth disease A viral disease of cattle and horses that is rarely transmitted to humans. Because of a similarity in name, it is occasionally confused with hand-foot-and-mouth disease, a common viral infection of children.

SYMPTOMS: In humans, symptoms include fever, headache, and malaise with dryness and burning sensation of the mouth. Vesicles develop on the lips, tongue, mouth, palms, and soles.

TREATMENT: Therapy is symptomatic. Full recovery occurs in 2 to 3 weeks. Several preventive vaccines are available.

foot board A flat piece of material placed at the foot end of a patient's bed. It is angled slightly away from the patient and extends up above the mattress. When used properly it helps to prevent footdrop. The patient should be positioned in bed so that when the legs are fully extended the soles of the feet just touch the padded board.

foot-candle An amount of light equivalent to 1 lumen per square foot.

footdrop (foot/'dröp) Plantar flexion of the foot due to injury, paralysis, or weakness of the nerves supplying the anterior tibial muscles. It may result in dragging of the foot or toes while walking.

footplate (foot/'plät) The flat part of the stapes, a bone in the middle ear.

foot-pound The amount of energy required to lift 1 lb of mass a vertical distance of 1 ft.

footprint An impression of the foot, esp. an ink impression used for identification of infants.

forage (fö-röz'h) [Fr., boring] Creation of a channel through an enlarged prostate by use of an electric cautery. This technique may be used in other tissues.

foramen (for-ä'mën) *pl.* **foramina** [L.] A passage or opening; an orifice, a communication between two cavities of an organ, or a hole in a bone for passage of vessels or nerves.

anterior condyloid f. The opening above the condyle of the occipital bone. The 12th cranial nerve passes through it.

anterior sacral f. One of the openings on the anterior aspect of the sacrum through which the anterior primary branches of the sacral nerve pass.

apical f. The opening in the end of the root of a tooth through which the blood, lymphatic, and nerve supplies pass to the dental pulp.

f. of Bochdalek A fetal diaphragmatic opening that may not close com-

pletely; a site for a congenital diaphragmatic hernia.

caval f. The opening in the central tendon of the diaphragm through which the vena cava passes from the abdominal cavity into the thoracic cavity.

epiploic f. The opening connecting the peritoneal cavity to its lesser sac. SYN: *foramen of Winslow*.

ethmoidal f. One of the openings in the medial wall of the orbit. The ethmoidal nerve and artery pass through these openings.

external auditory f. The outer auditory meatus, through which sound waves travel to reach the tympanic membrane.

greater sciatic f. The larger of two posterior openings into the bony pelvis. Along the back edge of the ilium and ischium bones, there are two semicircular indentations, the greater and lesser sciatic notches. Two crossed ligaments (the sacrotuberous and sacrospinous ligaments) make these notches into enclosed ovals, the greater and lesser sciatic foramina. The greater sciatic foramen is the upper and larger of these. The gluteal and some hip-joint structures, such as the piriformis muscle and the gluteal nerves and blood vessels, leave the pelvic cavity through this opening, as do the sciatic nerve and the posterior cutaneous nerve of the thigh.

Huschke's f. SEE: under *Huschke, Emil*.

incisive f. Small opening in the maxillary palate, lingual to the maxillary central incisors. The foramen is the terminal end of the incisive canal.

infraorbital f. The opening in the maxilla through which the infraorbital branch of the maxillary nerve passes.

internal auditory f. The opening in the petrous portion of the temporal bone through which the seventh and eighth cranial nerves pass.

interventricular f. SEE: *Monro's foramen*.

intervertebral f. The opening between adjacent articulated vertebrae for passage of nerves to and from the spinal cord.

jugular f. The opening in the base of the skull through which pass the sigmoid and inferior petrosal sinus and the 9th, 10th, and 11th cranial nerves.

lesser sciatic f. The opening bounded by the hip bone, sacrum, and sacrospinous ligament.

lingual f. A small opening on the lingual surface of the mandible at the midline. It is surrounded by small bony protuberances called genial tubercles. The terminal branches of the mandibular nerve exit the bone through the lingual foramen and innervate the gingiva in the anterior portion of the mandible.

f. of Luschka Key-Retzius foramina.

Magendie's f. SEE: *Magendie's foramen*.

f. magnum The opening in the occipital bone through which the spinal cord passes from the brain.

mandibular f. The opening on the medial surface of the mandibular ramus through which the inferior alveolar vessels and nerve enter the mandibular canal.

mastoid f. The opening in the mastoid part of the temporal bone. A small vein passes through it.

mental f. The opening on the ventral surface of the body of the mandible where the mandibular nerve exits the mandible.

Monro's f. The interventricular foramen between a lateral ventricle and the third ventricle inside the brain.

obturator f. A large oval foramen below the acetabulum bounded by the pubis and ischium.

olfactory f. An opening in the cribriform plate of the ethmoid bone for passage of the olfactory nerves.

optic f. An opening in the lesser wing of the sphenoid bone. The optic nerve and ophthalmic artery pass through it.

f. ovale 1. The opening between the two atria of the fetal heart; it permits blood to flow from the right atrium to the left atrium to bypass the lungs. It usually closes shortly after birth as a result of hemodynamic changes related to respiration. If it remains open, the defect can be repaired surgically. Patency of the foramen ovale occasionally is a source of paradoxical stroke in patients with lower extremity deep venous thrombosis. SEE: *fetal circulation*.
2. The oval opening in the posterior margin of the great sphenoidal wing for the mandibular branch of the trigeminal nerve and the small meningeal artery.

palatine (greater and lesser) f. The openings of the palatine canals through which nerves pass to the mucosa of the hard and soft palate.

posterior condyloid f. The opening behind the condyle of the occipital bone. A small vein passes through it.

posterior sacral f. One of the openings on the posterior aspect of the sacrum through which the posterior primary branches of the sacral nerve pass.

f. rotundum The opening in the great sphenoidal wing through which the maxillary branch of the trigeminal nerve passes.

Soemmering's f. SEE: under *Soemmering, Samuel T. von*.

sphenopalatine f. The opening between the palatine and sphenoid bones. It provides a passage from the pterygopalatine fossa to the nasal cavity for the sphenopalatine artery and nasal nerves.

f. spinosum The hole in the outer edge of the greater wing of the sphenoid bone through which the middle meningeal artery passes as it enters the middle cranial fossa. It is just lateral to the foramen ovale.

stylomastoid f. A hole in the base of the skull between the mastoid process and the styloid process.

supraorbital f. An opening sometimes present above the superior border of the orbit of the eye. The supraorbital nerve and vessels pass through it.

transverse f. A hole for the vertebral artery in the transverse process of a cervical vertebra.

vena caval f. The opening in the diaphragm through which the inferior vena cava and branches of the right vagus nerve pass SEE: *caval f.*

vertebral f. The large opening between the neural arch and the body of the vertebra that contains the spinal cord.

f. of Winslow Epiploic f.

Forbes' disease (fōrbz) [Gilbert B. Forbes, U.S. pediatrician, 1916–2003] Glycogen storage disease type III.

force An external influence; a push or pull exerted on an object. The metric unit for force is the newton. One newton equals 0.225 lb of force.

catabolic f. Energy produced by metabolism of food.

centrifugal f. The force that impels a thing, or parts of it, outward from the center of rotation. SEE: *centrifuge*.

electromotive f. ABBR: EMF. Energy that causes flow of electricity in a conductor. The energy is measured in volts.

G f. The gravitational constant. In aerospace medicine, the term indicates the forces acting on the human body during acceleration in certain flight maneuvers. Thus a force of 2 positive G means that the aviator is being subjected to a force twice that of gravity with a doubling of weight in that condition (i.e., the force against the seat is 2 G). G force may be in any axis and may be negative or positive.

maximum inspiratory f. ABBR: MIF. The output of the inspiratory muscles measured in negative centimeters of water pressure. It is measured by having the subject inhale from a tube connected to a manometer under conditions of no flow. Also called *maximum inspiratory pressure*; *negative inspiratory force*.

reserve f. The energy available above that required for normal functioning of the heart.

unit of f. An arbitrary measure of a certain amount of force. For example, a dyne is the amount of force acting continuously on a mass of 1 g that will accelerate the mass 1 cm per second.

force couple Biomechanical principle whereby two or more muscles acting in different directions influence the rotation of a joint in a specific direction. When the forces are of equal magnitude and in opposite directions, the limb will rotate about its long axis. SEE: *biomechanics*.


forced duction test A test used in ophthalmology to assess whether eye elevation or movements of the inferior muscles of the eye are restricted as a result of an injury, e.g., of an orbital floor fracture. Used to determine if an ocular deviation is mechanically restricted versus paretic.


forced expiratory time ABBR: FET. The time required to forcibly exhale a specified volume of air from the lung.

forced expiratory volume ABBR: FEV. The volume of air that can be expired after a full inspiration. The expiration is done as quickly as possible and the volume measured at precise times; at $\frac{1}{2}$, 1, 2, and 3 sec. This provides valuable information concerning the ability to expel air from the lungs.


forceps (for 'sēps) [L.] Pincers for holding, seizing, or extracting tissue. In obstetrics, forceps application is classified according to the position of the fetal head when the forceps are applied (i.e., outlet forceps, low forceps, and midforceps). SEE: *station*.

 **alligator f.** A straight or angled clamp with jawlike movement at its end.

 **Allis f.** Forceps with curved, serrated edges. They are used to grasp tissue firmly.

 **artery f.** A delicate clamp that will not injure the vessel; used for temporary occlusion of a vessel.


axis-traction f. Obstetrical forceps fitted with a handle that makes it possible to provide traction in line with the direction in which the head must be moved.


 **bone f.** A heavy-duty scissors-like instrument for cutting bone and removing bone fragments.

capsule f. Forceps used to create an opening in the anterior capsule of the lens during cataract surgery.

Chamberlen f. The original obstetrical forceps, named after the inventor Peter Chamberlen (1560–1631) or his son Peter (1601–1683). They kept their development secret until Hugh Chamberlen (1664–1726) disclosed it.

clamp f. Any forceps with an automatic lock.

 **dental f.** Forceps of varying shapes for grasping teeth during extraction procedures.

 **dressing f.** Forceps for general use in dressing wounds and removing dead tissue and drainage tubes.

Halsted's f. A small curved or straight


hemostatic forceps.

Magill f. SEE: *Magill forceps*.

mosquito f. A smaller variety of Halsted's forceps with a finely pointed tip.

needle f. Forceps for grasping and holding a needle.

obstetrical f. Forceps used to extract the fetal head from the pelvis during delivery. They serve the dual purpose of allowing withdrawal force to be applied to the fetal head and protecting the head during the passage.

 **rongeur f.** Forceps used for cutting bone.

 **tissue f.** A pincer-like toothed instrument for grasping delicate tissues.

towel f. Sharply pointed clip for holding towels and/or skin.

forcing function Any management device or tool used to limit user errors by prohibiting specific actions without prior use of necessary safety procedures. In nursing a device that stores and dispenses medications and that may prevent the withdrawal of those medications unless the patient's vital signs or allergy list is recorded by the nurse and found to meet specified criteria for safe use.

forcipate (for 'sī-pāt) [L. *forceps*, tongs] Shaped like forceps.

Fordyce's disease, Fordyce's spots (for 'dī-sēs) [John Fordyce, U.S. dermatologist, 1858–1925] Enlarged ectopic sebaceous glands in the mucosa of the mouth and genitals. They appear as small yellow spots. They are asymptomatic and are present in most people.

Fordyce-Fox disease (for 'dis-fōks') [George Henry Fox, U.S. dermatologist, 1846–1937] SEE: *Fox-Fordyce disease*.

forearm (for 'ārm) [AS. *fore*, in front, + *arm*, arm] The portion of the arm between the elbow and wrist.

forebrain (for 'brān) [ʹ + *bregen*, brain] Proencephalon.

forefinger (for 'fīn'gēr) The index finger; the second digit of the hand (the thumb is the first).

forefoot (for 'foot) The part of the foot in front of the tarsometatarsal joint.

foregut (for 'güt) [ʹ + *gut*, a pouring] The first part of the embryonic digestive tube from which the pharynx, esophagus, stomach, and duodenum are formed. SYN: *protogaster*.

forehead [AS *forheafod*] The anterior part of the head below the hairline and above the eyes.

foreign body Anything present at a site where it would not normally be found. Slivers, cinders, dirt, or small objects may lodge in the skin, ears, eyes, or nose or may be taken internally. If not removed, they may cause unsightly marks or tattooing of the skin and inflammation and infection of the tissue involved. SEE: *foreign bodies in ear*; *foreign bodies in the esophagus*; *foreign body in*

nose; foreign bodies in the skin; foreign bodies in vagina.

foreign body reaction A localized inflammatory response elicited by any material (e.g., a splinter or a suture) that would not normally be found within the body.

forelock (for'lök) A lock of hair that grows on the forehead.

white f. A white tuft of hair that grows on the forehead. It is associated with Waardenburg syndrome, and is seen in vitiligo.

forensic (for-ën'sik) [L. *forensis*, public] Pert. to the law; legal.

foreplay Fondling of the sex partner to produce mutual sexual arousal and pleasure prior to intercourse.

foreskin (for'skin) [AS. *fore*, in front, + O. Norse *skinn*, skin] The prepuce, the loose skin at and covering the end of the penis or clitoris like a hood. Excision of the prepuce constitutes circumcision. Smegma praeputii is secreted by Tyson's glands and collects under the foreskin.

forewaters (for'wät-ërz) A pocket of amniotic fluid that precedes the presenting part of the fetus into the cervical canal. Expulsion or dissolution of the mucus plug (cervical operculum) allows the pocket to descend into the canal during the first stage of labor. SEE: *operculum*.

forgetting Inability to remember something previously known or learned. SEE: *memory*.

fork An elongated instrument that splits at the end to form two or more prongs.

tuning f. SEE: *tuning fork*.

form The distinctive size, shape, and external appearance of an object.

arch f. The shape of the dental arch when viewed in the horizontal plane.

-form (förm) [L. *forma*] Suffix meaning in the form of or in the shape of.

formaldehyde (for-mäl'dë-hid) A colorless, pungent, irritant gas (HCOH) commonly made by oxidation of methyl alcohol, the simplest member of the aldehyde group.

formalin (for'mä-lin) An aqueous solution of 37% formaldehyde, used as a tissue preservative. It is carcinogenic. SEE: *aldehyde*.

formate (for'mät) A salt of formic acid.

formation 1. A structure, shape, or figure. 2. The giving of form or shape to, or the development of, a structure.

reticular f. A meshed structure formed of gray matter and interlacing fibers of white matter found in the medulla oblongata between the pyramids and the floor of the fourth ventricle of the brain. It is also present in the spinal cord, midbrain, and pons. Fibers from this structure are important in controlling or influencing alertness, waking, sleeping, and various reflexes. They are thought to activate the cerebral cortex

independently of specific sensory or other neural systems. The reticular formation is part of the reticular activating (alerting) system.

form constancy The ability to identify an object even when it is rotated, reversed, or displaced spatially. In reading, for example, it is the ability to identify the similarities and differences between the letters "p" and "q" or the letters "b" and "d."

forme fruste (form froost) *pl.* **formes frustes** [Fr., defaced] An aborted or incomplete form of disease arrested before running its course; an atypical and indefinite manifestation of an illness.

formic (for'mik) [L. *formica*, ant] Pert. to ants or to formic acid.

formic aldehyde Formaldehyde.

formication (for'mi-kä'shün) The profoundly disturbing sensation that insects are crawling on one's skin. This is one of the more troublesome side effects of alcohol and cocaine withdrawal.

formiciasis (for'mis-i'ä-sis) [L. *formica*, ant, + Gr. *-iasis*, condition] Irritation caused by ant bites.

formilase (for'mi-läs) An enzyme that catalyzes conversion of acetic acid to formic acid.

formol (for'möl) Formaldehyde solution. SEE: *formalin*.

formula [L., a little form] 1. A rule prescribing ingredients and proportions for the preparation of a compound. 2. In chemistry, a symbolic expression of the constitution of a molecule. It consists of letters, each denoting one atom of one element, with subscripted numbers denoting the number of atoms present. Water, or H₂O, consists of two molecules of the element hydrogen and one of oxygen. It may also be written HOH.

Collections of atoms that constitute a group by themselves (radical) are often separated by periods or parentheses. In this case, figures prefixed or appended to the parentheses, or prefixed to an expression contained within periods, apply to all the symbols embraced by the parentheses or periods. In all other cases, a figure prefixed to a symbolic expression for a molecule, such as a coefficient in an algebraic formula, is a multiplier of all the symbols following.

3. Any liquid diet containing variable amounts of protein, fat, carbohydrate, vitamins, and minerals administered to infants as an alternative or a supplement to breast milk.

chemical f. SEE: *formula* (2).

dental f. A brief method of expressing the dentition of mammals in which the numbers of the teeth are given in the form of a fraction, each portion representing one quadrant; the numbers of the upper teeth form the numerator, and those of the lower teeth the denominator.

The first number listed represents the incisors; the second, the canines; the third, the premolars; and the fourth, the molars. The dental formula of the upper and lower right half of the mouth in humans is

$$\frac{2 - 1 - 2 - 3}{2 - 1 - 2 - 3} \text{ (right upper jaw)}$$

$$\frac{2 - 1 - 2 - 3}{2 - 1 - 2 - 3} \text{ (right lower jaw)}$$

empirical f. A chemical formula that indicates the simplest numerical ratio of the elements within a molecule, without demonstrating the molecule's chemical bonds or structure. For example, the empirical formula for water is H_2O . SYN: *molecular formula*.

molecular f. Empirical f.

official f. A formula in a pharmacopeia.

spatial f. Stereochemical f.

stereochemical f. A method of depicting chemical formulas so that the elements and their number are depicted as well as their position in space in relation to each other. SYN: *spatial formula*.

structural f. A formula of a compound that shows the relationship of the atoms in a molecule. The atoms are shown joined by valence bonds (e.g., $H-O-H$).

formulary (for'mū-lār'ē) [L. *formula*, a little form] **1.** A book of formulas. **2.** A list of drugs available for routine use at a health care facility.

National F. ABBR: NF. A book that provides standards and specifications for drugs. Previously issued by the American Pharmaceutical Association, it is now published by the U.S. Pharmacopeial Convention, Inc.

formyl (for'mīl) The radical of formic acid, HCO.

fornicate (for'nī-kāt") [L. *fornicatus*] Arched or vaultlike; shaped like a fornix.

fornicate [L. *fornicari*] To have sexual intercourse.

fornication (for'nī-kā'shūn) Sexual intercourse.

fornices (for'nī-sēz) [L.] Pl. of fornix.

fornix (for'nīks) [L., arch] **1.** A fibrous vaulted band connecting the cerebral lobes. **2.** Any vaultlike or arched body.

f. conjunctivae The loose folds connecting the palpebral and bulbar conjunctivae.

f. vaginae Each of the four recesses that surround the cervix. The posterior fornix is deeper than the anterior or lateral (right and left) fornices.

Fort Bragg fever [Fort Bragg, North Carolina, a U.S. military base] Pretibial fever.

fortification spectrum (fōr'tī-fī-kā'shūn spēk'trūm) The appearance of a dark patch with a zigzag outline in the visual

field, causing a temporary blindness there. SYN: *teichopsia*.

fortify (for'tī-fī) In food science technology, to add one or more substances to a food to increase its nutrient density.

forward surgical team ABBR: FST. A small mobile military unit consisting of surgeons, anesthetists, nurses, and support personnel. It is used in or near a battlefield to rescue and stabilize injured soldiers. The seriously injured are transported from FSTs to larger military hospitals for definitive care of their wounds.

fos (fās) A family of cancer-causing genes, first identified in viruses, that function within cells as transcription factors. Members of this family can transform normal cells (e.g., fibroblasts) into cancer cells (e.g., osteosarcomas, chondrosarcomas). SEE: *oncogene; transformation*.

ETIOLOGY: The name is derived from "FBJ osteosarcoma virus," in which these oncogenes were first identified.

Fosamax (fōs'ā-māk's") SEE: *alendronate*.

fossa (fōs'ā) *pl. fossae* [L.] A furrow or shallow depression.

antecubital f. Triangular area lying anterior to and below the elbow, bounded medially by the pronator teres and laterally by the brachioradialis muscles. SYN: *cubital fossa*.

articular f. of mandible Mandibular f.

axillary f. Axilla; armpit.

canine f. The wide, shallow depression on the external surface of the maxilla superolateral to the canine tooth. It serves as the origin of the levator anguli oris muscle.

cerebral f. Any of several depressions on the inside floor of the cranium. SYN: *cranial fossa*.

coronoid f. The depression on the anterior surface of the lower end of the humerus. During full flexion of the forearm, the coronoid process of the ulna fits into the depression.

cranial f. Cerebral f.

cubital f. Antecubital fossa.

digastric f. The depression behind the lower margin of the mandible at the side of the symphysis menti. The anterior belly of the digastric muscle attaches here.

epigastric f. The pit of the inside of the stomach.

glenoid f. 1. The depression on the scapula that articulates with the head of the humerus. **2.** Mandibular f. SYN: *glenoid cavity*.

hyaloid f. The depression on the anterior surface of the vitreous body of the eye. The lens is located there.

hypophyseal f. The deep depression in the sphenoid bone in which the pitu-

itary gland rests. SYN: *pituitary fossa*; *sella turcica*.

iliac f. One of the concavities of the iliac bones of the pelvis.

incisive f. The depression on the anterior surface of the body of the maxilla medial to the root of the canine incisor tooth.

infratemporal f. The shallow depression under and medial to the zygomatic arch. It contains the muscles of mastication, the first two parts of the maxillary artery, the pterygoid venous plexus, and branches of the mandibular nerve, the third division of the trigeminal nerve.

intercondyloid f. The depression on the inferior surface of the femur between the femoral condyles. The cruciate ligaments pass through it.

interpeduncular f. The deep groove in the anterior surface of the midbrain, between the cerebral peduncles. The third cranial nerve emerges here.

ischioanal f. Ischiorectal f.

ischioanal f. The space on either side of the lower end of the rectum and anal canal. It is bounded laterally by the obturator internus muscle and the tuberosity of the ischium, medially by the levator ani and coccygeus muscles, and posteriorly by the gluteus maximus muscle. SYN: *ischioanal fossa*.

jugular f. The depression in the petrosal portion of the temporal bone for the jugular vein.

lacrimal f. The hollow of the frontal bone that holds the lacrimal gland.

lenticular f. The depression in the anterior surface of the vitreous for reception of the crystalline lens.

mandibular f. The depression in the temporal bone into which the condyle of the mandible fits. SYN: *articular fossa of mandible*; *glenoid fossa* (2).

mastoid f. The small triangular area between the posterior wall of the acoustic meatus and the posterior root of the zygomatic process of the temporal bone.

nasal f. The cavity between the anterior opening to the nose and the nasopharynx.

olecranon f. The depression on the posterior surface of the lower end of the humerus. During full extension of the forearm, the olecranon process of the ulna fits into this depression.

f. ovalis The opening in the fascia of the thigh through which the large saphenous vein passes.

ovarian f. The depression in the parietal peritoneum of the pelvis that contains the ovary.

piriform f. Depressions in the lateral walls of the laryngopharynx.

pituitary f. Hypophysial f.

popliteal f. The soft tissue depression posterior to the knee.

pterygopalatine f. A space bounded posteriorly by the root of the pterygoid process, medially by the orbital and sphenoidal processes of the palatine bone, and anteriorly by the superomedial aspect of the posterior surface of the maxilla. Also called *sphenomaxillary fossa*.

rhomboid f. The floor of the fourth ventricle of the brain.

Rosenmüller's f. SEE: under *Rosenmüller, Johann Christian*.

subarcuate f. A depression that extends backward as a blind tunnel under the superior semicircular canal of the temporal bone.

sublingual f. A shallow depression on the inner surface of the body of the mandible above the anterior part of the mylohyoid ridge. It is occupied by the major salivary gland in the area, the sublingual gland.

submandibular f. An oblong depression between the mylohyoid ridge and the inferior border of the medial surface of the body of the mandible. It is occupied by the submandibular gland. These were previously referred to as the *submaxillary fossa* and *submaxillary gland*.

subpyramidal f. A depression in the inferior wall of the middle ear. It is inferior to the round window and posterior to the pyramid.

supraclavicular f. A depression on either side of the neck extending down behind the clavicle.

supraspinous f. The concave triangular area above the spinous process of the posterior surface of the scapula.

temporal f. The depression on the side of the skull below the temporal lines. It is deep to the zygomatic arch and continuous with the infratemporal fossa.

tonsillar f. A depression, located between the glossopalatine and pharyngopalatine arches, in which the palatine tonsil is situated. SYN: *tonsillar cleft*.

tooth central f. A shallow and wide depression on the occlusal surface of a posterior tooth.

fossae (fós'ē) [L.] Pl. of fossa.

fossette (fō-sēt') [Fr.] **1.** A small depression or fossa. **2.** A small but deep corneal ulcer.

foster care The care of individuals who cannot live independently (such as children, homeless families, or frail elderly persons) in a group or private home.

adult f.c. Long-term care for elderly individuals in an adult foster care facility. Typically, such a facility resembles a residence rather than a nursing home and may have fewer regulations than a nursing home.

Fothergill's disease (fōth'ēr-gilz) [John Fothergill, Brit. physician, 1712–1780] **1.** *Scarlatina anginosa*, an ulcerative



sores throat present in severe scarlet fever. **2.** Trigeminal neuralgia.

foulage (foo-lōzh') [Fr.] Massage by kneading with pressure on the muscles.

Fountain syndrome A rare autosomal recessive syndrome characterized by mental retardation, short and stubby fingers and toes, a swollen appearance of the cheeks and lips, and, frequently, seizures, short stature, and a large cranial circumference.

fourchet, fourchette (foor-shět') [Fr. *fourchette*, a fork] A tense band or transverse fold of mucous membrane at the posterior commissure of the vagina, connecting the posterior ends of the labia minora. The fossa navicularis, a cul-de-sac anterior to the fourchette, separates it from the hymen. It disappears after defloration or parturition, leaving a more open vulva below and behind. SEE: *frenulum labiorum pudendi*; *vestibule of vagina*.

Fournier's gangrene, Fournier's disease (fōr-nē'āz) [Jean Alfred Fournier, French dermatologist, 1832–1915] Necrotizing fasciitis of the genitalia that may spread to the thighs or abdomen. This aggressive and life-threatening form of cellulitis typically occurs in patients who have had local trauma to the perineum and patients with diabetes mellitus.

ETIOLOGY: Multiple aerobic and anaerobic bacteria cause the infection.

TREATMENT: Treatment consists of broad-spectrum antibiotics and wide surgical débridement.

fourth cranial nerve A small mixed nerve exiting from the dorsal surface of the midbrain. It contains efferent motor fibers to the superior oblique muscle of the eye and afferent sensory fibers conveying proprioceptive impulses from the same muscle. SYN: *trochlear nerve*.

fovea (fō'vē-ā) *pl.* **foveae** [L.] A pit or cuplike depression. SEE: *fossa*.

f. capitis The depression on the head of the femur for attachment of the ligamentum teres.

f. centralis retinae In the eye, the pit in the middle of the macula lutea that contains only cones. In contemporary usage it is simply called the foveola.

foveate (fō'vē-āt) [L. *foveatus*] Pitted.

foveation (fō'vē-ā'shūn) Pitting, as in smallpox.

foveola (fō'vē-ō-lā) *pl.* **foveolae** [L., little pit] **1.** A minute pit or depression. **2.** The thinnest part of the retina, where vision is most acute. Unlike other regions of the retina, it has no layer of ganglion cells between it and the retinal pigment epithelium.

Fowler's position (fow'lērz) [George R. Fowler, U.S. surgeon, 1848–1906] A semi-sitting position. The head of an adjustable bed can be elevated to the desired height to produce angulation of

the body, usually 45° to 60°. The knees may or may not be bent. A wedge support can be used to elevate the patient's head and back if an adjustable bed is not available. The position is used to facilitate breathing and drainage and for the comfort of the bedridden patient while eating or talking.

NOTE: Fowler's position has three variations: high (sitting upright in bed), regular (head or torso elevated 45° or more), and low or semi-low (head and torso elevated to 30°). SEE: *illius*; *dorsal recumbent position* for *illius*.



HIGH FOWLER'S POSITION

Fox-Fordyce disease (fōks'for'dis)

[George Henry Fox, U.S. dermatologist, 1846–1937; John Fordyce, U.S. dermatologist, 1858–1925] A chronic pruritic papular eruption of areas of the skin that contain apocrine sweat glands. The intraepidermal ducts of the apocrine glands become obstructed and eventually rupture. The disease occurs mostly in persons 13 to 35 years of age and about 10 times more frequently in women than men. It does not occur before puberty.

TREATMENT: Several agents, including estrogens, corticosteroids, and topical tretinoin cream, have been used, but with little benefit. SYN: *Fordyce-Fox disease*.

foxglove (fōks'glōv) The common name for the flowering plant *Digitalis purpurea*, from which digitalis is obtained.

FPR *False-positive ratio*.

Fr Symbol for the element francium.

fraction [L. *fractio*, act of breaking] **1.** In biological chemistry, the separable part of a substance such as blood or plasma. **2.** The ratio of a component to the total (e.g., the substance fraction of carboxy-hemoglobin [relative to the total hemoglobin]).

attributable f. The percentage of instances of an illness that can be accounted for by a particular risk factor. For example, people exposed to asbestos have a certain risk of developing lung cancer, and if they also smoke tobacco,

they are also at risk from that factor. These risks may be estimated from cohort studies. SYN: *attributable risk*.

f. of inspired oxygen ABBR: FIO_2 . The concentration of oxygen in the inspired air, esp. that supplied as supplemental oxygen by mask or catheter. Concentrations of oxygen greater than 50% are toxic if administered for more than a few days.

mass f. The ratio of the mass of a constituent to the total mass of the system in which the constituent is contained. SEE: *mass fraction*.

oxyhemoglobin f. That portion of hemoglobin present in a sample of blood that is reversibly bound to oxygen.

substance f. The ratio of the amount (number of moles or entities) of a constituent of a mixture to the total of constituents of the system. SEE: *mass f.*

volume f. The ratio of the volume of a constituent to the volume of the whole. In practice, it may be difficult to determine the volume fraction because differences in the molecular sizes of the constituents may produce a total volume that differs from the sum of the individual volumes of the mixture. When materials of similar physicochemical characteristics (e.g., multiple aqueous solutions) are combined, this is not a problem.

fractional excretion of sodium The urinary sodium concentration multiplied by the plasma creatinine concentration multiplied by 100, all divided by the product of the plasma sodium concentration and the urinary creatinine concentration.

fractional shortening The reduction of the length of the end-diastolic diameter that occurs by the end of systole. Like the ejection fraction, this is a measure of the heart's muscular contractility. If the diameter fails to shorten by at least 28%, the efficiency of the heart in ejecting blood is impaired.

fractional test meal Extended examination of the stomach contents. First the residual contents are removed and then the test meal is given. After the meal, assessments of gastric emptying, gastric acidity, pancreatic secretion, or nutrient absorption may be undertaken.

fractional urine A collection of urine taken during a few specified hours or from a specified quantity rather than from the entire amount voided during a day.

fractionation (fräk"shūn-ā'shūn) **1.** In radiation therapy, the process of spreading the total required treatment dose over an extended period. **2.** In chemistry, the separation of a mixture into its components, usually to isolate a particular substance for use or study.

fracture [L. *fractura*, break] **1.** An injury upon assessment that is painful, swollen, and deformed. **2.** A break of a bone. SEE: *illus.*

CAUSES: *Pathological:* In certain diseases and conditions such as cancer, osteomalacia, syphilis, and osteomyelitis, bones break spontaneously without trauma. *Direct violence:* The bone is broken directly at the spot where the force was applied, as in fracture of the tibia by being run over. *Indirect violence:* The bone is fractured by a force applied at a distance from the site of fracture and transmitted to the fractured bone, as fracture of the clavicle by falling on the outstretched hand. *Muscular contraction:* The bone is broken by a sudden violent contraction of the muscles.

SIGNS: Signs include loss of the power of movement, pain with acute tenderness over the site of fracture, swelling and bruising, deformity and possible shortening, unnatural mobility, and crepitus or grating that is heard when the ends of the bone rub together.

TREATMENT: Immediate first aid includes splinting of the fracture site and joints above and below it to limit further movement and displacement. Applying a cold pack to the fracture site and elevating it above the level of the heart may limit pain and swelling. Radiography should be used to identify the fracture and the exact position of the bone fragments.

The physician reduces the fracture (places the fragments in proper position). The bone is kept in position by means of a cast or splint until union has taken place. Then the limb is restored to complete function by physical therapy and exercise.

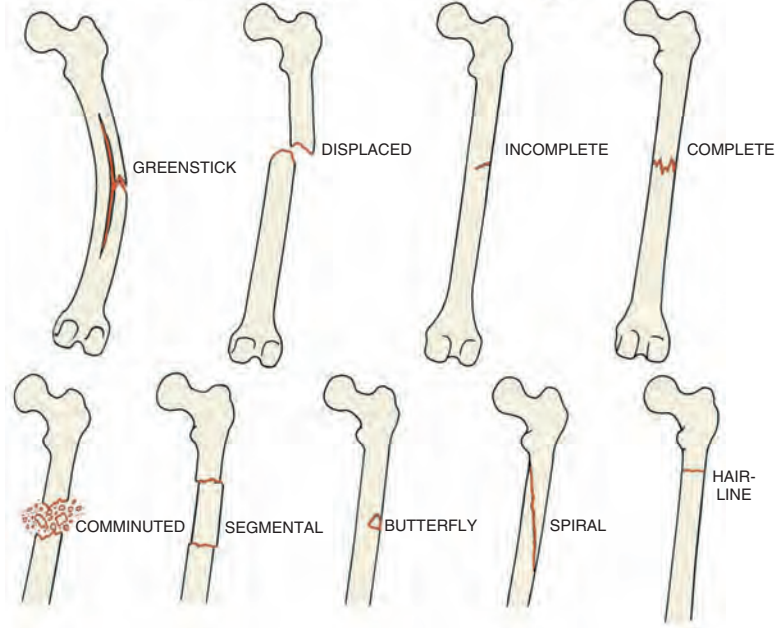
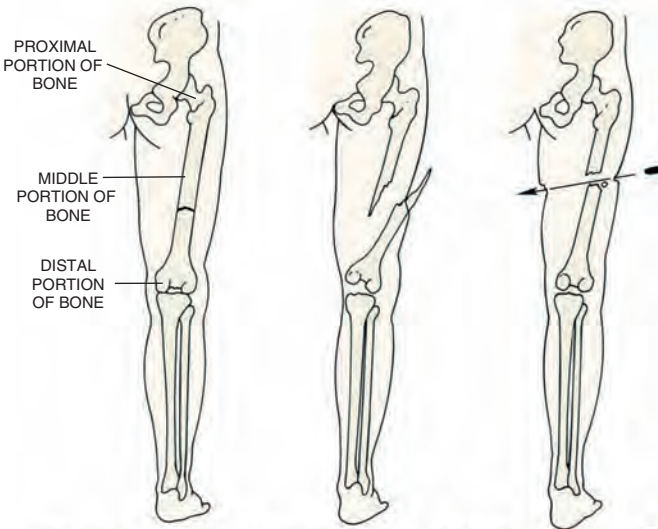
In open or compound fractures, any bleeding must be arrested before the fracture is treated. Initially, the open fracture should be covered with a sterile (or clean) dressing and the fracture site immobilized. Open reduction may be required. The wound is then washed and cleaned with sterile saline. If the area is grossly contaminated, mild soap solution may be used provided it is thoroughly washed away with generous amounts of sterile saline. When the wound is clean, a sterile dressing is secured by a bandage. The bone may then be immobilized by external fixation until the wound heals.

Skeletal traction may be used instead of a cast or external fixator for certain fractures, such as femoral shaft fractures. Pins are placed in the bone and the bone ends are held in place by a system of pulleys and weights until bony union occurs.

FRAGMENTS UNDISPLACED

FRAGMENTS SEPARATED DUE TO BREAK FROM WITHIN (COMPOUND FRACTURE)

FRAGMENTS SEPARATED BY EXTERNAL FORCE SUCH AS BULLET (COMPOUND FRACTURE)



TYPES OF FRACTURES AND TERMINOLOGY

If the bone does not heal, a weak electric current applied to the bone ends (bone stimulation) may promote healing. Hip fractures require gentle handling and immobilization to prevent displacement of the fracture, ag-

gravation of bleeding, or disruption of a pelvic hematoma. Open reduction with internal fixation may be required, and is performed when the patient is deemed to be hemodynamically stable.



First aid for fractures of the spine requires extreme care with respect to moving the patient. Unnecessary or improper movement may injure or even transect the spinal cord. Stabilizing the patient on a rigid board, with full spinal protection, is necessary until x-ray studies reveal the spine is stable.

PATIENT CARE: Vascular and neurological status of the limb distal to the fracture site are monitored before and after immobilization with traction, casting, or fixation devices. Pain is assessed and managed with prescribed analgesics and noninvasive holistic measures. All procedures and related sensations are explained, and realistic reassurance is provided.

The patient is evaluated for fat embolism after long bone fractures, for infection in open fractures, for excessive blood loss and hypovolemic shock, and for delayed union or nonunion during healing and follow-up. The patient should report signs of impaired circulation (skin coldness, numbness, tingling, discoloration, and changes in mobility) and is taught how to care for his or her cast or splint and the correct use of assistive devices (slings, crutches, and walker). SEE: *Nursing Diagnoses Appendix; illus.*



TRACTION APPLIED TO A FRACTURE OF THE LOWER EXTREMITY

avulsion f. The pulling away of the bony attachment site of tendons, ligament, joint capsule, or fascia. Avulsion fractures of tendons are usually caused by a forceful contraction of the muscle. Ligamentous avulsions are caused by forcing the joint beyond its normal range of motion and are often associated with sprains or dislocations.

bend f. Plastic deformation of bone.

Bennett's f. SEE: *Bennett's fracture.*

bimalleolar f. A fracture of the medial and lateral malleoli of the ankle joint.

blow-out f. SEE: *orbital blow-out f.*

blow up f. A fracture of the bony orbit above the eye. It may result in entrapment of the superior rectus muscle with

a consequent inability to gaze downward.

bowing f. A bending or curving fracture of a bone (usually a forearm bone) as the result of a traumatic load that compresses the bone along its long axis.

boxer's f. A fracture of the distal end of the fourth or fifth metacarpal with posterior displacement of the proximal structures.

buckle f. Torus f.

burst f. A burst fracture is similar to a compression fracture but is typically more severe and involves displacement of the bony fragments. SEE: *compression f.*

chauffeur's f. A colloquial term for a fracture of the radial styloid with the carpal joint.

clay shoveler's f. A fracture of the base of the spinous process of the lower cervical spine associated with sudden flexion of the neck. It may also be caused by direct trauma.

closed f. A fracture of the bone with no skin wound.

Colles' f. SEE: under *Colles, Abraham.*

comminuted f. A fracture in which the bone is broken or splintered into pieces.

complete f. A fracture in which the bone is completely broken (i.e., neither fragment is connected to the other).

complicated f. A fracture in which the bone is broken and has injured some internal organ, such as a broken rib piercing a lung.

compound f. A fracture in which an external wound leads down to the site of fracture, or fragments of bone protrude through the skin. SYN: *open fracture.*

compression f. A fracture of a vertebra by pressure along the long axis of the vertebral column. Such fractures, which may occur traumatically or as a result of osteoporosis, are marked by loss of bone height.

curbstone f. An avulsion fracture of the posterior margin of the tibia, typically as a result of striking the dorsal surface of the foot on an unyielding surface, such as a concrete step or curb.

depressed f. A fracture in which a piece of bone (e.g., the skull, the ribs) is broken and driven inward.

diastatic f. A fracture that follows a cranial suture and causes it to separate.

direct f. A fracture at a site where force was applied.

dislocation f. A fracture near a dislocated joint. SEE: *dislocation; fracture.*

double f. Two fractures of the same bone.

Dupuytren's f. SEE: under *Dupuytren, Baron Guillaume.*

Duverney's f. SEE: *Duverney's fracture.*

epiphyseal f. A separation of the

epiphysis from the bone between the shaft of the bone and its growing end. It occurs only in skeletally immature patients.

fatigue f. Stress *f.*

fissured f. A narrow split in the bone that does not go through to the other side of the bone.

flexion-teardrop f. An unstable fracture of the cervical spine in which a small fragment of the anteroinferior corner of a vertebral body avulses from the rest of the vertebra as a result of massive flexion applied to the cervical spine. Patients with this fracture have sustained injuries to all the spinal ligaments and usually severe spinal cord injury and quadriplegia.

greenstick f. A fracture in which the bone is partially bent and partially broken, as when a green stick breaks. It occurs in children, esp. those with rickets.

hairline f. A minor fracture in which all the portions of the bone are in perfect alignment. The fracture is seen on a radiograph as a very thin line between the two segments that does not extend entirely through the bone. SEE: *stress f.*

hangman's f. A bipedicular fracture of the second cervical vertebra, often with a concomitant dislocation of the vertebra. The term hangman's fracture stems from properly performed judicial hangings. At the moment when the dropped victim fully extends the rope, the hangman's knot causes fracture dislocation of the upper cervical spine and transection of the spinal cord or medulla. If the knot is not made or applied properly, death is usually due to asphyxia. Contemporary hangman's fractures primarily occur as the result of automobile accidents or athletic competitions.

hip f. Fracture of the hip.

impacted f. A fracture in which the bone is broken and one end is wedged into the interior of the other.

incomplete f. A fracture in which the line of fracture does not include the whole bone. SEE: *stress f.*

indirect f. A fracture distant from the place where the force was applied.

insufficiency f. A stress fracture occurring in abnormal bone (e.g., osteoporotic bone) subjected to normal forces.

intracapsular f. A fracture occurring within the capsule of a joint.

intrauterine f. A broken fetal bone.

Jefferson f. SEE: *Jefferson fracture.*

Jones f. SEE: *Jones fracture.*

lead pipe f. A fracture in which the bone is compressed and bent so that one side of the fracture bulges and the other side shows a slight crack.

LeFort f. A fracture usually involving more than one of the facial bones: maxillary, nasal, orbital, and/or zygomatic. SYN: *mid-face fracture.*

lover's f. A fracture of the calcaneus, due to jumping from a height (e.g., a balcony or second-story window).

march f. A fracture of the lower extremities or bones of the feet as a result of overuse. SEE: *stress f.*

mid-face f. LeFort *f.*

Monteggia's f. SEE: *Monteggia's fracture.*

nightstick f. A nondisplaced transverse fracture of the ulna resulting from a direct blow.

nonunion of f. SEE: *nonunion.*

occult f. A fracture that is suspected based on clinical grounds (e.g., guarding, pain, and swelling) but not seen on x-rays. The fracture may be seen with bone scans or magnetic resonance imaging.

open f. Compound *f.*

orbital blow-out f. A fracture of the bony floor beneath the eye. It typically results in entrapment of the inferior rectus muscle, with a consequent inability to look upward with the affected eye, which causes double vision during vertical gaze.

overriding f. A fracture in which the ends of the fractured bone slide past each other.

pathological f. A fracture of a diseased or weakened bone produced by a force that would not have fractured a healthy bone. The underlying disease may be metastasis from a cancer that originated elsewhere, primary cancer of the bone, or osteoporosis.

PATIENT CARE: The limbs and joints of at-risk patients are gently and carefully supported when repositioning, exercising, or mobilizing. If such patients fall or are otherwise injured, and report limb, pelvic, or back pain or inability to bear weight, the patient and the affected limb should be stabilized and x-rayed.

ping-pong f. A depressed fracture of the skull that resembles the indentation made by pressing firmly on a ping-pong ball.

Pott's f. SEE: under *Pott, John Percivall.*

retrochanteric f. A fracture that passes through the greater trochanter of the femur.

Rolando f. SEE: *Rolando fracture.*

simple f. A fracture without rupture of ligaments and skin.

sleeve f. An avulsion fracture of the patella that typically occurs as a result of a sudden strong contraction of the quadriceps muscle group.

Smith's f. SEE: *Smith's fracture.*

snowboarder's f. A fracture of the lateral border of the talus caused by inversion and rotation of the talus within the mortise. Signs and symptoms often mimic those of an inversion (lateral) ankle sprain.

spiral f. A fracture that follows a helical line along and around the course of a long bone.

sprain f. The separation of a ligament from its insertion, taking with it a piece of the bone. SEE: *avulsion f.*

stellate f. A fracture with numerous fissures radiating from the central point of injury.

straddle f. A traumatic fracture of all four pubic rami, often associated with injury to the urethra.

stress f. Microfractures that appear without evidence of a single traumatic onset. This type of fracture is difficult to diagnose by standard roentgenographical examination and may not become visible until 3 to 4 weeks after the onset of symptoms. Scintigraphy and/or magnetic resonance imaging may lead to earlier identification of the fracture lines. Stress fractures occur from repetitive microtraumas, as with running, aerobic dancing, or marching or other cyclical loading patterns, with use of improper shoes on hard surfaces; or with inadequate healing time after stress. Stress fractures are classified as fatigue fractures or insufficiency fractures based on their etiology. Undiagnosed and untreated stress fractures may progress to frank fractures. SYN: *fatigue fracture*. SEE: *insufficiency f.*

T f. A fracture in which bone splits both longitudinally and transversely.

toddler's f. A fracture of the distal third of the tibia, sustained in a child typically aged 2 to 4 years. The child may limp or refuse to walk because of pain. The fracture may not be easily seen on plain radiographs.

torus f. A fracture where the structure of one side of the bone is compressed, while the opposite side deflects from the growth plate, leaving the cortex intact. SYN: *buckle fracture*.

transcervical f. A fracture through the neck of the femur.

transverse f. A fracture in which the fracture line is at right angles to the long axis of the bone.

trimalleolar f. A fracture of the lateral and medial malleoli of the ankle joint with an additional fracture of the posterior edge of the distal tibia.

tripod f. A fracture in which the zygoma is separated from its attachment to the maxilla and the temporal and frontal bones.

Wagstaffe's f. SEE: *Wagstaffe's fracture*.

fracture dislocation A fracture near a dislocated joint.

fragile X syndrome A chromosomal disease, often associated with mental retardation, in which the tip of the long arm of the X chromosome can separate from the rest of the genetic material. Most males and 30% of females with

this syndrome are mentally retarded. Males also develop greatly enlarged testicles (macro-orchidism), enlarged ears, and a prominent jaw.

fragilitas (frä-jil'î-täs) [L.] Fragility.

fragility (frä-jil'î-tē) Brittleness; having the property of being readily broken, injured, or damaged.

capillary f. A breakdown of capillaries with hemorrhage into almost any site but most noticeably in the skin.

f. of red blood cells The tendency of red blood cells to rupture. This is determined by subjecting the cells to different concentrations of saline in laboratory tests.

If red blood cells are placed in distilled water, they swell rapidly and burst because they normally are suspended in a solution of much greater osmotic pressure. This phenomenon is called hemolysis. If they are suspended in a solution of normal saline, the cells retain their normal shape and do not burst. If they are placed in successively weaker solutions of saline, a point is reached at which some of the cells burst and liberate their hemoglobin within a given length of time. Finally, at a given dilution, all the cells have burst within the allotted time, which is usually 2 hr. Normal blood cells begin to hemolyze in about 0.44% saline solution, and complete hemolysis occurs in about 0.35% solution.

fragment (fräg'měnt) A part broken off a larger entity.

Fab f. Area on an immunoglobulin (antibody) to which antigens bind. The enzyme papain splits antibodies into three fragments, two Fab fragments, each of which is antigen-specific, and an Fc or crystallizable fragment, which is involved in secondary antibody activities such as activating complement.

immunoglobulin f. The portion of the IgG molecule that contains an antibody-combining site. Specific fragments are obtained by treating the molecule with the enzyme papain under specified conditions. The resultant fragments are designated "F(zz) Fragment," where zz represents the specific fragment. SYN: *immunoglobulin isotype*.

fragment antigen binding ABBR: Fab. Area on an immunoglobulin (antibody) to which antigens bind.

fragmentation (fräg'měn-tā'shūn) [L. *fragmentum*, detached part] Breaking up into pieces.

sleep f. Arousals and awakenings that disrupt the normal stages and architecture of sleep. These events, which occur commonly in patients who have sleep apnea or chronic pain, contribute to daytime sleepiness and other health problems. SYN: *sleep interruption*.

frail elderly Older persons with medical,

nutritional, cognitive, emotional, or activity impairments. These deficits may limit their ability to live independently and predispose them to illnesses and the side effects of treatment.

frailty Weakness, fragility, lack of balance or endurance, sarcopenia, immobility, and wasting.

frambesia (frām-bē'zē-ă) [Fr. *framboise*, raspberry] Yaws.

frambesioma (frām-bē-zē-ō'mă) [" + Gr. *oma*, tumor] The primary lesion of yaws in the form of a protruding nodule. This mother yaw appears at the site of inoculation of the causative agent, *Treponema pertenue*.

frame A supporting structure.

Balkan f. A framework that fits over a bed. Weights suspended from the frame and connected through ropes and pulleys are used to produce continuous traction while permitting freedom of motion, thus maintaining desired immobilization of the part being treated.

Bradford f. SEE: *Bradford frame*.

quadriplegic standing f. A device for supporting a patient with all four extremities paralyzed.

Stryker f. SEE: *Stryker frame*.

trial f. An eyeglass frame for holding trial lenses while a person is being fitted for glasses.

Framingham Heart Study, Framingham Study [named for Framingham, MA, the town where the investigation took place] A study of the risk factors that contribute to the development of coronary artery disease and stroke, performed with a group of about 5000 residents of a small New England town under the auspices of the National Institutes of Health (National Heart, Lung, and Blood Institute). The study began shortly after World War II and has followed a cohort of individuals, aged 30-62, for signs and symptoms of atherosclerotic vascular disease and those physical findings and lifestyle choices that contribute to the development of the disease. In 1971, 5124 children of the original cohort were enrolled in the study, and in 2002, a third generation of townspeople were enrolled in an attempt to further understand genetic factors that contribute to the development of heart attack and stroke. The Framingham study identified the major acknowledged risk factors for vascular disease: diabetes, high blood pressure, hyperlipidemia, obesity, a sedentary lifestyle, and smoking. The Framingham database has also been used to explore illnesses other than heart disease, including arthritis, dementia, lung disease, osteoporosis, and a wide variety of genetic illnesses.

Franceschetti's syndrome (frän'chēs-kēt'ēz) [Adolphe Franceschetti, Swiss ophthalmologist, 1896-1968] Mandi-

bulofacial dysostosis with hypoplasia of the facial bones, downward angulation of the palpebral fissures, macrostomia, ear defects, and defectively formed extremities. SYN: *Teacher Collins syndrome*.

Francisella tularensis (frän'sī-sēl'ă too'lă-rēn'sis) [Edward Francis, Tulare County, California] A gram-negative, aerobic, non-spore-forming bacillus that causes tularemia in humans and animals.

francium (frän'sē-üm) [Named for France, the country in which it was discovered] SYMB: Fr. A radioactive metallic element occurring as a natural isotope. Its atomic number is 87; the atomic weight of the most stable isotope is 233.

frank Obvious, esp. in reference to a clinical sign or condition such as blood in the urine, sputum, or feces.

Frankfort horizontal plane (fränk'fort) A cephalometric plane joining the anthropometric landmarks of porion and orbitale; the reproducible position of the head when the upper margin of the ear openings and lower margin of the orbit of the eye are horizontal.

Franklin glasses (fränk'līn) [Benjamin Franklin, U.S. statesman and inventor, 1706-1790] Bifocal spectacles.

Frank-Starling law (fränk'stär'ling) In cardiac physiology, the rule stating that cardiac output increases in proportion to the diastolic stretch of heart muscle fibers.

fratricide (frät'rī-sīd") [L. *fratricidium*] Murder of one's brother or sister.

FRC *functional residual capacity*.

Fröhlich's syndrome (frä'liks) [Alfred Fröhlich, Austrian neurologist, 1871-1953] A condition characterized by obesity and sexual infantilism, atrophy or hypoplasia of the gonads, and altered secondary sex characteristics. It is caused by disturbance of the hypothalamus and hypophysis, usually secondary to a neoplasm. SYN: *adiposogenital dystrophy*.

FRCP *Fellow of the Royal College of Physicians*.

FRCP(C) *Fellow of the Royal College of Physicians of Canada*.

FRCS *Fellow of the Royal College of Surgeons*.

FRCS(C) *Fellow of the Royal College of Surgeons of Canada*.

freckle (frēk'l) [O. Norse *freknur*] A small stained or pigmented spot on sun-exposed skin. SYN: *ephelis*; *lentigo*.

Hutchinson's f. A noninvasive malignant melanoma.

free base A highly addictive form of cocaine consumed by smoking. It is prepared by alkalizing the hydrochloride salt, extracting it with an organic solvent such as ether, and then heating the extract to 90°C. The inhaled material is

rapidly absorbed from the lung. SEE: *cocaine hydrochloride*; *crack*; *freebasing*.

freebasing (frē'bās-īng) The inhalation of a form of cocaine called free base. SEE: *cocaine hydrochloride*; *crack*.

Freeman-Sheldon syndrome (frē'mān-shēl'dōn) Whistling face syndrome.

free medical clinic A clinic that provides medical care without expecting payment for services. A free clinic typically combines medical services with patient education, patient empowerment, and social work.

freeway space The gap between the upper and lower teeth when the mandible is in a comfortably resting position.

freeze-drying (frēz'drī-īng) Preservation of tissue by rapidly freezing the specimen and then dehydrating it in a high vacuum. SYN: *lyophilization*.

freezing [AS. *freosan*] **1.** Passing from a liquid to a solid state due to heat loss. **2.** Damaged by exposure to cold temperatures. SEE: *frostbite*; *hypothermia*.

Fregoli's delusion [L. Fregoli, 19th century Italian actor, known for his many characters and rapid costume changes] The delusion that someone is assuming a variety of disguises to pursue one (the patient) with craft and cunning.

Freiberg's infraction (frī'bērgz) [Albert Henry Freiberg, U.S. surgeon, 1868–1940] Osteochondritis of the head of the second metatarsal bone of the foot.

fremitus (frēm'ī-tūs) [L.] Vibratory tremors, esp. those felt through the chest wall by palpation. Varieties include vocal or tactile, friction, hydatid, rhonchal or bronchial, cavernous on succussion, pleural, pericardial, tussive, and thrills. SEE: *palpation*; *thrill*.

hydatid f. A tremulous sensation felt on palpating a hydatid tumor.

tactile f. The vibration or thrill felt while the patient is speaking and the hand is held against the chest.

tussive f. Vibrations felt when the hand is held against the chest when the patient coughs.

vocal f. Vibrations of the voice transmitted to the ear during auscultation of the chest of a person speaking. In determining vocal fremitus, the following precautions should be observed: Symmetric parts of the chest are compared. The same pressure is applied to the stethoscope on each side. Fremitus is decreased in pleural effusions (air, pus, blood, serum, or lymph), emphysema, pulmonary collapse from an obstructed bronchus, pulmonary edema, and cancers of the lung.

Frenchay Activities Index (frēn'chā) A formal interview for patients who have suffered a stroke to compare their functional abilities before and after the stroke. The patient describes how employment, meal preparation and clean

up, gardening, shopping, and other activities of daily living have been altered by the stroke.

French scale A system used to indicate the outer diameter of catheters and sounds. Each unit on the scale is approximately equivalent to one-third mm; thus a 21 French sound is 7 mm in diameter. The size of the diameter of the catheter increases as the numerical value of French increases.

frenectomy (frē-nēk'tō-mē) [L. *fraenum*, bridle, + Gr. *ektome*, excision] Surgical cutting of any frenum, usually of the tongue.

frenotomy (frē-nōt'ō-mē) [ʹ + Gr. *tome*, incision] Division of any frenum, esp. for tongue-tie.

frenuloplasty (frēn'ū-lō-plās'tē) [ʹ + Gr. *plassein*, to form] Surgical correction of an abnormally attached frenulum.

frenulum (frēn'ū-lūm) *pl. frenula* [L., a little bridle] **1.** A small frenum. SYN: *vinculum*. **2.** A small fold of white matter on the upper surface of the anterior medullary velum extending to the corpora quadrigemina of the brain.

f. clitoridis The union of the inner parts of the labia minora on the under-surface of the clitoris.

f. labiorum pudendi The fold of membrane connecting the posterior ends of the labia minora.

f. linguae Frenulum of the tongue.

f. of the lips The fold of mucous membrane extending from the middle of the inner surface of the lip to the alveolar mucosa. It is seen in both the upper and lower jaws.

f. preputii The frenulum that unites the foreskin (prepuce) to the glans penis.

f. of the tongue A thin fold of mucosa in the middle of the floor of the mouth that runs from the gums behind the lower central incisors to the middle of the underside of the tongue. It divides the space between the tongue in half and can easily be seen when the tongue is raised. At birth this fold of mucosa may be tight, a condition called tongue-tie. SYN: *frenulum linguae*.

frenum (frē'nūm) *pl. frena* [L. *fraenum*, bridle] A fold of mucous membrane that connects two parts, one more or less movable, and checks the movement of this part. SEE: *frenulum*. **frenal, adj.**

frenzy (frēn'zē) [ME. *frenesie*] A state of violent mental agitation; maniacal excitement. SEE: *panic*.

Freon (frē'ōn) Trade name of a group of hydrocarbon gases previously used as a refrigerant and propellant in metered dose inhalers.

frequency [L. *frequens*, often] **1.** The number of repetitions of a phenomenon in a certain period or within a distinct population, such as the frequency of

heartbeat, sound vibrations, or a disease. SEE: *incidence*. **2.** The rate of oscillation or alternation in an alternating current circuit, in contradistinction to periodicity in the interruptions or regular variations of current in a direct current circuit. Frequency is computed on the basis of a complete cycle, in which the current rises from zero to a positive maximum, returns to zero, descends to an opposite negative minimum, and returns to zero. **3.** The rate at which uterine contractions occur, measured by the time elapsed between the beginning of one contraction and the beginning of the next.

frequency of breathing ABBR: fb. The number of spontaneous or machine-generated breaths per unit time.

Fresnel lenses (frä-něl) [A. J. Fresnel, Fr. physicist 1788–1827] A magnifying glass that distorts vision, preventing the eye from fixating. Under its influence spontaneous and gaze-specific nystagmus can be precisely evaluated.

Fresnel membrane prism A prism that can be applied to an eyeglass lens to correct double vision (e.g., in patients with ocular nerve palsies or difficulties with ocular convergence).

F response In electrodiagnostic study of spinal reflexes, the time required for a stimulus applied to a motor nerve to travel in the opposite direction up the nerve to the spinal cord and return.

fretum (fré-tüm) [L.] A constriction.

Freud, Sigmund (froyd) An Austrian neurologist and psychoanalyst (1856–1939) whose teachings involved analysis of resistance and transference, and a procedure for investigating mental function by use of free association and dream interpretation. Freud did not consider psychoanalysis to be scientific. He believed that its purpose was to elucidate the darkest recesses of the mind and to enable individuals to integrate the emotional and intellectual sides of their nature (i.e., the forces of love and death) and to develop better knowledge of self and a level of maturity and peace of mind that would help the individual and others have better lives.

Freudian Pert. to Sigmund Freud's theories of unconscious or repressed libido, or past sex experiences or desires, as the cause of various neuroses, the cure for which he believed to be the restoration of such conditions to consciousness through psychoanalysis.

F. slip A mistake in speaking or writing that is thought to provide insight into the individual's unconscious thoughts, motives, or wishes.

Freudian (froy'dé-än) SEE: under *Freud, Sigmund*.

freudian slip [From Freudian psychology] SEE: under *Freud, Sigmund*.

Freund's adjuvant (froynds) [Jules

Thomas Freund, Hungarian-born U.S. immunologist, 1890–1960] A mixture of killed microorganisms, usually mycobacteria, in an oil and water emulsion. The material is administered to induce antibody formation. Because the oil retards absorption of the mixture, the antibody response is much greater than if the killed microorganisms were administered alone.

Frey syndrome (fri) [Lucja Frey, Polish neurologist, 1899–1944] Sweating and/or flushing of the skin overlying the parotid gland that occurs after chewing or eating a meal. It is seen most often after parotid gland surgery but may also accompany traumatic injuries to the face and other conditions. SYN: *auriculotemporal syndrome*.

friable (fri'ä-b'l) [L. *friabilis*] Easily broken or pulverized.

Fricke's bandage A special bandage for supporting and immobilizing the scrotum.

friction [L. *frictio*] **1.** Rubbing. **2.** In massage, strong circular manipulations of deep tissue, always followed by centripetal stroking.

cross-fiber f. Deep transverse f.

deep transverse f. A massage technique in which stroking is applied across the longitudinal direction of the tissues of muscles, tendons, ligaments, or fascia to prevent adhesions, increase mobility of the tissue, and align new fibers along the lines of stress. SYN: *cross-fiber friction*.

dry f. Friction using no liquid, or other form of lubricant.

moist f. Friction using a lubricant, such as a liquid, lotion, or oil.

friction rub The distinct sound heard when two dry surfaces are rubbed together. If the sound is loud enough, the condition producing the sound can also be felt.

pericardial f.r. SEE: under *rub*.

pleural f.r. SEE: under *rub*.

Friedländer's bacillus (fréd'lën-dérs) [Carl F. Friedländer, Ger. physician, 1847–1887] *Klebsiella pneumoniae*.

Friedländer's disease Enderarteritis obliterans.

Friedländer's pneumonia Lobar pneumonia caused by infection with *Klebsiella pneumoniae*, characterized by fevers, chills, sweats, cough, pleuritic pain, bloody sputum, and bulging interlobar fissures on chest x-ray.

Friedreich's ataxia (fréd'riks) [Nikolaus Friedreich, Ger. neurologist, 1825–1882] An inherited degenerative disease with sclerosis of the dorsal and lateral columns of the spinal cord. It is accompanied by muscular uncoordination, speech impairment, lateral curvature of the spinal column, with muscle paralysis, esp. of the lower extremities. The

onset is in childhood or early adolescence. SYN: *heredoataxia*.

Friedreich's sign 1. Sudden collapse of the cervical veins that were previously distended at each diastole. The cause is an adherent pericardium. 2. Lowering of the pitch of the percussion note that occurs over an area of cavitation during inspiration.

fright [AS. *fryhto*] Extreme sudden fear.

frigid (frī'j'īd) [L. *frigidus*] 1. Cold. 2. Unresponsive to emotion, applied esp. to the inability of a person to feel sexual desire. SEE: *impotence*.

frigidity (frī-jīd'ī-tē) A state of sexual dysfunction marked by the inability to respond to erotic stimuli. SEE: *female sexual arousal disorder*; *male erectile disorder*.

frigorabile (frīg'ō-lā'bīl) [L. *frigor*, cold, + *labilis*, unstable] Capable of being destroyed by low temperature.

frigostabile (frīg'ō-stā'b'l) [" + *stabilis*, firm] Incapable of being destroyed by low temperature.

frit (frit) [It. *fritta*, fry] 1. The material from which glass or the glazed portion of pottery is made. 2. A similar material for making the glaze of artificial teeth.

frog face Flatness of the face resulting from intranasal disease.

Froin's syndrome (frwahnz) [Georges Froin, Fr. physician, 1874–1932] The presence of yellow cerebrospinal fluid that coagulates rapidly. This is associated with any condition in which the fluid in the spinal canal is prevented from mixing with the cerebrospinal fluid in the ventricles.

frolement (frōl-mōn') [Fr.] 1. Very light friction with the hand in massage. SEE: *massage*. 2. A sound resembling rustling heard in auscultation.

Froment's sign (frō-māz') [Jules Froment, Fr. physician, 1878–1946] Flexion of the distal phalanx of the thumb when a sheet of paper is held between the thumb and index finger. It indicates ulnar nerve palsy.

Frommann's lines (frōm'ānz) [Carl Frommann, Ger. anatomist, 1831–1892] Transverse lines on the axon of a myelinated nerve fiber; they stain with silver nitrate.

frontal [L. *frontalis*] 1. In anatomy, pert. to or located in the front; anterior. 2. Pert. to the forehead bone.

fronto- [L. *frons*, brow] Combining form meaning *anterior*; *forehead*.

frontomalar (frōn'tō-mā'lār) [" + *mala*, cheek] Pert. to the frontal and malar bones.

frontomaxillary (frōn'tō-māx'ī-lār'ē) [" + *maxilla*, jawbone] Pert. to the frontal and maxillary bones.

frontotemporal (frōn'tō-tēm'por-āl) [" + *tempora*, the temples] Pert. to the frontal and temporal bones.

front-tap reflex Contraction of the gas-

trocnemius muscle when stretched muscles of the extended leg are percussed.

FROPVD *Flow-restricted oxygen-powered ventilation device*. SEE: *under device*.

frost [AS.] A frozen vapor deposit.

uremic f. A deposit of urea crystals on the skin from evaporation of sweat in a patient whose kidneys are severely impaired, as in uremia.

frostbite (frōst'bīt) Severe tissue and cell damage caused by freezing a body part. The injury occurs both because intracellular water turns to ice and because extremely cold temperatures damage and block the blood supply to exposed parts. Exposed areas (e.g., ears, cheeks, nose, fingers, and toes) are most often affected. SEE: *illius*; *freezing*; *frostnip*; *Nursing Diagnoses Appendix*.



FROSTBITE

SYMPTOMS: The frozen tissue is usually numb until it is rewarmed, when it may become extremely painful. Hands, feet, noses, and ears are typically affected first. Signs of frostbite depend on the depth of tissue damage: there may be swelling and hyperemia of the skin (superficial frostbite); blistering or hemorrhagic blistering and pain (second- and third-degree frostbite); or gangrene of muscles and necrosis of other subcutaneous tissues (deep or fourth-degree frostbite).

TREATMENT: After the patient's airway, breathing, and circulation are stabilized, he or she is warmed and rehydrated to prevent systemic effects of hypothermia (low body temperature). Wet and constrictive clothing and jewelry are removed; the patient is kept dry and placed in a warm area, and warm fluids are given by mouth. If the patient's core temperature exceeds 89.6°F (32°C), external warming is used. The frozen body part is immersed in a tepid to warm water bath (100° to 104°F [37.8° to 42.2°C]) or a warming blanket is applied to cover the trunk and limbs. If the patient's core temperature is less than 89.6°F (32°C), internal and external warming should be used concurrently to gradually warm the body core and surface, as rearming the surface first could result in ventricular fibrilla-

tion (rewarming shock). Internal rewarming involves using warmed oxygen inhalation, warmed saline gastric lavage, and sometimes warmed peritoneal lavage. Rewarming often produces uncomfortable tingling, or frankly painful sensations in the frostbitten body part. Tetanus prophylaxis, analgesics, and nonsteroidal anti-inflammatory drugs are given. If tissue sloughing occurs, minimal débridement is performed, unless the patient is septic or otherwise systemically compromised by the injury. Because tissue that appears severely damaged often heals spontaneously, surgery is sometimes delayed for weeks or months. SEE: *freezing* for treatment of frozen parts.



Rubbing or using frozen limbs should be avoided, to minimize injury to the skin and soft tissues.

PATIENT CARE: Emergency department personnel assess for frostbite in any patient who has been exposed to cold and complains of a cold, numb extremity or body part. The elderly, patients taking beta blockers, malnourished patients, alcoholics, diabetics, smokers, and people with peripheral vascular disease are at the highest risk for damage due to frostbite. They should be advised to take special precautions when outdoors. While the extent of tissue damage depends on the degree of cold and the duration of exposure, the degree of injury may be difficult to determine on initial assessment, and requires ongoing monitoring. Neurovascular status is monitored closely, along with arterial blood gas levels, cardiac rhythm and central venous pressure, and fluid and electrolyte balance. A complete blood count, blood urea nitrogen, partial thromboplastin time, prothrombin time, and an international normalized ratio are also assessed. Preventing infection is an important consideration, and the patient may be placed in protective (reverse) isolation to minimize contact with infectious agents. During rewarming, the patient is assessed frequently for complications (e.g., compartment syndrome).

Depending on the extent of débridement and the necessity for amputation, the physical therapist and occupational therapist work with the patient to manage activities of daily living. Outpatient rehabilitation may be required for an extended period. The patient may require assistance to deal with the emotional stress of the injury. Needs are determined, supportive care is provided, and the patient is referred for further psychological care as necessary. If the frostbite developed because of inade-

quate clothing or shelter, a community social service referral may be appropriate. To prevent frostbite, patients should avoid prolonged cold exposure and get adequate food, warmth and rest when outdoors. Teach individuals to wear mittens rather than gloves, to clothe themselves in waterproof, wind-proof multilayers, to wear two pairs of socks (cotton next to the skin and wool outside), and to wear a scarf and hat covering the ears to reduce loss of heat through the head (highest area of loss). Shelter should be sought or physical activity increased when exposed to cold (as in a snowstorm). Advise individuals that alcohol draws blood out of body organs and into capillary beds, and that smoking interferes with circulation, so both should be avoided when cold exposure is unavoidable.

frost-itch Winter itch.

frostnip A mild form of cold injury, consisting of reversible blanching of the skin, usually on the earlobes, cheeks, nose, fingers, and toes. SEE: *frostbite*.

frottage (frō-tōzh') [Fr., rubbing] **1.** A massage technique using rubbing, esp. for sexual gratification. **2.** A surgical treatment sometimes used to treat pneumothorax.

frotteurism (frō-tūr'izm) Recurrent intense sexual urges and fantasies involving touching and rubbing against a non-consenting person. These acts are usually performed in crowded places where arrest is unlikely. The perpetrators are usually young men. Persons who have acted on these urges are usually distressed about them.

frozen watchfulness The hopeless reproachful stare of battered children.

FRS *Fellow of the Royal Society.*

FRSC *Fellow of the Royal Society (Canada).*

fructofuranose (frük'tō-fū'rā-nōs) The furanose form of fructose.

fructokinase (frük'tō-kī'nās) An enzyme that catalyzes transfer of high-energy phosphate from a donor to fructose.

fructose (frük'tōs) [L. *fructus*, fruit] Levulose; fruit sugar. A monosaccharide and a hexose, it has the same empirical formula as glucose, $C_6H_{12}O_6$, and is found in corn syrup, honey, fruit juices, and as part of the disaccharide sucrose. In the liver, fructose is changed to glucose to be used for energy production or to be stored as glycogen. SEE: *disaccharide*.

fructose intolerance Inability to metabolize the carbohydrate fructose due to a hereditary absence or deficiency of the enzyme 1,6-biphosphate aldolase B. Clinical signs develop early in life. They include hypoglycemia, jaundice, hepatomegaly, vomiting, lethargy, irritability, and convulsions. Fructose can be identified in the urine. The fructose

tolerance test should not be used because it can induce irreversible coma.

TREATMENT: Acute attacks are treated by glucose administration. For long-term therapy, all foods containing fructose (present in sweet fruits and sugar cane) and sucrose and sorbitol (the latter used as a sweetening agent in foods and drugs) must be eliminated from the diet.

fructosemia (frūk'tō-sē'mē-ă) [f' + Gr. *haima*, blood] Fructose in the blood.

fructoside (frūk'tō-sīd) A carbohydrate that yields fructose on hydrolysis.

fructosuria (frūk'tō-sū-rē-ă) [f' + Gr. *ouron*, urine] Fructose in the urine.

fruit [L. *fructus*, fruit] **1.** The ripened ovary of a seed-bearing plant and the surrounding tissue, such as the pod of a bean, nut, grain, or berry. **2.** The edible product of a plant consisting of ripened seeds and the enveloping tissue. Fruits add vitamins, minerals, and fiber to the diet. They help prevent constipation and vitamin deficiency syndromes. Most people should eat 2 to 3 servings of fruit every day, although people with impaired glucose tolerance or diabetes mellitus should consume just 1 to 2 servings.

COMPOSITION: Carbohydrates in the form of fruit sugars are the chief calorie component of fruits. Seventy-five percent of the calories in most fruit is a mixture of dextrose and fructose. Fruits are a good source of vitamins and minerals.

Pectose bodies: Pectose, the principle in fruits that causes them to jell, is found in unripe fruit; pectin is found in ripe fruit or fruit that has been cooked in a weak acid solution.

Fruit acids: Acetic acid is found in wine and vinegar. Citric acid is found in lemons, oranges, limes, and citrons. Malic acid is found in apples, pears, apricots, peaches, and currants. Oxalic acid is found in rhubarb, sorrel, and cranberries. Tartaric acid is found in grapes, pineapples, and tamarinds. Salicylic acid is found in currants, cranberries, cherries, plums, grapes, and crabapples.

Combined acids: Citric and malic acid are found in raspberries, strawberries, gooseberries, and cherries. Citric, malic, and oxalic acid are found in cranberries.

fruitarian (froo-tār'ē-ăn) Someone who eliminates all foods from the diet except fruits, vegetable oils, nuts, and honey. SEE: *vegan*.

frumentaceous (froo-měn-tă'shūs) [L. *frumentum*, grain] Resembling or pert. to grain.

frustration [L. *frustratus*, disappointed] **1.** Lack of an adequate outlet for the libido. **2.** The condition that results from the thwarting or prevention of acts that would satisfy or gratify physical or personal needs.

Frye's standard (frī) [Fm. *Frye v. U.S.* 1923] One of several standards govern-

ing the admissibility of scientific or expert testimony in courts of law. To gain acceptance the proposed evidence or testimony must agree with generally accepted scientific methods or thinking.

Fryns syndrome A rare autosomal dominant disorder characterized by diaphragmatic hernia and facial, limb, cardiac, lung, and brain anomalies. The disease is often fatal in infancy; survivors may have cognitive deficits.

FSH follicle-stimulating hormone. SEE: under *hormone*.

FSH/LHRH follicle-stimulating hormone and luteinizing hormone-releasing hormone.

FSH-RF follicle-stimulating hormone-releasing factor.

FSH-RH follicle-stimulating hormone-releasing hormone. SEE: under *hormone*.

ft L. *fiat* or *fiant*, let there be made; *florentium*, former name for promethium; *foot*.

FTA-ABS fluorescent treponemal antibody-absorption test for syphilis.

FTT failure to thrive.

fuchsin (fook'sin) A red dye that can be prepared in an acid or basic form.

fucose (fū'kōs) A mucopolysaccharide present in blood group substances and in human milk.

fucosidosis (fū'kō-sī-dō'sīs) An autosomal recessive disease resulting from absence of the enzyme required to metabolize fucosidase. Clinically, neurological deterioration begins shortly after a period of normal early development. Heart disease, thick skin, and hyperhidrosis develop and are followed by death at an early age.

Fucus vesiculosus (fū'kūs vē-sīk-ū-lō'sūs, foō') [L., "vesicular lichen"] Bladderwrack.

fuel source (fū'ēl) [ME. *feuel*] A flammable substance that provides energy.

-fuge [L. *fugare*, to put to flight] Suffix meaning *something that expels or drives away*.

fugetaxis (fū'jī-tăk'sīs) [L. *fugere*, to flee + ""] The movement of white blood cells away from chemical or biochemical signaling chemicals, such as chemokines; chemorepulsion.

fugitive (fū'jī-tīv) [L. *fugitivus*] **1.** Temporary, transient. **2.** Wandering; pert. to inconstant symptoms.

fugue (fūg) [L. *fuga*, flight] A dissociative disorder in which the person acts normally but has almost complete amnesia for what happened when recovery occurs.

psychogenic f. Sudden, unexpected travel away from one's home or place of work with inability to recall one's past. The individual may assume a partial or complete new identity. The condition is not due to organic brain disease. It may follow severe mental stress such as marital quarrels or a natural disaster. It is usually of short duration but can last for

months. Recovery is the usual outcome without recurrences.

Fukuyama disease (foo-koo-yah'mā) A rare autosomal recessive muscular dystrophy found almost exclusively in people of Japanese descent, in which muscular weakness, inability to walk, micropolygyria, and mental retardation are common.

fulcrum (fūl'krūm) The object or point on which a lever moves.

fulgurant (fūl'gū-rānt) [L. *fulgurare*, to lighten] Coming and going intensely like a flash of light, or a shooting pain. SYN: *fulminant*.

fulgurate (fūl'gū-rāt) To destroy or remove tissue by means of fulguration.

fulguration (fūl'gū-rā'shūn) Destruction of tissue by means of long high-frequency electric sparks. SEE: *electrodesiccation*.

full-field digital mammography ABBR: FFDM. The enhancement of mammographic imaging of the breast with computer software that improves the resolution of the image and the visibility of lesions.

fulling (fūl'ing) [O. Fr. *fauler*, to fill] A movement in massage: kneading with the limb held between the hands, rolling it backward and forward.

full term In obstetrics, an infant born between the beginning of the 38th and the end of the 41st week of gestation. SYN: *term infant*.

full width half maximum ABBR: FWHM. The width of a peak or the bandpass of an emission or absorption spectrum in a laboratory photometer or spectrophotometer. When combined with other characteristics of the device, this can be used to predict suitability of the photometer or spectrophotometer for specific applications and measurements.

fulminant, fulminating (fool', fūl'mī-nānt) [L. *fulminans*] **1.** Having a rapid and severe onset. **2.** Coming in lightning-like flashes of pain, as in tabes dorsalis. SYN: *fulgurant*.

fulminate To occur suddenly; to have a rapid or explosive onset. Said of some diseases.

fumagillin (fū'mā-jil'in) A molecule produced by fungi that prevents new blood vessel formation ("angiogenesis"), and may be useful in treating cancers.

fumarase (fū'mā-rās) An enzyme present in many plants and animals. It catalyzes the production of L-malic acid from fumaric acid.

fumaric acid (fū-mār'ik) C₄H₄O₄; one of the organic acids in the citric acid cycle. It is used as a substitute for tartaric acid in beverages and baking powders.

fume hood An enclosed, ventilated space used in a laboratory to contain and exhaust aerosols, chemicals, dusts, microbes, powders, vapors, and other inhalational hazards.

fumes [L. *fumus*, smoke] Vapors, esp. those with irritating qualities.

nitric acid f. The vapors of nitric acid (HNO₃). They are used in various chemical processes. Poisoning is produced by the action of the corrosive fumes on the respiratory tract.

SYMPTOMS: Findings include choking, gasping, swelling of mucous membranes, tightness in the chest, pulmonary edema, cough, and shock. Symptoms may last for 1 week or more.

TREATMENT: The patient must be removed immediately from the fumes and good ventilation of the lungs maintained. Therapy is given for shock and pulmonary edema. Administration of oxygen under pressure using a mask may be required along with analgesics and anxiolytics as needed. Clothes must be removed if they are contaminated. Steroids may help diminish the inflammatory response of the lungs.

fumigant (fū'mī-gānt) [L. *fumigare*, to make smoke] An agent used in disinfecting a room. The substance produces fumes that are lethal to insects and rodents. Chemicals used include hydrogen cyanide gas, acrylonitrile, carbon tetrachloride, ethylene oxide, and methyl bromide.



All of these chemicals are highly toxic, potentially lethal, and in some cases explosive. They should be used only by persons skilled in their application.

fumigation (fū'mī-gā'shūn) **1.** The use of poisonous fumes or gases to destroy living organisms, esp. rats, mice, insects, and other vermin. Fumigants are relatively ineffective against bacteria and viruses; consequently, terminal disinfection of the sickroom, formerly a common practice, has been discontinued. **2.** The disinfection of rooms by gases.

fuming (fū'ming) [L. *fumus*, smoke] Having a visible vapor.

function (fūng'shūn) [L. *functio*, performance] **1.** The action performed by any structure. In a living organism this may pertain to a cell or a part of a cell, tissue, organ, or system of organs. **2.** The act of carrying on or performing a special activity. Normal function is the normal action of an organ. Abnormal activity or the failure of an organ to perform its activity is the basis of disease or disease processes. Structural changes in an organ are pathological and are common causes of malfunction, although an organ may function abnormally without observable structural changes. In humans, function can pertain to the manner in which the individual can perform successfully the tasks and roles required for everyday living.

executive f. The cognitive processes involving logic, planning, analysis, and reasoning. These capacities enable us to solve problems encountered in daily life that require considerations of goals, contexts, options, and previous experiences to select an appropriate strategy.

hazard f. A formula used to estimate the prognosis of a person who has already survived an illness for a specific time.

functional 1. Pert. to function. **2.** A term describing a symptom which has not been found to be caused by an organic disease. **3.** In endocrinology, active secretion of hormones, e.g., a *functional adenoma*.

functional disease A general term for inorganic disease or a disease in which organic changes are not evident; a disturbance of the function of any organ. SYN: *functional disorder*; *functional illness*. SEE: *organic disease*; *somatoform disorder*.

functional disorder Functional disease.

functional endoscopic sinus surgery ABBR: FESS. Any surgical procedure performed during direct inspection of the sinuses with fiberoptic endoscopes. FESS is frequently used to treat chronic sinusitis that has not responded to treatment with medications. It can also be used to remove nasal polyps or foreign bodies in the nose, to excise some tumors, and to control nosebleeds.

functional health pattern Collective features of an individual's health history used to assess, plan, diagnose, intervene, and evaluate appropriate nursing care. The term is associated with Margery Gordon. SEE: *Nursing Diagnoses Appendix*.

Functional Independence Measure ABBR: FIM. A clinical tool used to assess the ability of persons needing rehabilitative services to cope independently and perform activities of daily living. These activities include self-care, sphincter control, mobility, locomotion, communication, and social cognition. Data derived from FIM correlate with some outcome measures in rehabilitation, such as the length of time a patient may need to stay in care or the resources the patient will use. The version of FIM for children is called WeeFIM. SEE: *WeeFIM*.

functional overlay The emotional response to physical illness. It may take the form of a conversion reaction, affective overreaction, prolonged symptoms of physical illness after signs of the illness have subsided, or combinations of these. Functional overlay may appear to be the primary disease; skill may be required to determine the actual cause of illness.

functional reach The furthest distance in front of the body that a person, standing

in a fixed position with arms fully extended, can touch without falling. The *functional reach test*, as originally devised by Duncan et al, is a measure of frailty in addition to an assessment of balance, flexibility, and fall risk. Norms for this test are: reach < 6 inches = high risk of falls/frailty; reach > 6 inches and < 10 inches = moderate risk for falls/frailty; reach > 10 inches = low risk for falls/frailty. A variation of the test, called the *multidimensional reach test*, assesses a subject's ability to reach both forward and side-to-side.

functional residual capacity ABBR: FRC.

The amount of air remaining in the lungs after a normal resting expiration.

functional somatic syndrome Any of several poorly understood conditions in the group that includes multiple chemical sensitivity syndrome, sick building syndrome, repetition stress injury, chronic whiplash, chronic fatigue syndrome, irritable bowel syndrome, and fibromyalgia syndrome.

functional vision The processing and use of visual information in the performance of visually related tasks, e.g., reading, driving, or recognizing individuals at a distance or in a crowd.

funda (fün'dä) [L., sling] A four-tailed bandage. **fundal**, *adj.*

fundectomy (fün-dëk'tō-mē) [L. *fundus*, base, + Gr. *ektome*, excision] Removal of the fundus of any organ.

fundic (fün'dik) Pert. to a fundus.

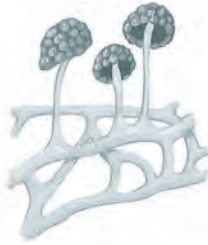
fundiform (fün'di-form) [L. *funda*, sling, + *forma*, shape] Sling-shaped or looped.

fundoplication (fün'dō-pli-kä'shün) Procedure used to treat gastroesophageal reflux and/or hiatal hernia by reestablishing a gastroesophageal angle and creating a barrier to intrathoracic gastric displacement. Most of this is accomplished by the Nissen technique by wrapping the fundus about the gastric cardia. This procedure may be performed laparoscopically as well as by open surgery in adults, children, or infants.

Belsey f. A surgical procedure for gastroesophageal reflux that relies on a repair of three quarters of the circumference of the gastroesophageal sphincter.

Nissen f. The surgical correction of an esophageal hiatal hernia or gastroesophageal reflux, by wrapping the gastric cardia with adjacent portions of the gastric fundus. This procedure, which is frequently performed laparoscopically, reestablishes the gastroesophageal angle, enhances the lower esophageal sphincter, and prevents intrathoracic displacement of the stomach.

PATIENT CARE: The patient is prepared physically and psychologically for surgery, and postsurgical procedures to

YEAST ($\times 750$)RHIZOPUS ($\times 40$)ASPERGILLUS ($\times 40$)RINGWORM ($\times 750$)CRYPTOCOCCUS ($\times 500$)

FUNGI

be expected are explained. Vital signs and fluid intake and output, including wound and nasogastric tube drainage (if used) should be checked and recorded. Postoperative care includes attention to oral hygiene; care of chest tube thoracostomy (if a thoracic approach was employed); pain assessment and management; and incentive spirometry, deep breathing and coughing to prevent atelectasis or pneumonia. Before hospital discharge, dietary restrictions should be reviewed with the patient, and small, frequent meals recommended. Lifting, straining, and other activities that would increase intra-abdominal pressure should be avoided for about 5 weeks. Follow-up care should be scheduled.

fundus (fün'düs) [L., base] **1.** The larger part, base, or body of a hollow organ. **2.** The portion of an organ most remote from its opening. **fundic** (fün'dik), *adj.*

f. of bladder The base of the urinary bladder, the portion closest to the rectum.

f. flavimaculatus Stargardt disease.

f. of gallbladder The lower dilated portion of the gallbladder.

ocular f. The posterior part of the eye including the retina and optic nerve.

f. of stomach The uppermost portion of the stomach, posterior and lateral to the entrance of the esophagus.

f. uteri The area of the uterus above the openings of the fallopian tubes.

fundus albipunctatus An autosomal recessive form of night blindness in which

the retina is flecked or pigmented, and resynthesis of rhodopsin is delayed.

funduscope (fün'düs-sköp) [L. *fundus*, base, + Gr. *skopein*, to examine] A device for examining the fundus of the eye.

funduscopy (fün-düs'kö-pē) [L. *fundus*, base, + Gr. *skopein*, to examine] Examination, esp. visual, of the fundus of any organ. In ophthalmology, visual examination of the fundus of the eye. SYN: *ophthalmoscopy*.

fundusectomy (fün'düs-ék'tō-mē) [f + Gr. *ektome*, excision] Excision of the fundus of the stomach. SYN: *cardiectomy*.

fungal septicemia Fungemia.

fungate (fün'gät) [L. *fungus*, mushroom] To grow like a fungus.

fungating (fün'gät-ing) Growing rapidly like a fungus; said of certain tumors.

fungemia (fün-jē'mē-ä) [f + Gr. *haima*, blood] The presence of fungi in the blood, most commonly *Candida* or *Aspergillus*. It can be life-threatening, esp. in immunocompromised patients. SYN: *fungal septicemia*. SEE: *sepsis*.

Fungi (fün'ji) [L. *fungus*, mushroom] The kingdom of organisms that includes yeasts, molds, and mushrooms. Fungi grow as single cells, as in yeast, or as multicellular filamentous colonies, as in molds and mushrooms. They do not contain chlorophyll, so they are saprophytic (obtain food from dead organic matter) or parasitic (obtain nourishment from living organisms). Most fungi are not pathogenic, and the body's normal flora contains many fungi. SEE: *illus.*

- Fungi that cause disease come from a group called fungi imperfecti. In immunocompetent humans they cause minor infections of the hair, nails, mucous membranes, or skin. In a person with a compromised immune system due to AIDS or immunosuppressive drug therapy, fungi are a source of opportunistic infections that can cause death.
- fungicide** (fūn'jī-sīd) [L. *fungi*, mushrooms, + *cidus*, killing] An agent that kills fungi and their spores.
- fungiform** (fūn'jī-form) [ʹ + *forma*, shape] Mushroom-shaped.
- fungin** (fūn'jīn, fūng'gīn) [ʹ] A suffix used in pharmacology to designate any antifungal drug.
- fungistasis** (fūn'jī-stā'sīs) [ʹ + Gr. *stasis*, a halting] A condition in which the growth of fungi is inhibited.
- fungistat** (fūn'jī-stāt) [ʹ + Gr. *statikos*, standing] An agent that inhibits the growth of fungi. **fungistatic** (-stāt'īk), *adj.*
- fungitoxic** (fūn'jī-tōk'sīk) Poisonous to fungi.
- fungoid** (fūn'goyd) [ʹ + Gr. *eidos*, form, shape] Having the appearance of a fungus.
- fungosity** (fūn'gōs'ī-tē) A soft, spongy fungus-like growth.
- fungus** (fūn'gūs) *pl.* **fungi** [L., mushroom] **1.** An organism belonging to the kingdom Fungi; a yeast, mold, or mushroom. SEE: *Fungi*. **2.** A spongelike morbid growth on the body that resembles fungi. SEE: *actinomycosis*. **fungial, fungous**, (fun'gūs), *adj.*
dematiaceous f. Dematiaceae.
filamentous f. Mold(2).
- fungus ball** The growth of a mold, often *Aspergillus*, in a body cavity without the invasion of tissue. Most common sites are the nasal cavities, paranasal sinuses, kidneys, and lungs.
- funic** (fū'nīk) [L. *funis*, cord] Pert. to the umbilical cord.
- funicular** (fū-nīk'ū-lār) Pert. to the spermatic or umbilical cord.
- funiculitis** (fū-nīk'ū-lī'tīs) [ʹ + Gr. *itis*, inflammation] Inflammation of the spermatic cord.
- funiculopexy** (fū-nīk'ū-lō-pēks'ē) [ʹ + Gr. *pexis*, fixation] Suturing of the spermatic cord to the tissues in cases of undescended testicle.
- funiculus** (fū-nīk'ū-lūs) *pl.* **funiculi** [L., little cord] **1.** Any small structure resembling a cord. **2.** A division of the white matter of the spinal cord consisting of fasciculi, or fiber tracts, lying peripheral to the gray matter. The types of funiculi are dorsal, lateral, and ventral.
- funipuncture** (fū'nī-pūnk'chūr) [L. *funis*, a cord, + *punctura*, to prick] Puncture of the umbilical vein in utero, to obtain a sample of fetal blood. The needle is inserted under ultrasonic guidance.
- funis** (fū'nīs) [L., cord] A cordlike structure, such as the spermatic cord or the umbilical cord.
- funisitis** (fū'nī-sī'tīs) Infection of the umbilical cord.
- funnel** [L. *funderere*, to pour] A conical device open at both ends for pouring liquid from one vessel into another.
- funnel breast, funnel chest** A congenital anomaly consisting of sternal depression of the chest walls so that the xiphoid is depressed posteriorly. SYN: *pectus excavatum*.
- FUO** *fever of unknown origin*.
- furcal** (fūr'kāl) Forked.
- furcation** (fūr-kā'shūn) The branch point of a multirooted tooth. Teeth that divide into two roots are termed bifurcated. Teeth that divide into three roots are termed trifurcated. SYN: *bifurcation* (2).
- furfur** (fūr'fūr) [L., bran] Dandruff scales.
- furfuraceous** (fūr-fūr-rā'shūs) Scaly or resembling scales.
- furor** (fūr'ōr) [L., rage] Extremely violent outbursts of anger, often without provocation.
- furosemide** (fūr-ōr'sē-mīd) A loop diuretic.
- furred** (fūrđ) [O. Fr. *forre*, lining] Covered with a dustlike deposit; used of the tongue.
- furrow** (fūr'ō) [AS. *furh*] A groove.
atrioventricular f. The groove demarcating the atria of the heart from the ventricles.
digital f. Any of several transverse lines on the palmar surface of the fingers across the joints.
gluteal f. The vertical groove on the skin between the buttocks.
- furuncle** (fūr'rūng-k'l) [L. *furunculus*] Boil.
- furunculoid** (fūr-rūng'kū-loyd) [L. *furunculus*, a boil, + Gr. *eidos*, form, shape] Resembling a furuncle or boil. SEE: *furunculosis*.
- furunculosis** (fūr-rūng'kū-lō'sīs) [ʹ + Gr. *osis*, condition] A condition resulting from furuncles or boils.
- furunculous** (fūr-rūng'kū-lūs) Pert. to or of the nature of a furuncle or boil.
- furunculus** (fūr-rūng'kū-lūs) *pl.* **furunculi** [L., a boil] Boil.
- fusariosis** (fūr-zār'ē-ō'sīs) [*Fusarium* + ʹ] Infection or intoxication by species of the genus *Fusarium*. It typically affects immunocompromised patients.
- Fusarium** (fūr-zā-rē-ūm) [L. *fusus*, spindle] A genus of fungi, most of which are plant pathogens, and a few of which may be opportunistic in humans.
- fuscus** (fūs'in) [L. *fuscus*, dark brown] A brown pigment, a melanin, present in the outermost layer (pigmented epithelium) of the retina.

fuse (fūz) [L. *fusus*, poured] **1.** A safety device consisting of a strip of wire made from easily meltable metal of predetermined conductance. The metal melts, breaking the circuit when excess current passes through. **2.** To unite or blend together, as the coherence of adjacent body structures.

fusible (fū'zī-b'l) Capable of being melted or joined.

fusiform (fū'zī-form) [L. *fusus*, spindle, + *forma*, shape] Tapering at both ends; spindle-shaped.

fusimotor (fū'sī-mō'tor) Pert. to the motor innervation of the intrafusal muscle fibers originating in the gamma efferent neurons of the ventral horns of the spinal cord.

fusion (fū'shūn) [L. *fusio*] **1.** Meeting and joining together through liquefaction by heat. **2.** The process of fusing or uniting. **3.** The union of adjacent tooth germs to form an oversize tooth of abnormal configuration or two teeth partially fused at the crown or root. **4.** The blending of genetic material of two distinct cells or species.

diaphyseal-epiphyseal f. Surgical obliteration of the epiphyseal line of a bone so that the epiphysis and diaphysis are joined.

nuclear f. Joining of the nucleus of small atoms to form larger atoms. It occurs when temperatures reach millions of degrees. An example is the nuclear reaction joining hydrogen together to form helium and resulting in the significant release of energy.

spinal f. SEE: *spinal fusion*.

fusion imaging Any combination of radiological technologies for generating images of body structures. Some exam-

ples of fusion imaging are positron emission tomography-computed tomographic (PET-CT) scanning, in which the molecular data derived from a PET scan are combined with high-resolution anatomical data from a CT scan; CT-magnetic resonance fusion imaging; and single photon emissions computed tomographic (SPECT) fusion imaging.

Fusobacterium (fū'zō-bāk-tē'rē-ūm) A genus of gram-negative, non-spore-forming bacilli that is part of the resident flora of the intestines and oral cavity. They are strict anaerobes and may infect necrotic tissue. *F. nucleatum* has been cultured from lesions of gangrenous stomatitis.

fusocellular (fū'sō-sēl'ū-lār) [L. *fusus*, spindle, + *cellulus*, little cell] Spindle-celled.

fusogen (fūz'ō-jēn") [Fm. *fus(ion)* + "] A substance that can cause cellular membranes to merge.

fusospirochetal (fū'sō-spī-rō-kē'tāl) [" + Gr. *speira*, coil, + *chaite*, hair] Pert. to fusiform bacilli and spirochetes.

fusospirochetosis (fū'sō-spī'rō-kē-tō'sis) [" + " + " + *osis*, condition] Infection with fusiform bacilli and spirochetes, such as necrotizing gingivitis.

fastigation (fūs'tī-gā'shūn) [L. *fastigatio*] In massage, beating with light rods.

futile care In clinical practice, any intervention that will not improve a patient's health, well-being, comfort, or prognosis. The term is used esp. in the care of patients at the end of life. SEE: *advance directive*; *hospice*.

FVC *forced vital capacity*.

FWB *full weight bearing*.