



T *temperature; time; intraocular tension.*

t *temporal; L. ter, three times.*

t- *therapy related; resulting from treatment. It is used in hematology to designate a cancer or leukemia that arises after treatment with cytotoxic drugs or radiation therapy, as in "t-AML" (therapy-related acute myeloid leukemia) or "t-MDS" (therapy-related myelodysplastic syndrome).*

T1, T2, etc. *first thoracic nerve, second thoracic nerve, and so forth.*

T_{1/2}, t_{1/2} In nuclear medicine, the symbol of half-life of a radioactive substance.

T₃ *triiodothyronine.*

T₄ *thyroxine.*

T-1824 Evans blue.

TA *Terminologia Anatomica.*

Ta Symbol for the element tantalum.

tabanid (tăb'ă-nid) [L. *tabanus*, horsefly] A member of the dipterous family Tabanidae.

Tabanidae (tă-băn'î-dē) [L. *tabanus*, horsefly] A family of insects belonging to the order Diptera. It includes horseflies, gadflies, deer flies, and mango flies, all bloodsucking insects that attack humans and other warm-blooded animals. These flies are of medical importance because they are vectors of the filarial worm *Loa loa*, tularemia, and other diseases.

tabanka (tă-băng'kă) [Fm. Trinidadian English] A family-bound illness specific to the West Indies in which men who are abandoned by their wives become severely depressed and may commit suicide.

Tabanus (tă-bă'nūs) [L., horsefly] A genus of flies of the family Tabanidae.

tabardillo (tăb'ăr-dē'lyō) [Sp.] An epidemic louse-borne typhus fever occurring in parts of Mexico. SEE: *typhus*.

tabella (tă-bēl'ă) *pl. tabellae* [L., tablet] A medicated mass of material formed into a small disk. SEE: *lozenge; tablet; troche*.

tabes (tă'bēz) [L., wasting disease] A gradual, progressive wasting in any chronic disease.

diabetic t. Peripheral neuritis affecting diabetics; may affect the spinal cord and simulate tabes caused by syphilis.

t. dorsalis A form of neurosyphilis, in which the dorsal roots of sensory nerves are damaged by inflammation. It causes problems in coordinating muscles for voluntary movement and ambulation (locomotor ataxia), which produce a staggering gait, absence of deep tendon reflexes (e.g., at the ankles), and loss of pain in the lower extremities, inter-

rupted occasionally by flashes of sharp pain (lightning pains). Tabes is frequently seen in combination with the other forms of neurosyphilis, meningitis, and dementia. Physical therapy and teaching are needed to reduce the risk of falls. Penicillin G is the treatment of choice; for penicillin-allergic persons, tetracyclines are used. SYN: *locomotor ataxia*. SEE: *syphilis*.

t. ergotica Tabes resulting from the use of ergot.

t. mesenterica Emaciation and malnutrition caused by engorgement and tubercular degeneration of the mesenteric glands.

tabetic (tă-bēt'ik) [L. *tabes*, wasting disease] Pert. to or afflicted with tabes.

tabetiform (tă-bēt'î-form) [" + *forma*, shape] Resembling or characteristic of tabes.

tablature (tăb'lă-chūr) The structure of a cranial bone consisting of outer and inner layers of compact bone separated by spongy bone, the diploe.

table (tă'bl) [L. *tabula*, board] **1.** A flat-topped structure, as an operating table. **2.** A thin, flat plate, as of bone.

t. of the skull The inner and outer layers of a cranial bone, made of compact bone. These are separated by diploe, spongy bone that contains red bone marrow.

tilt t. A table that can be inclined or tipped over while a person is strapped to it. It is used to study patients with loss of consciousness of unknown cause.

water t. The level at which rock or any underground stratum is saturated with water. This overlies an impervious stratum.

tablespoon (tă'bl-spoon) ABBR: Tbs. A rough measure, equal approx. to 15 ml of fluid. To administer a tablespoon of medicine, 15 ml of the substance should be given.

tablet (tăb'lēt) [O.Fr. *tablete*, a small table] A small, disklike mass of medicinal powder.

buccal t. A tablet designed to be placed in the mouth and held between the cheek and gum until dissolved and absorbed through the buccal mucosa.

coated t. A type of tablet usually made by enclosing a drug in a protective shell.

compressed t. A tablet made by forcibly compressing powdered medications into the desired shape to decrease their solubility. These tablets may be very hard and not readily soluble.

dispensing t. A tablet that contains

a clinically effective large amount of an active drug.

enteric-coated t. A tablet that resists digestion in gastric acid.

fluoride t. A tablet of sodium fluoride for prevention of dental caries and osteoporosis.

hypodermic t. A tablet used to form injectable solutions.

sublingual t. A small, flat, oval tablet placed beneath the tongue to permit direct absorption of the active substance.

t. triturate A tablet made by moistening the medication mixed with a powdered lactose or sucrose and then molding it into shape and allowing the liquid to evaporate. It usually disintegrates readily.

taboo [Polynesian *tabu, tapu*, inviolable] An act, object, or social custom separated or set aside as being sacred or profane, thus forbidden for general use.

tabular (täb'ü-lär) [L. *tabula*, board]
1. Resembling a table. **2.** Set up in columns, as a tabulation.

tabun (tä'bün) Ethyl N-dimethylphosphoramidocyanidate; an organophosphate chemical used primarily as a pesticide. It has been used in chemical warfare as a toxic nerve gas.

tache (tösh) [Fr., spot] A colored spot or macule on the skin, as a freckle.

tachetic (täk-ët'ík) [Fr. *tache*, spot] Marked by purple or reddish-blue patches (taches).

tachistoscope (tä-kís'tō-sköp) [Gr. *tachistos*, swiftest, + *skopein*, to view] A device used to determine the speed of visual perception. The time of exposure can be adjusted so that the length of time needed for detection of the viewed object can be measured.

tachy- Combining form meaning *swift, rapid*.

tachyarrhythmia (täk"ē-ä-rith'mē-ä) [Gr. *tachys*, swift, + *a*, not, + *rhythmos*, rhythm] Any cardiac rhythm disturbance in which the heart rate exceeds 100 beats per minute (bpm).

tachybrady syndrome Sick sinus syndrome.

tachycardia (täk"ē-kär'dē-ä) [" + *kardia*, heart] An abnormally rapid heart rate, greater than 100 beats per minute (bpm) in adults. SYN: *tachyrrhythmia* (1); *accelerated pulse*.

atrial t. A rapid regular heart rate arising from an irritable focus in the atria, with a rate of more than 100 beats per minute but less than 220 bpm.

atrioventricular nodal reentrant t. ABBR: AVNRT. The most common supraventricular tachycardia, resulting from abnormal conduction of electrical impulses through a self-sustaining circuit in the atrioventricular node. It occurs more often in women than in men, often in their twenties. The heart rate

is usually between 150 and 250 bpm. SEE: *re-entry*.

ectopic t. A rapid heartbeat caused by stimuli arising from outside the sinoatrial node.

fetal t. A fetal heart rate faster than 160 bpm that persists throughout one 10-min period.

multifocal atrial t. ABBR: MAT. A cardiac arrhythmia that sometimes is confused with atrial fibrillation, because the heart rate is greater than 100 bpm and the ventricular response is irregular. However, in MAT P waves are clearly visible on the electrocardiogram, and they have at least three distinct shapes. MAT is seen most often in patients with poorly compensated chronic obstructive lung disease. It may resolve with management of the underlying respiratory problem.

narrow complex t. Tachycardia in which the duration of the QRS complex is less than 0.12 seconds. Most narrow complex tachycardias originate from a pacemaker above the ventricles and are therefore supraventricular tachycardias.

nodal t. Tachycardia resulting from a focus in the atrioventricular node. It may be the result of digitalis therapy.

pacemaker-mediated t. A problem of dual-chamber cardiac pacemakers in which tachycardia develops due to improper functioning of the pacemaker. This can be treated by reprogramming the electronic signals to the atrium.

paroxysmal atrial t. A term formerly used for paroxysmal supraventricular tachycardia ("paroxysmal" implies that the arrhythmia begins and ends suddenly).

paroxysmal junctional t. Tachycardia due to increased activity of the AV junction. The rate is usually from 120 to 180 bpm.

paroxysmal supraventricular t. ABBR: PSVT. A sporadically occurring arrhythmia with an atrial rate that is usually 160 to 200 beats per minute. It originates above the bundle of His, and typically appears on the surface electrocardiogram as a rapid, narrow-complex tachycardia. This relatively common arrhythmia may revert to sinus rhythm with rest, sedation, vagal maneuvers, or drug therapy.

paroxysmal ventricular t. Ventricular tachycardia beginning and ending suddenly.

polymorphic ventricular t. Torsade de pointes.

reflex t. Tachycardia resulting from stimuli outside the heart, reflexly accelerating the heart rate or depressing vagal tone.

sinus t. A rapid heart rate (over 100 bpm) originating in the sinoatrial node. It may be caused by fevers, exercise, de-



hydration, bleeding, stimulant drugs (e.g., epinephrine, aminophylline), thyrotoxicosis, or many other diseases or conditions.

TREATMENT: The underlying cause is addressed.

supraventricular t. ABBR: SVT. A rapid, regular tachycardia in which the pacemaker is found in the sinus node, the atria, or the atrioventricular junction, i.e., above the ventricles. SEE: *paroxysmal supraventricular t.*

ventricular t. ABBR: VT. Three or more consecutive ventricular ectopic complexes (duration greater than 120 msec) occurring at a rate of 100 to 250 bpm. Although nonsustained VT may occasionally be well-tolerated, it often arises in hearts that have suffered ischemic damage or cardiomyopathic degeneration and may be a cause of sudden death. Nonsustained VT lasts less than 30 sec. Sustained VT lasts more than 30 sec and is much more likely to produce loss of consciousness or other life-threatening symptoms. SEE: *illus.*

TREATMENT: The acute treatment of sustained VT is outlined in advanced life support protocols but may include the administration of lidocaine or other antiarrhythmic drugs, cardioversion, or defibrillation. Chronic, recurring VT may be treated with sotalol, amiodarone, or implantable cardioverter-defibrillators.

wide complex t. ABBR: WCT. An arrhythmia with a sustained rate of more than 100 bpm in which the surface electrocardiogram reveals QRS complexes lasting at least 120 msec. WCT is usually caused by ventricular tachycardia, although it may occasionally result from a supraventricular tachycardia whose conduction through the ventricles produces an abnormally wide QRS complex.

tachycardia-bradycardia syndrome Sick sinus syndrome.

tachycardic (tăk'ē-kăr'dĭk) [Gr. *tachys*, swift, + *kardia*, heart] Pert. to or afflicted with tachycardia.

tachygastric (tăk'ē-găs'trē-ă) Increased rate of contractions of the stomach.

tachykinin (tăk'kĭ'nĭn) [' + ''] ABBR: TK. Any of a large family of peptides that function as neurotransmitters in the central and peripheral nervous sys-

tems. They have extraneuronal activity in other body tissues. Their diverse biological actions are mediated through cellular G proteins.

tachylalia (tăk'ē-lă'lē-ă) [' + *lalein*, to speak] Rapid speech.

tachyphasia (tăk'ē-fă'zē-ă) [' + *phasis*, speech] Tachyphrasia.

tachyphrasia (tăk'ē-fră'zē-ă) [' + *phrasia*, speech] Excessive volubility or rapidity of speech, as seen in mania and some other psychotic illnesses. SYN: *tachyphasia*.

tachyphrenia (tăk'ē-frē'nē-ă) [' + *phren*, mind] Abnormally rapid mental activity.

tachyphylaxis (tăk'ē-fĭ-lăk'sĭs) [' + *phylaxis*, protection] **1.** Rapid immunization to a toxic dose of a substance by previously injecting tiny doses of the same substance. **2.** Diminishing responsiveness to a drug after routine usage.

tachyrythmia (tăk'ē-rĭth'mē-ă) [' + *rhythmos*, rhythm] **1.** Tachycardia. **2.** Increase in the frequency of brain waves in electroencephalography up to 12 to 50 per second.

tachysterol (tă-kĭs'tě-rōl) One of the isomers of ergosterol. It is a compound related to vitamin D.

tactical emergency medical support ABBR: TEMS. Specially trained emergency medical staff who support law enforcement officials during out-of-hospital operations.

tactile (tăk'tĭl) [L. *tactilis*] Perceptible to the touch. SYN: *tactual*.

t. defensiveness Behaviors such as avoidance or withdrawal in response to being touched by another person. These defensive reactions are seen most often in children with autism or related disorders.

t. discrimination The ability to localize two points of pressure on the surface of the skin and to identify them as discrete sensations.

t. localization An individual's ability to accurately identify the site of tactile stimulation (touch, pressure, or pain). Tactile localization is often tested in sensory evaluations following disease or trauma of the nervous system.

t. system That portion of the nervous system concerned with the sensation of touch. It includes sensory nerve endings (Meissner's corpuscles, Merkel's tactile disks, hair-root endings), afferent nerve



VENTRICULAR TACHYCARDIA

fibers, conducting pathways in the cord and brain, and the sensory area of the parietal lobe of the cerebral cortex.

taction (tāk'shūn) [L. *tactio*] **1.** The sense of touch. **2.** Touching.

tactometer (tāk-tōm'ēt-ēr) [L. *tactus*, touch, + Gr. *metron*, measure] An instrument for determining the acuity of tactile sensitiveness.

tactical (tāk'tū-āl) [L. *tactus*, touch] Tactile.

tactus (tāk'tūs) [L.] Touch (1).

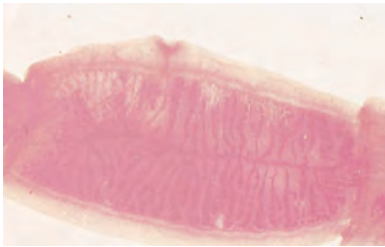
taen-, taeni- Combining forms meaning *tapeworm*. SEE: *ten-*.

Taenia (tē'nē-ā) [L., *tape*] A genus of tapeworms, parasitic flatworms belonging to the class Cestoda, phylum Platyhelminthes. They are elongated ribbon-like worms consisting of a scolex, usually with suckers and perhaps hooks, and a chain of segments (proglottids). Adults live as intestinal parasites of vertebrates; larvae parasitize both vertebrates and invertebrates, which are intermediate hosts. SEE: *taeniasis*; *tapeworm*.

T. echinococcus *Echinococcus granulosus*.

T. lata *Diphyllobothrium latum*.

T. saginata A tapeworm whose larvae live in cattle. The adult worm lives in the small intestine of humans, who acquire it by eating insufficiently cooked beef infested with the encysted larval form (cysticercus or bladderworm). Adult worms may reach a length of 15 to 20 ft (4.6 to 6.1 m) or longer. SYN: *beef tapeworm*. SEE: *illus.*

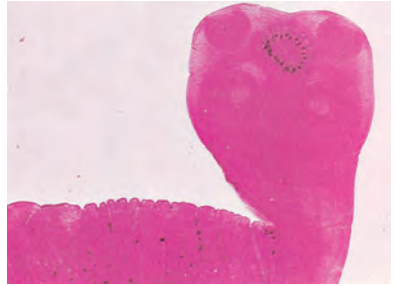


TAENIA SAGINATA

Gravid proglottid (orig. mag. ×5)

T. solium A tapeworm whose larvae live in hogs; its scolex possesses a row of hooks about the rostellum. The adult worm lives in the small intestine of humans, who acquire it by eating insufficiently cooked pork. Adult worms may take up residence in the intestine, depriving the host of food. Larval forms of *T. solium* may encyst in the brain, resulting in seizures. In some underdeveloped nations the onset of seizures in adulthood is presumed to be the result of neurocysticercosis until proved otherwise. The infection is treated with niclo-

samide or praziquantel. SYN: *armed tapeworm*; *pork tapeworm*. SEE: *illus.*



TAENIA SOLIUM

(Orig. mag. ×100)

taenia (tē'nē-ā) [L., *tape*] **1.** A flat band or strip of soft tissue. **2.** A tapeworm of the genus *Taenia*. SYN: *tenia*.

t. coli The three bands of smooth muscle into which the longitudinal muscle layer of the colon is gathered. They are taenia mesocolica (mesenteric insertion), taenia libera (opposite mesocolic band), and taenia omentalis (at place of attachment of omentum to transverse colon).

taeniicide (tē'nē-ā-sīd) [L. *taenia*, tapeworm, + *cidus*, kill] An agent that kills tapeworms.

taeniafuge (tē'nē-ā-fūj) [" + *fugere*, to put to flight] Tenifuge.

taeniasis (tē-nī-ā-sīs) [" + Gr. *-iasis*, condition] The condition of being infested with tapeworms of the genus *Taenia*. SEE: *tapeworm*.

taeniform (tē'nī-form) [" + *forma*, shape] Having the structure of, or resembling, a tapeworm.

taenifuge (tē'nī-fūj) [" + *fuga*, flight] Tenifuge.

tag **1.** A small polyp or growth. **2.** A label or tracer; or the application of a label or tracer.

hemorrhoidal t. Remaining anal skin tag related to uneven postsurgical healing, spontaneous resolution of a previously enlarged external hemorrhoid, secondary to anal skin irritation, or external to an anal fissure. SEE: *sentinel pile*.

radioactive t. A radioactive isotope that is incorporated into a chemical or organic material to allow its detection in metabolic or chemical processes. SYN: *radiolabel*.

skin t. A small outgrowth of skin, usually occurring on the neck, axilla, and groin. SEE: *illus.*; *acrochordon*.

tagging Introduction of a radioactive isotope into a molecule in order to distinguish the molecule from others without that "tag." SYN: *labeling*.

Tahyna virus (tā-hīn'ā) ABBR: TAH. A European arbovirus of the Bunyaviri-



SKIN TAGS

dae family. It is transmitted to humans by mosquito bite and causes fevers, respiratory illnesses, encephalitis, and meningitis.

tai chi (tī-chē) A traditional Chinese martial art in which a series of slow, controlled movements are made through various postures designed to develop flexibility, balance, strength, relaxation, and mental concentration. Tai chi has been used as a therapeutic exercise by the young and the old, hemophiliacs, and people recovering from brain injuries.

taijin kyofusho (tī-jēn-kyō-foo-shō) [Jap., literally, “fear of interpersonal relationships disorder”] ABBR: TKS. A culture-bound syndrome in Japan in which a person becomes fearful that he or she is offensive to others. In the West it is considered a form of social anxiety disorder.

tail (tāl) [AS. *taegel*] **1.** The long end of a structure, such as the extremity of the spinal column or the final segments of a polypeptide or nucleic acid. SEE: *cauda*. **2.** An uninterrupted extension of the insurance policy period; also called the *extended reporting endorsement*. SEE: *professional liability insurance*.

taint (tānt) [O.Fr. *teint*, color, tint] To spoil or cause putrefaction, as in tainted meat.

taipan snake venom time (tī'pān) [Aboriginal Australian name] A test used to determine the presence of lupus anticoagulant in a blood specimen. The test relies on the mixing of venom from snakes of the genus *Oxyuranus* with dilute phospholipid and can be used even in patients receiving warfarin anticoagulation.

Takayasu's arteritis (tāk'kā-yā'sooz) [Michishige Takayasu, Japanese physician, 1872–1938] A rare vasculitis of the aorta and its branches, marked by inflammatory changes in the large arteries. Blood flow through those arteries is limited, esp. to the arms or head of affected persons. The disease, which is found most often in young women of Japanese descent, produces symptoms such as dizziness or arm claudication.

Affected individuals usually have markedly reduced blood pressures or pulses in one or both arms. SYN: *pulseless disease*.

take To be effective, as in administering a vaccine; or to be successful in grafting skin or transplanting an organ.

talalgia (tāl-āl'jē-ā) [L. *talus*, heel, + Gr. *algos*, pain] Pain in the heel or ankle.

talar (tāl'lār) [L. *talaris*, of the ankle] Pert. to the talus, the ankle.

talar tilt test An orthopedic test used to determine the collateral stability of the ankle joint. The amount of laxity in the affected ankle is determined relative to the laxity in the uninvolved limb.

Eversion talar tilt test. The foot and ankle are maintained in the neutral position. The examiner stabilizes the distal lower leg while cupping the calcaneus with the opposite hand. The talus is then rolled outward to eversion.

This test checks the integrity of the deltoid ligament group of the medial ankle, esp. the tibiocalcaneal and tibionavicular ligaments. The mechanical block formed by the lateral malleolus limits the amount of eversion.

Inversion talar tilt test. The foot and ankle are maintained in the neutral position. The examiner stabilizes the distal lower leg while cupping the calcaneus with the opposite hand. The talus is then rolled inward to inversion.

This test checks the integrity of the lateral ligaments, specifically the calcaneofibular, anterior talofibular, and posterior talofibular ligaments (in order of involvement). The anterior talofibular ligament can be isolated through the use of the anterior drawer test.

talc (tālk) [Persian *talk*] Powdered soapstone; a soft, soapy powder; native hydrous magnesium silicate, $Mg_3Si_4O_{10}(OH)_2$, used, for example, in pleurodesis. SYN: *talcum*.



Exposure to talc in the workplace can result in interstitial lung disease. Persons who work with talc or other particulates should wear masks that limit respiratory exposure to fine dust particles.

talcosis (tāl-kō'sīs) [Persian *talk*, talc, + Gr. *osis*, condition] Any disease caused by the inhalation or injection of talc. The lungs are often affected.

talcum (tālk'ūm) [L.] Talc.

talipes (tāl'ī-pēz) [L. *talus*, ankle, + *pes*, foot] Any of several deformities of the foot, esp. those occurring congenitally; a nontraumatic deviation of the foot in the direction of one or two of the four lines of movement.

t. arcuatus Talipes in which there is an exaggerated medial arch of the foot. SYN: *pes cavus*; *talipes cavus*.

t. calcaneus Talipes in which the foot is dorsiflexed and the heel alone touches the ground, causing the patient to walk on the inner side of the heel. It often follows infantile paralysis of the calf muscles.

t. cavus Talipes arcuatus.

t. equinovarus A combination of talipes equinus and talipes valgus. SYN: *clubfoot*.

t. equinus Talipes in which the foot is plantar flexed and the person walks on the toes.

t. percavus Talipes in which there is excessive plantar curvature.

t. valgus Talipes in which the heel and foot are turned outward.

t. varus Talipes in which the heel is turned inward from the midline of the leg.

talipomanus (täl'p-ôm'an-üs) [L. *talus*, ankle, + *pes*, foot, + *manus*, hand] A deformity of the hand in which it is twisted out of position. SYN: *clubhand*.

tallow (täl'ō) Fat obtained from suet, the solid fat of certain ruminants.

talocalcaneal (täl'lō-käl-kä'nē-äl) [ʹ + *calcaneus*, heel bone] Pert. to the talus and calcaneus, bones of the tarsus.

talocrural (täl'lō-kroo'räl) [ʹ + *crus*, leg] Pert. to the talus and leg bones.

talocrural articulation The ankle joint; a ginglymoid or hinge joint.

talofibular (täl'lō-fib'ü-lär) [ʹ + *fibula*, pin] Concerning the talus and fibula.

talon (täl'ōn) [L.] The claw of a bird of prey.

t. noir Minute black areas on the heels (or less often the toes or hands) caused by repetitive injuries that produce hemorrhage into the skin.

talonic (täl'ō-nīd) [ME. *talon*, heel] The crushing region, the posterior or heel part, of a lower molar tooth.

talus (täl'lüs) *pl.* **tali** [L., ankle] The ankle bone. It is an irregular, stubby cylinder and articulates with the tibia, fibula, calcaneus, and navicular bone. In front its head has a broad, rounded articular surface that meets the navicular bone. The body of the talus has a saddle-shaped articular surface on the top that meets the distal articular end of the tibia to form the main ankle joint; the outer side of the talus has a broad, convex articular surface that meets the lateral malleolus of the distal end of the fibula. On the bottom of the head and the body of the talus, there are two separate convex articular surfaces that meet the calcaneus (heel) bone. It was formerly called astragalus

tambour (täm-boor') [Fr., drum] A shallow, drum-shaped appliance used in registering information such as changes in rate or intensity of pulse, respiration, or arterial blood pressure.

Tamm-Horsfall mucoprotein (täm'hors'fäl) [Igor Tamm, Russian-born U.S. virologist,

1922–1971; Frank L. Horsfall, Jr., U.S. physician, 1906–1971] A normal mucoprotein in the urine, produced by the ascending limb of the loop of Henle. When this protein is concentrated at low pH, it forms gel, which may protect the kidney from infection by bacteria.

tamoxifen citrate (tä-möks'ÿ-fën) An antiestrogenic drug used in treating and preventing breast cancer.

tampon (täm'pön) [Fr., plug] A roll or pack made of absorbent materials used to stop bleeding, absorb secretions, or obtain specimens from a wound or body cavity.

menstrual t. An absorbent material suitably shaped and prepared to provide a hygienic means of absorbing menstrual fluid in the vagina. A cord is attached and remains outside the vagina to facilitate removal. These tampons are made for self-insertion. Washing hands before insertion and after removal as well as changing tampons often guards against toxic shock syndrome. SEE: *menstruation*; *sanitary napkin*.

Mikulicz's t. Mikulicz's drain.

nasal t. A tampon used to compress bleeding blood vessels in the nose.

tamponade (täm'pön-äd') [Fr., plug] **1.** The act of using a tampon. SYN: *tamponing*; *tamponment*. **2.** The pathological or intentional compression of a part.

balloon t. The application of pressure against a part of the body with an inflatable balloon, typically to stop blood loss. Balloon tamponade has been used to stop bleeding from esophageal varices, ectopic pregnancies, the postpartum uterus, the liver (e.g., after gunshot wounds), damaged blood vessels.

cardiac t. A life-threatening condition in which elevated pressures within the pericardium impair the filling of the heart during diastole.

Cardiac tamponade may result from injuries to the heart or great vessels, from cardiac rupture, or from other conditions that produce large pericardial effusions. If fluid accumulates rapidly, as little as 150 ml can impair the filling of the heart. Slow accumulation, as in pericardial effusion associated with cancer, may not produce immediate signs and symptoms because the fibrous wall of the pericardial sac can gradually stretch to accommodate as much as 1 to 2 L of fluid.

ETIOLOGY: Cardiac tamponade may be idiopathic (Dressler's syndrome) or may result from any of the following causes: effusion (in cancer, bacterial infections, tuberculosis, and, rarely, acute rheumatic fever); hemorrhage from trauma (e.g., gunshot or stab wounds of the chest, perforation by catheter during cardiac or central venous catheteri-

zation, or after cardiac surgery); hemorrhage from nontraumatic causes (e.g., rupture of the heart or great vessels, or anticoagulant therapy in a patient with pericarditis); viral, postirradiation, or idiopathic pericarditis; acute myocardial infarction; chronic renal failure; drug reaction (e.g., from procainamide, hydralazine, minoxidil, isoniazid, penicillin, methysergide, or daunorubicin); or connective tissue disorders (e.g., rheumatoid arthritis, systemic lupus erythematosus, rheumatic fever, vasculitis, and scleroderma). Classic signs of tamponade include persistent hypotension despite fluid bolusing, muffled heart sounds, distended jugular veins, and pulsus paradoxus (a drop in systolic blood pressure of more than 10 mm Hg on inspiration).

DIAGNOSIS: Cardiac tamponade is suggested by chest radiograph (slightly widened mediastinum and enlargement of the cardiac silhouette), ECG (reduced QRS amplitude, electrical alternans of the P wave, QRS complex, and T wave and generalized ST-segment elevation), and pulmonary artery pressure monitoring (increased right atrial pressure, right ventricular diastolic pressure, and central venous pressure). It is definitively diagnosed with echocardiography, or MRI or CT of the chest.

TREATMENT: Pericardiocentesis (needle aspiration of the pericardial cavity) or surgical creation of a pericardial opening (a "window") dramatically improves systemic arterial pressure and cardiac output. In patients with malignant tamponade, a balloon-aided opening in the pericardium may be made (a "balloon pericardiomy").

PATIENT CARE: The patient is assessed for a history of disorders that can cause tamponade and for symptoms such as chest pain and dyspnea. Oxygen is administered via nonrebreather mask, and intravenous access established via one or two large-bore catheters for fluid resuscitation. Airway, breathing, circulation, and level of consciousness are closely monitored.

If the patient is unstable, he or she requires arterial blood gas analysis and hemodynamic monitoring and support. Prescribed inotropic drugs and intravenous solutions maintain the patient's blood pressure, and oxygen and ventilatory support are administered as necessary and prescribed.

Pain is assessed, and appropriate analgesia provided. The patient is prepared for central line insertion, pericardiocentesis, thoracotomy, or other therapeutic measures as indicated; brief explanations of procedures and expected sensations are provided; and the patient is reassured to decrease anxiety. The patient is observed for a decrease in

central venous pressure and a concomitant rise in blood pressure after treatment, which indicate relief of cardiac compression. If the patient is not acutely ill, the patient is educated about the condition, including its cause and its planned treatment (e.g., by surgery to place a pericardial window). The importance of immediately reporting worsening symptoms is stressed. The patient is followed with repeat echocardiography and chest X-rays as deemed necessary. **SYN:** *pericardial tamponade*.

nasal t. Compression of nasal blood vessels to stop bleeding. **SEE:** *epistaxis; nosebleed* for illus.

pericardial t. Cardiac tamponade. **SEE:** *illus*.

tamponing, tamponment (tăm'pön-íng, tám-pön'měnt) Tamponade.

Tanacetum parthenium (tăn"ă-sě'tüm păr-thén'ě-üm) [NL] The scientific name for feverfew.

tandem 1. A curved stainless steel tube inserted into the uterine canal during brachytherapy to hold radioactive sources. **2.** Any two objects arranged consecutively or working in series with one another.

tandem mass assay Tandem mass spectrometry.

tandem repeat A short segment of DNA that includes duplicated genetic material.

tang (tăng) **1.** A strong taste or flavor.

2. A long, slender projection or prong forming a part of a chisel, file, or knife.

3. In dentistry, an apparatus for joining the rests and retainers to palatal or lingual bars of a denture.

Tannerella (tăn"ěr-ě'l'ü) A genus of gram-negative, anaerobic, non-spore-forming bacilli (formerly classified as *Bacteroides*). One species, *T. forsythensis* (less commonly known as *T. forsythia*), is an important cause of periodontal infection.

tannin (tăn'in) [Fr. *tanin*] **1.** An acid found in the bark of certain plants and trees or their products, usually from nutgall. It is found in coffee and to a greater extent in tea. **2.** Any of several substances containing tannin.

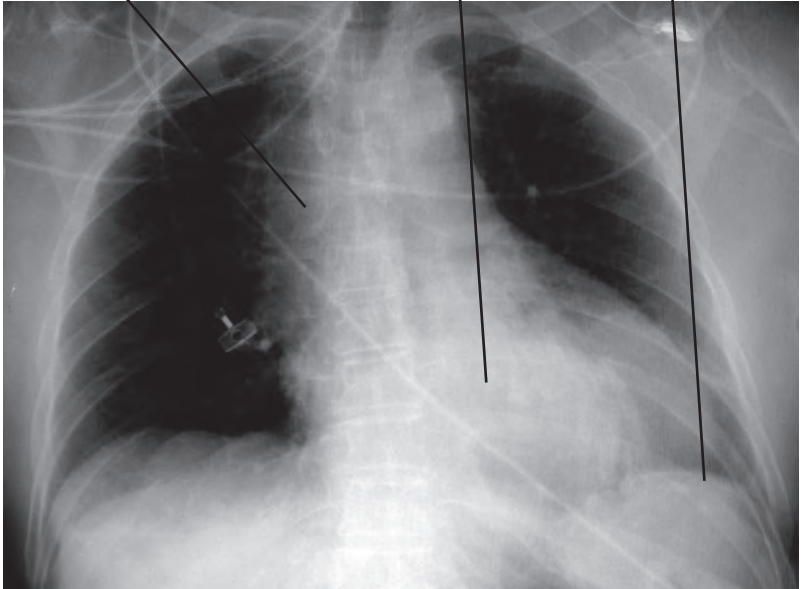
ACTION/USES: Tannin was once used as an astringent, an antidote for various poisons, and a topical hemostatic.

tanning salon A commercial establishment where patrons can expose themselves to ultraviolet light to darken their skin. Because ultraviolet light ages the skin and increases the likelihood of skin cancers, tanning salons are frowned on by dermatologists, cancer specialists, and other health care professionals. **SEE:** *actinic keratosis; basal cell carcinoma; melanoma; photosensitivity; squamous cell carcinoma*.

widening of
the mediastinum

cardiac
silhouette

fluid
surrounding
the heart



PERICARDIAL TAMPONADE

tantalum (tän'tă-lŭm) SYMB: Ta. A rare metallic element derived from tantalite; atomic weight, 180.947; atomic number, 73. Because it is noncorrosive and malleable, it has been used to repair cranial defects, as a wire suture, and in prostheses.

tantrum, temper An explosive outburst, usually by a child, often as a result of frustration or developmental disabilities. It may resolve with a variety of parental interventions, such as behavioral modification techniques (e.g., positive reinforcement of more acceptable behaviors by the child).

tap (täp) [AS. *taeppa*] To puncture or to empty a cavity of fluid. SEE: *lumbar puncture*; *paracentesis*; *thoracentesis*.

spinal t. Lumbar puncture.

tap (täp) [O.Fr. *taper*] **1.** A light blow. **2.** An instrument used for performing a tap. **3.** An instrument used to create an internal thread.

tape (täp) [AS. *taeppa*] **1.** A flexible, narrow strip of linen, cotton, paper, or plastic such as adhesive tape. **2.** To wrap a part with a long bandage made of adhesive or other type of material.

adhesive t. A fabric, film, or paper, one side of which is coated with an adhesive so that it remains in place when

applied to the skin. In general, there are two types of backings for the adhesive material: occlusive and nonocclusive. The former prevents air from going through the backing and the latter does not. The occlusive type increases the possibility of skin irritation, so it is rarely used. SYN: *adhesive plaster*.

PATIENT CARE: To prevent skin damage, adhesive tape should be removed by carefully peeling back the tape, following the direction of hair growth while the skin is held taut behind the tape removal edge or alternatively compressing the skin from the tape as it is held on gentle tension. The skin should be checked for irritation. If the adhesive material has irritated the skin, solvents may be used judiciously to assist in removal. Because some patients are allergic to certain adhesive agents, information about this type of allergy should be gathered as part of the history; other varieties of tape may be nonreactive. If the patient is intolerant of all adhesives, alternative bandage applications are used.

tapeinocephalic (täp'ī-nō-sē-fäl'ik) [Gr. *tapeinos*, low-lying, + *kephale*, head] Pert. to tapeinocephaly.

tapeinocephaly (täp'ī-nō-sēf'äl-lē) A flat-

tened head in which the vertical index of the skull is less than 72.

tapetum (tă-pĕ'tŭm) [NL, a carpet] A layer of fibers from the corpus callosum forming the roof and lateral walls of the inferior and posterior horns of the lateral ventricles of the brain. This layer separates the optic radiation from the ventricle and passes to the temporal and occipital lobes.

tapeworm (tăp'wŏrm) [AS. *taeppe*, a narrow band, + *uyrm*, worm] Any of the species of worms of the class Cestoda, phylum Platyhelminthes; all are intestinal parasites of humans and other animals. A typical tapeworm consists of a scolex, with hooks and suckers for attachment, and a series of a few to several thousand segments, or proglottids. New proglottids develop at the scolex, so that a worm is actually a linear colony of immature, mature, and gravid proglottids; adult worms range from less than an inch to 50 ft or more, depending on the species. The terminal proglottids, which contain fertilized eggs, break off and pass from the host in the feces. The eggs develop into small, hooked embryos, which, when ingested by the proper intermediate host (usually another vertebrate such as a pig), develop into encysted larvae (cysticerci) in the muscle tissue. Humans acquire tapeworm infestation by eating undercooked meat that contains the cysticerci. SEE: *Taenia*.

Species of medical importance are *Diphyllobothrium latum*, *Echinococcus granulosus*, *Hymenolepis nana*, *H. diminuta*, *Taenia saginata*, and *T. solium*. SEE: *cysticercosis*; *cysticercus*; *hydatid*; *taeniasis*.

SYMPTOMS: Often symptoms are absent, although abdominal discomfort, bloating, or changes in bowel habits may be present. If tapeworms are very numerous, they may cause intestinal obstruction (but this is rare). Some species of tapeworms may cause severe disease: *Echinococcus* can cause life-threatening cysts in the liver or pericardium; *Taenia solium* can encyst in the brain and cause seizures or strokelike symptoms.

armed t. *Taenia solium*.

beef t. *Taenia saginata*.

broad t. *Diphyllobothrium latum*.

dog t. *Dipylidium caninum*.

dwarf t. *Hymenolepis nana*.

fish t. *Diphyllobothrium latum*.

hydatid t. *Echinococcus granulosus*.

mouse t. *Hymenolepis nana*.

pork t. *Taenia solium*.

rat t. *Hymenolepis nana*.

unarmed t. *Taenia saginata*.

taphophilia (tăf'ŏ-fil'ĕ-ă) [T + *philos*, love] An abnormal attraction for graves.

Tapia syndrome (tă'pĕ-ă) [Antonio

García Tapia, Sp. physician, 1875–1950] Paralysis of the pharynx and larynx on one side and atrophy of the tongue on the opposite side, caused by a lesion affecting the vagus (10th) and hypoglossal (12th) cranial nerves on the side in which the pharynx is affected.

tapinocephalic (tăp'in-ŏ-sĕf-ăl'ik) [Gr. *tapeinos*, lying low, + *kephale*, head] Pert. to flatness of the top of the cranium.

tapinocephaly (tăp'in-ŏ-sĕf'ă-lĕ) Flatness of the top of the cranium.

tapotement (tă-pŏt-mŏn') [Fr.] Percussion in massage. Techniques include beating with the clinched hand, clapping performed with the palm of the hand, hacking with the ulnar border of the hand, and punctuation with the tips of the fingers. The strength of the manipulations is an essential factor in the massage treatment, and care must be taken not to bruise the patient. As a rule, one should begin with moderate pressure, and then ascertain from the patient the appropriate level of stimulation. A lubricating lotion or cream should be used to avoid abrading the skin. SEE: *massage*.

tapping (tăp'ing) [O.Fr. *taper*, of imitative origin] Tapotement.

muscle t. Tapping the skin over a muscle belly to recruit more motor units and facilitate contraction.

tapping (tăp'ing) [AS. *taeppa*, tap] The withdrawal of fluid from a body cavity. Examples include paracentesis and thoracentesis.

tar A dark, viscid mass of complex chemicals obtained by destructive distillation of tobacco, coal, shale, and organic matter, esp. wood from pine and juniper trees.

coal t. A tar produced in the destructive distillation of bituminous coal. It is used as an ingredient in ointments for treating eczema, psoriasis, and other skin diseases.

tarantism (tăr'ăn-tizm) [*Taranto*, seaport in southern Italy, + Gr. *-ismos*, condition] A disorder that is culturally specific to regions of Italy and Northern Africa, marked by stupor, melancholy, and uncontrollable, manic dancing. It is popularly attributed to the bite of the tarantula, although some experts believe it to be an example of a mass psychogenic illness. SYN: *tarantism*.

tarantula (tă-răn'tŭ-lă) A large venomous spider feared by many people; however, its bite is comparable in severity to a bee sting. SEE: *spider bite*.

Tardieu's spot (tăr-dyüz') [Auguste A. Tardieu, Fr. physician, 1818–1879] One of the subpleural spots of echymosis following death by strangulation.

tardive (tăr'div) [Fr., tardy] Characterized by lateness, esp. pert. to a disease in which the characteristic sign or

- symptom appears late in the course of the disease. SEE: *dyskinesia, tardive*.
- tare** (tār) The weight of an empty container. That weight is subtracted from the total weight of the vessel and substance added to it in order to determine the precise weight of the material added to the container.
- tared** (tārd) A container of known and predetermined tare.
- tarentism** (tār'ēn-tīzm) Tarantism.
- target** (tār'gēt) [O.Fr. *targette*, light shield] **1.** A structure or organ to which something is directed. **2.** The portion of the anode of an x-ray or therapeutic tube in which electrons from the filament or electron gun are focused and x-ray photons are produced; usually made of a heavy metal such as tungsten or molybdenum.
- tarnish** Surface discoloration or reduced luster of metals owing to the effect of corrosive substances or galvanic action. In dental restorations, such action may be enhanced by accumulation of bacterial plaque.
- tarsadenitis** (tār'sād-ēn-ī'tis) [Gr. *tarsos*, a broad, flat surface, + *aden*, gland, + *itis*, inflammation] An inflammation of the tarsal or meibomian glands of the eyelid.
- tarsal** (tār'sāl) [Gr. *tarsalis*] **1.** Pert. to the tarsus or supporting plate of the eyelid. **2.** Pert. to the ankle or tarsus.
- tarsalgia** (tār-sāl'jē-ā) [Gr. *tarsos*, a broad, flat surface, + *algos*, pain] Pain in the tarsus or ankle; it may be due to flatfoot, shortening of the Achilles tendon, or other causes.
- tarsal tunnel syndrome** Neuropathy of the distal portion of the posterior tibial nerve at the ankle caused by chronic pressure on the nerve at the point it passes through the tarsal tunnel. It causes pain in and numbness of the sole of the foot and weakness of the plantar flexion of the toes.
- tarsectomy** (tar-sēk'tō-mē) [" + *ektome*, excision] **1.** An excision of the tarsus or a tarsal bone. **2.** The removal of the tarsal plate of an eyelid.
- tarspectopia** (tār'sēk-tō'pē-ā) A dislocation of the tarsus.
- tarsitis** (tār-sī'tis) [" + *itis*, inflammation] **1.** An inflammation of the tarsus of the foot. **2.** Blepharitis.
- tarso-** [Gr. *tarsos*, a broad, flat surface] Combining form indicating *the flat of the foot or the edge of the eyelid*.
- tarsoclasia, tarsoclasia** (tār'sō-klā'sē-ā, tār-sōk'lās-īs) [" + *klasis*, a breaking] A surgical fracture of the tarsus for the correction of clubfoot.
- tarsomalacia** (tār'sō-mā-lā'sē-ā) [" + *malakia*, a softening] The softening of the tarsal plate of the eyes.
- tarsomegaly** (tār'sō-mēg'ā-lē) [" + *megas*, large] An enlargement of the heel bone, the calcaneus.
- tarsometatarsal** (tār'sō-mēt'ā-tār'sāl) [" + *meta*, between, + *tarsos*, a broad, flat surface] Pert. to the tarsus and the metatarsus.
- tarso-orbital** (tār'sō-or'bi-tāl) [" + L. *orbita*, track] Concerning the tarsus of the eyelid and the orbit.
- tarsoptosis** (tār'sōp-tō'sis) [" + *ptosis*, falling] Flatfoot; fallen arch of the foot.
- tarsorrhaphy** (tār-sor'ā-fē) [" + *rhaphe*, seam, ridge] Blepharorrhaphy.
- tarsotomy** (tār-sōt'ō-mē) [" + *tome*, incision] **1.** An incision of the tarsal plate of an eyelid. **2.** Any surgical incision of the tarsus of the foot.
- tarsus** (tār'sūs) *pl.* **tarsi** [Gr. *tarsos*, a broad, flat surface] **1.** The ankle with its seven bones located between the bones of the lower leg and the metatarsus and forming the proximal portion of the foot. It consists of the calcaneus (os calcis), talus (astragalus), cuboid (os cuboideum), navicular (scaphoid), and first, second, and third cuneiform bones. The talus articulates with the tibia and fibula, the cuboid and cuneiform bones with the metatarsals. SEE: *foot; skeleton*; names of individual bones. **2.** A curved plate of dense white fibrous tissue forming the supporting structure of the eyelid; also called the *tarsal plate*.
- tartrate** (tār'trāt) A salt of tartaric acid.
- tartrazine** (tār'trā-zēn") A pyrazole aniline dye widely used to color foods, cosmetics, drugs, and textiles. Its use has been linked to hives and other allergic-type reactions in some individuals.
- Taru disease** SEE: *glycogen storage disease type VII*.
- task, cancellation** A type of cognitive test that measures attention by determining an individual's ability to select and mark a line through selected target letters or symbols within a larger field of many letters or symbols.
- task analysis** The process of dividing up an activity into components for the purposes of delineating the specific abilities needed to perform that activity. Purposeful activities require various levels of cognitive, perceptual (e.g., vision, proprioception), musculoskeletal, and neuromuscular abilities. Through understanding the abilities necessary for a specific task, practitioners are better able to develop a rehabilitation program for patients who cannot do it for themselves.
- taste** (tāst) [O.Fr. *taster*, to feel, to taste] **1.** To attempt to determine the flavor of a substance by touching it with the tongue. **2.** A chemical sense dependent on the sensory buds concentrated on the surface of the tongue, and scattered over the palate, pharynx, larynx, epiglottis, and superior esophagus; the nerves that innervate them; and the smell center (rhinencephalon) in the sylvian fissure of the brain's parietal cortex. The taste

buds, when appropriately stimulated, produce one or a combination of the five fundamental taste sensations: sweet, bitter, sour, savory, and salty. The sensation is influenced by the sense of smell. Information from the taste buds is carried to the brainstem by the lingual part of the trigeminal nerve, the chorda tympani and the facial nerve (from the anterior two thirds of the surface of the tongue), the glossopharyngeal nerve (from the posterior third), and the vagus nerve (from the tongue's base and pharyngeal areas). Loss of taste may be caused by any neurologic condition that interrupts the transmission pathway. Taste abnormalities also occur in normal aging, some infections, trauma, smoking, vitamin or mineral deficiencies, oral disorders, illicit drug use, lack of saliva, or the therapeutic use of cytotoxic drugs. SYN: *gustatory perception*.

The cells of the taste buds undergo continual degeneration and replacement. None survives for more than a few days.

PATIENT CARE: Taste alterations include ageusia (complete loss of tastes); hypogeusia (partial loss of taste); dysgeusia (distorted sense of taste); and cacogeusia (unpleasant or revolting food taste). When designing a nutritional program for people with altered taste, it is important to consider both their personal taste preferences and the availability of foods with enhanced flavors, both of which may optimize nutritional intake. For individuals with dry mouth from salivary gland disruption or other causes, artificial saliva not only assists in mastication and swallowing, but also enhances taste. Young children have difficulty differentiating between an abnormal taste sensation and simple taste dislike, and thus often refuse new foods, especially those with strong odors, as "disliked." Trying the same food at a later time or in a different preparation may elicit a more favorable response.

t. blindness An inability to taste certain substances such as phenylthiocarbamide (PTC). This inability is due to a hereditary factor that is transmitted as an autosomal recessive trait.

taste area An area in the cerebral cortex at the lower end of the somesthetic area in the parietal lobe.

taster (tās'tēr) A person capable of detecting a particular substance by using the taste sense.

TAT *thematic apperception test*.

tattooing (tā-too'ing) [Tahitian *tatau*]



1. Indelible marking of the skin produced by introducing minute amounts of pigments into the skin. Tattooing is usually done to produce a certain design, picture, or name. When it is done commercially, sterile procedures may

not be used and hepatitis B or C or HIV may be transmitted to the customer. The technique may also be used to conceal a corneal leukoma, to mask pigmented areas of skin, or to color skin to look like the areola in mammoplasty. 2. In radiation therapy, the induction of a small amount of indelible pigment under the skin used to designate an area to be treated with radiation.

removal of t. Use of a ruby laser to "erase" the pigment in an unwanted tattoo. This usually causes no permanent skin changes.

traumatic t. Following abrasion of the skin, embedding of fine dirt particles under the superficial layers of the skin; or as a result of forceful deposit of gunpowder granules. This can be prevented by immediate removal of the particles.

tau A protein associated with microtubules that is found in glial cells of the brains of people affected by neurodegenerative diseases, including Alzheimer's disease, Creutzfeldt-Jakob disease, frontotemporal dementia, and some forms of Parkinson's disease. In these and related illnesses, high levels of tau can be found in the cerebrospinal fluid.

tauopathy (tow-ōp'ū-thē) [" + "] Any neurodegenerative disorder in which abnormal levels of tau protein are found in the brain.

taurine (taw'rīn) $\text{NH}_2\text{CH}_2\text{CH}_2\text{SO}_3\text{H}$, a derivative of cysteine. It is present in bile, as taurocholic acid, in combination with bile acid.

taurocholate (taw'rō-kō'lāt) A salt of taurocholic acid.

taurocholemia (taw'rō-kō-lē'mē-ā) [Gr. *tauros*, a bull, + *chole*, bile, + *haima*, blood] Taurocholic acid in the blood.

taurodontism (taw'rō-dōn'tizm) [" + *odous*, tooth, + *-ismos*, condition] A condition in which the teeth have greatly enlarged and deepened pulp chambers that encroach on the roots of the teeth.

Taussig-Bing syndrome (tau'sig-bing) [Helen B. Taussig, U.S. pediatrician, 1898–1986; Richard J. Bing, U.S. surgeon, 1909–1986] A congenital deformity of the heart in which the aorta arises from the right ventricle and the pulmonary artery arises from both ventricles. An intraventricular septal defect is present.

tauto- Prefix meaning *identical*.

tautomer (taw'tō-mēr) [" + *meros*, a part] A chemical that is capable of tautomerism.

tautomerase (taw-tōm'ēr-ās) [" + " + *-ase*, enzyme] An enzyme that catalyzes tautomeric reactions.

tautomerism (taw-tōm'ēr-izm) [" + " + *-ismos*, condition] A phenomenon in which a chemical may be present in two forms, existing in dynamic equilibrium

so that as the amount of one substance is altered, the second is changed into the other form in order to maintain the equilibrium. SEE: *isomerism*.

taxane (tāk'sān") Any of a class of drugs derived from the bark of the yew tree, *Taxus breviflora*. Examples include paclitaxel and docetaxel. Taxanes are used to treat breast, ovarian, and other types of cancer. Side effects include bone marrow suppression, neuropathy, mucositis, and hypersensitivity reactions.

taxis (tāk'sis) [Gr., arrangement]

1. The manual replacement or reduction of a hernia or dislocation. **2.** The response of an organism to its environment; a turning toward (positive taxis) or away from (negative taxis) a particular stimulus. SEE: *chemotaxis*.

Taxol (tāk'söl") A chemotherapeutic drug obtained from the bark of the yew tree, *Taxus brevifolia*. It is used to treat cancers of the breast, ovary, and other organs. Side effects include bone marrow suppression, neuropathy, mucositis, and hypersensitivity reactions.

taxon (tāk'són) [Gr. *taxis*, arrangement] A taxonomic group.

taxonomy (tāks-ŏn'ō-mē) [" + *nomos*, law] **1.** The laws and principles of classification of living organisms **2.** Classification of learning objectives.

Taylor, Euphemia Jane [U.S. nurse, 1878–1957] A pioneer of psychiatric nursing. She graduated from the Johns Hopkins Hospital School of Nursing in 1907 and became Director of Nursing Services at the Henry Phipps Clinic at Johns Hopkins from 1913 to 1919. Due to her efforts, Johns Hopkins was the first general hospital school of nursing to offer a course in psychiatric nursing. She became the Dean of the Yale School of Nursing in 1934 and served in this position until 1944. She was also a leader in the International Council of Nurses until her death.

Taylor brace (tā'lēr) [Charles Fayette Taylor, U.S. surgeon, 1827–1899] A brace with two rigid posterior oblique portions and soft straps crossed anteriorly over the chest.

Tay-Sachs disease (tā'sāks) [Warren Tay, Brit. physician, 1843–1927; Bernard Sachs, U.S. neurologist, 1858–1944] The most severe (and most common) of the lipid storage diseases. Tay-Sachs disease is characterized by neurological deterioration in the first year of life. It is caused by a genetic abnormality on chromosome 15, which results in the deficient manufacture of lysosomal beta-hexosaminidase A. As a result of this metabolic error, sphingolipids accumulate in the neural tissues of affected offspring. The illness is especially prominent in families of Eastern European (Ashkenazi) Jews. In this ethnic group it is carried by approximately 1 in

25 individuals. Carriers of the trait can be accurately detected by assay of hexosaminidase A. SEE: *Nursing Diagnoses Appendix*; *sphingolipidosis*.

SYMPTOMS: The disease is characterized by normal development until the third to sixth month of life, after which profound regression occurs. Physical findings may include cherry-red spots on the macula and enlargement of the head in the absence of hydrocephalus. Alterations in muscle tone, an abnormal startle response (hyperacusis), blindness, social withdrawal, and mental retardation are common early signs. A vegetative state is nearly universal by the second year of life. Death may occur before age 4.

TB *tuberculosis*.

Tb Symbol for the element terbium.

tb *tubercle bacillus*; *tuberculosis*.

T-bar T-shaped tubing connected to an endotracheal tube; used to deliver oxygen therapy to an intubated patient who does not require mechanical ventilation.

TBI *total body irradiation*; *traumatic brain injury*.

TBP *thyroxine-binding protein*.

Tbs *tablespoon*.

TBSA *total body surface area*.

Tbsp *tablespoon*.

TBW *total body water*. The sum of the mass of water within cells, interstitial tissues, and plasma.

Tc Symbol for the element technetium.

T-cell growth factor Interleukin-2.

T-cell-mediated immunity Cell-mediated immunity.

T-cell receptor ABBR: TCR. One of two polypeptide chains (α or β) on the surface of T lymphocytes that recognize and bind foreign antigens. TCRs are antigen specific; their activity depends on antigen processing by macrophages or other antigen-presenting cells and the presence of major histocompatibility complex proteins to which peptides from the antigen are bound. SEE: *autoimmunity*; *immune response*; *cell, T*.

TCID₅₀ *tissue culture infective dose*.

TCR *T-cell receptor*.

tds L. *ter die sumendum*, to be taken three times a day.

Te Symbol for the element tellurium.

tea (tē) **1.** An infusion of a medicinal plant. **2.** The leaves of the plant *Thea chinensis* or *Camellia sinensis*, from which a beverage is made by steeping the leaves in boiling hot water.

COMPOSITION: A number of pharmacologically active ingredients including caffeine, theophylline, various antioxidants including polyphenolic compounds, and sufficient fluoride to help prevent tooth decay are present in tea. The caloric content is negligible unless sugar, honey, and/or milk is added prior to consumption. SEE: *caffeine*; *withdrawal, caffeine*.



Tea intake should be limited in those patients with a history of oxalate-containing kidney stones.

black t. Tea made from leaves that have been fermented before they are dried.

green t. Tea made from the leaves of *Camellia sinensis* that have been steamed to prevent fermentation and then rolled and dried. The ingredients of green tea said to influence health are antioxidants called catechins. Green tea is often promoted for the putative prevention of certain types of cancer. Although studies have demonstrated antitumor effects of tea in laboratory animals, studies of the impact of green tea consumption on breast and prostate cancer in humans failed to show any impact.

herb t., herbal tea Tea made of a variety of plants, including leaves of certain flowers, herbs, barks, and grasses. Some herbs used in these teas have been demonstrated to have pharmacological properties.

t. kombucha SEE: *kombucha tea*.

Paraguay copper t. Tea, also known as yerba maté, made from the leaves and stems of *Ilex paraguayensis*. It is a stimulating drink and contains volatile oil, tannin, and caffeine.

team A group of individuals working together to perform a common task.

tear (tār) [AS. *taer*] To separate or pull apart by force.

bucket handle t. A longitudinal tear, usually beginning in the middle of a meniscus (cartilage) of the knee.

tear break-up test ABBR: TBUT. A test for dry eyes in which fluorescein sodium is applied to the cornea. The amount of time it takes for the first dry spots to appear on the cornea is determined. A TBUT time of less than 10 seconds suggests poor tear film stability.

tear film A liquid consisting of lipids, water, and mucin that coats the outer surface of the eye, lubricating it.

PATIENT CARE: A reduction in the tear film causes a sensation of a dry or gritty eye, such as is seen in Sjögren's syndrome, keratoconjunctivitis, sicca, disorders of the lacrimal gland, and other conditions. Keeping eyelids clean, using artificial tears, and withholding medications that may reduce the tear film can prove helpful for some patients. Other treatments may include the wearing of moisture chambers around the eye, and eye lid surgery. Topical lubricants can be used for symptomatic relief.

tears (tērs) [AS. *tear*] The watery saline solution secreted continuously by the lacrimal glands. They lubricate the surfaces between the eyeball and eyelids

(i.e., the conjunctiva). These are called continuous tears. Irritant tears are produced when a foreign object or substance is in the eye. SEE: *Schirmer's test*.

artificial t. A solution used to lubricate the conjunctivae.

crocodile t. Tears and excessive saliva produced during eating. This condition is present when nerve fibers of the salivary glands grow abnormally into the lacrimal glands following Bell's (seventh nerve) palsy.

tease (tēz) [AS. *taesan*, to pluck] To separate a tissue into minute parts with a needle to prepare it for microscopy.

teaspoon (tē'spoon) ABBR: tsp. A household measure equal to approx. 5 ml. Teaspoons used in the home vary from 3 to 6 ml. Because household measures are not accurate, when a teaspoon dose is prescribed or ordered, 5 ml of the substance should be given.

teat (tēt) [ME. *tete*, from AS. *tīt*, teat]

1. The nipple of the mammary gland. SYN: *papilla mammae*. SEE: *breast*.
2. Any protuberance resembling a nipple.

teatulation (tēt'ū-lā'shūn) [AS. *tīt*, teat] The development of a nipple-like elevation.

technetium (tēk-nē'shē-ūm) SYMB: Tc. A synthetic metallic chemical element having a number of radioactive isotopes; average atomic weight, 98.9062; atomic number, 43. Radioisotopes of technetium are used in imaging studies in nuclear medicine (e.g., myocardial perfusion scans, bone scans, and V/Q scans).

technetium-99m SYMB: ^{99m}Tc. A silvery gray, radioactive, crystalline transition metal. It has a half-life of 6 hr. Its short-lived isotope ^{99m}Tc is used in nuclear medicine for a wide variety of diagnostic tests. The "m" refers to the fact that it is a metastable isotope.

technetium Tc 99m albumin aggregated injection An injection of technetium-99m that has been aggregated with albumin. It is used intravenously to scan the lungs.

technetium Tc 99m hexamethylpropyleneamine oxime ABBR: HMPAO. A radioactive tracer consisting of technetium-99m linked to hexamethylpropyleneamine oxime. It is used to make nuclear imaging scans of the brain, e.g., in the determination of brain death. Absence of uptake of the molecule by the brain is diagnostic of brain death.

technetium 99m (methoxyisotrile) MIBI A radioactive tracer consisting of technetium-99m linked to MIBI. It is used in nuclear medical imaging (e.g., in scintimammography) to identify cancerous breast masses. Other uses of technetium 99m MIBI include cardiac, parathyroid, and thyroid imaging.

technetium Tc 99m methylene di-

phosphonate A radioactive tracer consisting of technetium-99m linked to methylene diphosphonate. It is used in nuclear medicine to obtain images of bone and bone diseases, e.g., fractures not seen on plain x-rays, malignancies, and osteomyelitis.

technetium Tc 99m RBC A radioactive tracer consisting of technetium-99m linked to red blood cells. It is used in clinical medicine to evaluate occult bleeding, e.g., from the gastrointestinal tract, or the motion of the heart in gated blood pool imaging.

technetium Tc 99m sestamibi A radioactive tracer consisting of technetium-99m linked to sestamibi. It is used to image blood flow to the heart muscle, esp. when combined with exercise or pharmacological "stress" tests. In a heart with normal blood flow, the isotope should be taken up uniformly throughout the heart muscle. Decreased uptake by regions of the heart occurs when coronary artery blood flow to those regions is blocked, e.g., by atherosclerotic plaque. SYN: *sestamibi*.

technetium Tc 99m sulfur colloid A radioactive tracer consisting of technetium-99m linked to sulfur colloid. It is used in nuclear medicine scans to make images of gastric emptying or of the lymph nodes, liver, and spleen.

technical (tèk'ni-kāl) [Gr. *tekhnikos*, skilled] Requiring technique or special skill.

technical efficiency The extent to which the most appropriate technologies, e.g., MRI studies, are devoted to the solution of problems, such as the diagnosis of diseases of the spinal cord, regardless of their economic costs or sociopolitical impact.

technician (tèk-nish'ân) An individual who has the knowledge and skill required to carry out specific technical procedures. This individual usually has a diploma from a specialized school or an associate degree from college or has received training through preceptorship. Particular technicians are listed under the first word. SEE: e.g., *dental technician*; *emergency medical technician*; *respiratory therapy technician*.

technique (tèk-nèk') [Fr., Gr. *tekhnikos*]

1. A systematic procedure or method by which an involved or scientific task is completed. 2. The skill in performing details of a procedure or operation. 3. In radiology, the various technical factors that must be determined to produce a diagnostic radiograph (e.g., kilovoltage, milliamperage, time of exposure, and source-image receptor distance).

aseptic t. A method used in surgery to prevent contamination of the wound and operative site. All instruments used are sterilized, and physicians and nurses wear caps, masks, shoe cover-

ings, sterile gowns, and gloves. The technique is adapted at the bedside (e.g., during procedures) and in emergency and treatment rooms. SEE: *Standard and Universal Precautions Appendix*.

bisecting angle t. A dental radiographic technique that requires (1) placement of the film as close as possible to the teeth, causing the film to rest against the crown; (2) visualization of a bisector, which bisects the angle formed by the long axis of the teeth and the film; and (3) positioning of the central ray perpendicular to the bisector. The image produced is distorted in a buccolingual direction. Also called *short-cone technique*. SEE: *Cieszynski's rule*.

compensatory t. The use of modified procedures or assistive devices to enable the successful performance of tasks by persons with a disability.

enzyme-multiplied immunoassay t. ABBR: EMIT. An enzyme immunoassay based on a mixture of analyte and enzyme substrate such that no immobile phase is necessary. SEE: *enzyme immunoassay*; *cloned enzyme donor immunoassay*.

forced expiration t. A type of cough that facilitates clearance of bronchial secretions while reducing the risk of bronchiolar collapse. One or two expirations are forced from average to low lung volume with an open glottis. A period of diaphragmatic breathing and relaxation follows.

minimal leak t. ABBR: MLT. A method of determining the appropriate cuff inflation volume on endotracheal tubes. Excessive cuff inflation volume may lead to necrosis of the trachea, and excessive leaking may render oxygenation and ventilation ineffective or allow aspiration of large particles from the oral cavity.

paralleling t. A dental radiographic technique that requires placement of the film parallel to the teeth and positioning of the central ray perpendicular to the teeth. The orientation of the film, teeth, and central ray produces a radiograph with minimal geometric distortion. Also called *right-angle* or *long-cone technique*.

techno- Combining form meaning *art, skill*.

technologist (tèk'nöl'ô-jîst) [Gr. *techne*, art, + *logos*, word, reason] An individual specializing in the application of scientific knowledge in solving practical or theoretical problems. The knowledge and skills required for performing these functions are achieved through formal education and a period of supervised clinical practice.

Particular technologists are listed under the first word. SEE: e.g., *cardiovas-*

cular technologist; medical technologist; radiation therapy technologist.

technology (tĕk-nŏl'ō-jē) [^l + *logos*, word, reason] **1.** The application of scientific knowledge. **2.** The scientific knowledge used in solving or approaching practical problems and situations.

adaptive t. Assistive t.

assistive t. ABBR: AT. A device or adaptation that enables or assists persons with disabilities to perform everyday tasks of living. Assistive technologies are categorized by rehabilitation personnel as high technology or low technology, with the former including devices that use microprocessors. An example of a high-technology device is an environmental control unit or robotic aid. An example of a low-technology device is a reacher or a tool with a built-up handle. SYN: *adaptive technology; assistive technology device; adaptive device.*

The Technology Related Assistance for Individuals with Disabilities Act Amendments of 1994 provide for programs that support the development, acquisition, or application of assistive technology devices or equipment to assist persons with activity limitations resulting from functional impairments.

wavefront t. A three-dimensional mapping system that measures the irregularities of an optical system (e.g., the human eye or a telescope lens); used in ophthalmology to detect refractive aberrations. Parallel light rays are directed toward the eye. If there are no aberrations, the returning light rays remain parallel. Any deviation indicates a defect that can alter the clarity of a visual image. Visual deficits caused by refractive aberration can be corrected by reshaping of the cornea.

technology-enabled active learning ABBR: TEAL. A means of enhancing the educational experience of students by including computer-assisted interactive media with more traditional lectures, group assignments, problem-solving sessions, and readings. SYN: *technology-enabled problem-based learning.*

technology-enabled problem-based learning Technology-enabled active learning.

tectocephaly (tĕk-tŏ-sĕf'āl-ē) Scaphocephalism. **tectocephalic, adj.**

tectorium (tĕk-tŏ-rĕ-ŭm) *pl. tectoria* [L. *tectorium*, a covering] **1.** Any rooftop structure. SEE: *tectum; tegmentum; tegument.* **tectorial, adj.** **2.** The membrane that overhangs the receptors for hearing (hair cells) in the organ of Corti.

tectospinal (tĕk'tŏ-spi'nāl) [L. *tectum*, roof, + *spina*, thorn] From the tectum mesencephali to the spinal cord.

tectospinal tract A nerve tract that passes from the tectum of the midbrain

through the medulla to the spinal cord; most of the fibers cross to the other side of the body.

tectum (tĕk'tŭm) [L., roof] **1.** Any structure serving as, or resembling, a roof. SYN: *tectorium; tegmentum; tegument.* **2.** The dorsal portion of the midbrain consisting of the superior and inferior colliculi (corpora quadrigemina). SYN: *tegmentum.*

t. mesencephali The roof of the midbrain, including the corpora quadrigemina.

T.E.D. *threshold erythema dose.*

TEE (tĕ'ĕ'ĕ') *Transesophageal echocardiography.*

teenage Adolescent.

teeth (tĕth) Plural of tooth.

teething (tĕth'ing) [AS. *toth*, tooth] Eruption of the teeth. SEE: *dentition.*

tegmen (tĕg'mĕn) *pl. tegmina* [L. *tegmen*, covering] A structure that covers a part. **tegmental, adj.**

tegmental nucleus One of several masses of gray matter lying in the tegmentum of the midbrain and upper portion of the pons; it includes the dorsal, pedunculopontile, reticular, and ventral nuclei.

tegmentum (tĕg-mĕn'tŭm) [L. *tegmentum*, covering] **1.** A roof or covering. SYN: *tectorium; tegument.* **2.** The dorsal portion of the cruri cerebri of the midbrain. It contains the red nucleus and nuclei and roots of the oculomotor nerve. SYN: *tectum.*

tegment (tĕg'ŭ-mĕnt) **1.** Integument. **2.** A covering structure.

tegmental, tegumentary (tĕg'ŭ-mĕn'tāl, -tā-rĕ) Concerning the skin or tegument; covering.

teichoic acid (tī-kŏ'ĭk) A polymer found in the cell walls of some gram-positive bacteria, such as the staphylococci.

teichopsia (tī-kŏp'sĕ-ā) [Gr. *teichos*, wall, + *opsis*, vision] Zigzag lines bounding a luminous area appearing in the visual field. It causes temporary blindness in that portion of the field of vision. This condition is sometimes associated with migraine headaches or mental or physical strain. SYN: *scintillating scotoma.*

tel-, tele- **1.** Combining form meaning *end*. **2.** Combining form meaning *distant*.

tela (tĕ'lā) *pl. telae* [L. *tela*, web] Any weblike structure.

telalgia (tĕl-āl'jĕ-ā) [Gr. *tele*, distant, + *algos*, pain] Pain felt at a distance from its stimulus. SYN: *pain, referred.*

telangiectasia, telangiectasis (tĕl-ān'jĕ-ĕk-tā-zĕ-ā, -ĕk'tā-sis) [Gr. *telos*, end, + *angeion*, vessel, + *ektasis*, dilatation] A vascular lesion formed by dilatation of a group of small blood vessels. It may appear as a birthmark or become apparent in young children. It may also be caused by long-term sun exposure. Al-

though the lesion may occur anywhere on the skin, it is seen most frequently on the face and thighs. **SEE: illus. telangiectatic, adj.**



TELANGIECTASIA

hereditary hemorrhagic t. A disease transmitted by autosomal dominant inheritance marked by thinness of the walls of the blood vessels of the nose, skin, and digestive tract, as well as a tendency to hemorrhage. **SYN: Rendu-Osler-Weber syndrome.**

spider t. Stellate angioma.

telangiectodes (těl-ăn"jē-ék-tō'dēz) Tumors that have telangiectasia.

telangiitis (těl-ăn"jē-ī'tīs) [" + " + *itis*, inflammation] An inflammation of the capillaries.

telangioma (těl-ăn"jē-ō'mă) [Gr. *telos*, end, + *angeion*, vessel, + *oma*, tumor] A tumor made up of dilated capillaries or arterioles.

telangiosis (těl-ăn-jē-ō'sīs) [" + " + *osis*, condition] A disease of capillary vessels.

telecanthus (těl'ē-kăn'thūs) [Gr. *tele*, distant, + *kanthos*, corner of the eye] Increased distance between the inner canthi of the eyelids.

telecardiography (těl'ē-kăr'dē-ōg'ră-fē) [" + " + *graphein*, to write] The process of taking telecardiograms.

telecardiophone (těl'ē-kăr'dē-ō-fōn) [" + " + *phone*, voice] A stethoscope that will magnify heart sounds so they may be heard at a distance from the patient.

teleceptive (těl-ē-sēp'tiv) [" + L. *cepius*, take] Relating to a teleceptor.

teleceptor (těl'ē-sēp'tor) [" + L. *ceptor*, a receiver] A distance receptor; a sense organ that responds to stimuli arising some distance from the body, such as the eye, ear, and nose. **SYN: teleceptor.**

teleconferencing Holding a meeting with people at different geographic locations by means of telecommunication devices. Teleconferencing is accomplished with high-speed telephone connections, satellite links, or desktop computer video-conference software.

teledendrite, teledendron (těl-ē-dēn'drīt, -dēn'drōn) [Gr. *telos*, end, + *dendron*, a tree] One of the terminal processes of an axon. **SYN: telodendron.**

telediagnosis (těl'ē-dī'ăg-nō'sīs) [Gr. *tele*, distant, + *diagnosiskein*, to discern] Diagnosis made on the basis of data transmitted electronically to the physician's location.

telediastolic (těl'ē-dī-ă-stōl'ik) [Gr. *telos*, end, + *diastole*, a dilatation] Concerning the last phase of the diastole.

telefluoroscopy (těl'ē-floo'or-ōs'kō-pē) The transmission of fluoroscopic images by electronic means.

telehealth The use of telecommunication equipment and/or networks to transfer health care information among participants at different locations. Aspects of telehealth include teleradiology (the transmission of radiological images from one site to another), telemedicine (consultation by physicians at a distance), telenursing, and teledermatology.

telekinesis (těl'ē-kī-nē'sīs) [" + "] The ability to move objects by pure mental concentration. Claims of telekinetic powers are typical of patients with psychotic illnesses.

telemedicine (těl'ē-mēd'ī-sin) The use of telecommunication equipment to transmit video images, x-rays and other images, electronic medical records, and laboratory results about patients from distant sites. This improves health care access and delivery to remote rural, military, or international health care facilities.

telemeter (těl'ē-mē'tēr) [" + *metron*, measure] An electronic device used to transmit information to a distant point.

telemetry (těl-ēm'ē-trē) The transmission of data electronically to a distant location.

telencephalic (těl'ēn-sēf'ă-ik) [Gr. *telos*, end, + *enkephalos*, brain] Pert. to the endbrain (telencephalon).

telencephalization (těl'ēn-sēf'ă-lī-ză'shūn) The evolution of the cerebrum as a control center for functions previously regulated by lower nerve centers.

telencephalon (těl-ēn-sēf'ă-lōn) [" + *enkephalos*, brain] The embryonic endbrain or posterior division of the prosencephalon from which the cerebral hemispheres, corpora striata, and rhinencephalon develop.

teleneurite (těl'ē-nūrīt) [" + *neuron*, nerve] The branching end of an axon.

teleneuron (těl'ē-nūrōn) [" + *neuron*, nerve] A nerve ending.

teleo- Combining form meaning *perfect, complete*.

teleological (tē'lē-ō-lōj'ī-kăl) Concerning teleology.

teleology (těl-ē-ōl'ō-jē) [Gr. *teleos*, complete, + *logos*, word, reason] **1.** The belief that everything is directed toward some final purpose. **2.** The doctrine of final causes.

teleomitosi (těl'ē-ō-mī-tō'sīs) [" + *mi-*

tos, thread, + *osis*, condition] Completed mitosis.

teleomorph (tél'ē-ō-mawrf', tēl') [" + G. *morphe*, form] The sexual state of a fungus (the state in which two fungal nuclei unite and undergo meiosis, forming offspring with new genetic information). Fungi that have teleomorphic states are said to be "perfect" fungi. Fungi that reproduce asexually are said to be "imperfect." **teleomorphic** (tél'ē-ō-mawrf'ik, tēl'), *adj.* SEE: *anamorph*.

teleonomy (tél'ē-ōn'ō-mē) [" + *nomos*, law] The concept that, in an organism or animal, the existence of a structure, capability, or function indicates that it had survival value. **teleonomic** (tél'ē-ō-nōm'ik), *adj.*

teleoperator (tél'ē-ōp'ēr-āt'or) A machine or device operated by a person at a distance. Such a machine allows tasks to be done deep in the ocean or on orbiting satellites, and allows radioactive materials to be manipulated without danger of exposure to the radioactivity.

teleopsis (tél'ē-ōp'sē-ā) [Gr. *tele*, distant, + *ops*, eye] A visual disorder in which objects perceived in space have excessive depth or in which close objects appear far away.

teletherapeutics (tél'ē-ō-thēr-ā-pū'tiks) [Gr. *tele*, distant, + *therapeutikos*, treating] The use of hypnotic suggestion in the treatment of disease. SYN: *suggestive therapeutics*.

telepathy (tē-lēp'ā-thē) The ability to communicate with others wordlessly, that is, by broadcasting one's thoughts or by receiving the transmitted thoughts of others. Claims of telepathic powers are typical of patients with psychoses and of some shamans. SYN: *teleesthesia* (1).

telephony (tē-lēf'ō-nē) Telephone technology, i.e., the electronic transmission of voice, fax, or other information between distant parties using a handheld device containing both a speaker or transmitter and a receiver.

telepresence (tél'ē-prē-zīns) Virtual attendance rather than physical attendance (i.e., the presence of a person or thing that is brought about by technological means such as telephone, video, or other electronic devices).

telerradiogram (tél'ē-rā'dē-ō-grām) [Gr. *tele*, distant, + L. *radius*, ray, + Gr. *gramma*, something written] An x-ray image obtained by telerradiography.

telerradiography (tél'ē-rā-dē-ōg'rā-fē) Radiography with the radiation source about 2 m (6½ ft) from the body. Because the rays are virtually parallel at that distance, distortion is minimized. SYN: *teleroentgenography*.

telerradiology (tél'ē-rā-dē-ōl'ō-jē) The transmission of an x-ray image to a distant center where it may be interpreted by a radiologist.

telerradium (tél'ē-rā'dē-ūm) A radium source distant from the area being treated.

teleroentgenogram (tél'ē-rēnt-gēn'ō-grām) [" + *roentgen* + Gr. *gramma*, something written] Teleradiogram.

teleroentgenography (tél'ē-rēnt'gēn-ōg'rā-fē) [" + " + Gr. *graphein*, to write] Teleradiography.

telesthesia (tél'ēs-thē'zē-ā) [" + *aisthesis*, sensation] 1. Telepathy. 2. Distance perception. SEE: *paranormal*.

telesurgery (tél'ēs-sūr'jēr-ē) [" + "'] Surgery performed from a remote location, using robotically controlled instruments. Visual, auditory, tactile, and other feedback is provided electronically to the surgeon.

telesystolic (tél'ēs-sīs-tōl'ik) [Gr. *telos*, end, + *systole*, contraction] Pert. to the termination of cardiac systole.

teletherapy (tél'ē-thēr'ā-pē) [Gr. *tele*, distant, + *therapeia*, treatment] Cancer treatment in which the radiation source is placed outside the body.

telethonin (tél'ē-thōn'in) [Fm *telethon*, after the televised fund-raisers urging donations for muscular dystrophy] A 19kD protein found in the Z disk of striated and cardiac muscle. Mutations in the gene for telethonin result in altered sarcomeres and some forms of muscular dystrophy.

telluric (tē-lūr'ik) [L. *tellus*, earth] Of or rel. to the earth.

tellurism (tél'ū-rīzm) [" + Gr. *-ismos*, condition] The unproven and vague concept that emanations from the earth cause disease.

tellurium (tél-ū'rē-ūm) [L. *tellus*, earth] SYMB; Te. A brittle, silvery-white element used primarily in alloys and as a semiconductor; atomic weight, 127.60; atomic number, 52; specific gravity, 6.24.

telocentric (tél'ō-sēn'trīk) [Gr. *telos*, end, + *kentron*, center] Location of the centromere in the extreme end of the replicating chromosome so that there is only one arm on the chromosome.

teleceptor (tél'ō-sēp'tor) Teleceptor.

telodendron (tél-ō-dēn'drōn) [Gr. *telos*, end, + *dendron*, tree] Teledendrite.

telogen (tél'ō-jēn) [" + *genesis*, generation, birth] The resting stage of the hair growth cycle. SEE: *anagen*; *catagen*.

teloglia (tél-ōg'lē-ā) The Schwann cells at the end of a motor nerve fiber near the neuromuscular junction.

telolecithal (tél'ō-lēs'ī-thāl) Concerning an egg in which the large yolk mass is concentrated at one pole.

telolemma (tél'ō-lēm'mā) [" + *lemma*, rind] The membrane of the axon terminal at a neuromuscular junction.

telomerase (tél'ō-mēr'ās) An enzyme that helps cells repair the damage that

occurs to the end of the DNA molecule during each cycle of cell division. Without such repair, cells eventually age and die. Cancer cells have telomerases that allow infinite repair to the DNA strands, a factor that contributes to their "immortality." SEE: *telomere*.

Telomere (tĕl'ō-mĕr) [*"* + *meros*, part] A repetitive segment of DNA found on the ends of chromosomes. With each mitotic division, parts of the telomeres of a chromosome are lost. A theory of cellular aging proposes that the telomeres act as a biological clock and that when they are depleted, the cell dies or becomes much less active. **telomeric** (tĕl'ō-mĕr'ĭk), *adj.*

telomeric repeat amplification protocol assay (tĕl'ō-mĕr'ĭk) ABBR: TRAP. A means of detecting telomerase activity in laboratory specimens. Telomerase can be used as a biomarker for the presence of malignant cells. TRAP has been used to detect abnormal telomerase activity in urine (a marker of bladder cancer) and in tissue and cell extracts, e.g., in lymphomas or renal tumors.

telomeric theory of aging (tĕl'ō-mĕr'ĭk thĕ'ā-rĕ ūv ā'jĭng, -mĕr', thĕr'ĕ) The progressive shortening of the end regions of chromosomes that occurs with each cell replication cycle; this loss of genetic material may serve as the clock that defines aging at the cellular level.

telophase (tĕl'ō-fāz) [*"* + *phasis*, an appearance] The final phase or stage of mitosis (karyokinesis) during which reconstruction of the daughter nuclei takes place and the cytoplasm of the cell divides, giving rise to two daughter cells.

temoradiation (tĕm'ō-rā'dĕ-ā'shŭn) A colloquial term for the combination of radiation therapy with the chemotherapeutic drug temozolomide, a treatment for patients with glioblastoma multiforme.

tempeh (tĕm'pā) A wheat-soybean-mold modified and fermented food used traditionally in Asia. The quality of protein in tempeh is close to that of casein.

temper [AS. *temprian*, to mingle] The state of an individual's mood, disposition, or mind (e.g., even-tempered or foul-tempered).

temperament (tĕm'pĕr-ā-mĕnt) [L. *temperamentum*, mixture] The combination of intellectual, emotional, ethical, and physical characteristics of a specific individual.

temperance (tĕm'pĕr-āns) Moderation in one's thoughts and actions, esp. with respect to use of alcoholic beverages.

temperate (tĕm'pĕr-ĭt) Moderate; not excessive.

temperature (tĕm'pĕr-ā-tŭr) [L. *temperatura*, proportion] The degree of hot-

ness or coldness of a substance. SEE: *illus.*

absolute t. The temperature measured from absolute zero, which is -273.15°C .

ambient t. The surrounding temperature or that present in the place, site, or location indicated.

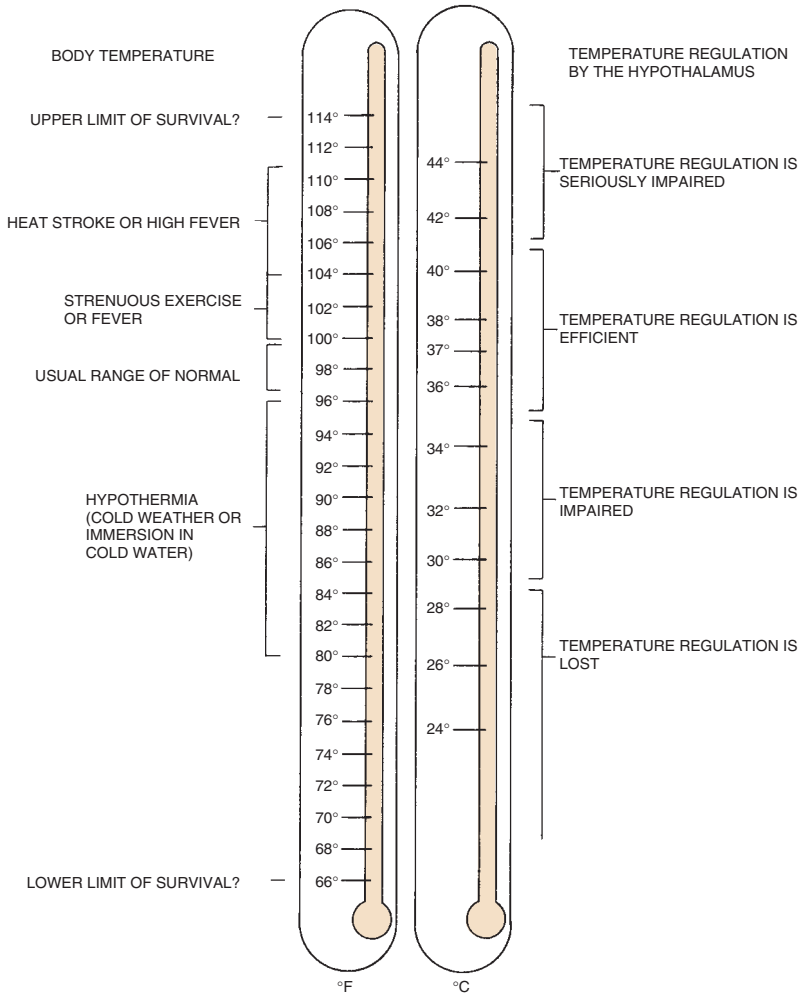
axillary t. The temperature obtained by placing a thermometer in the apex of the axilla with the arm pressed closely to the side of the body for 5 min. The temperature obtained by this method is usually 0.5° to 1.0°F (0.28° to 0.56°C) lower than oral.

body t. The temperature of the body, an indicator of health and disease and one of the vital signs. Body temperature varies with the time of day and the site of measurement. Oral temperature is usually 97.5° to 99.5°F (36° to 38°C). Daily fluctuations in an individual may be 1° or 2°F . Body temperature may be measured by a placing a thermometer in the mouth, the rectum, under the arm, in the bladder, within the chambers of the heart, or in the external auditory canal of the ear. Rectal temperature is usually from 0.5° to 1.0°F (0.28° to 0.56°C) higher than by mouth; axillary temperature is about 0.5°F (0.28°C) lower than by mouth. Oral temperature measurement may be inaccurate if performed just after the patient has ingested cold substances or has been breathing with the mouth open.

Body temperature is regulated by thermoregulatory centers in the hypothalamus that balance heat production and heat loss. Eighty-five percent of body heat is lost through the skin (radiation, conduction, sweating) and the remainder through the lungs and fecal and urinary excretions. Muscular work (including shivering) is a mechanism for raising body temperature. Elevation of temperature above normal is called fever (pyrexia), and subnormal temperature is hypothermia. Other factors that can influence body temperature are age (infants and children have a wider range of body temperature than adults, and elderly have lower body temperatures than others); menstruation cycle in women (the temperature rises in the ovulatory midcycle and remains high until menses); and exercise (temperature rises with moderate to vigorous muscular activity).

core t. The body's temperature in deep internal structures, such as the heart or bladder, as opposed to peripheral parts such as the mouth or axilla. In critical care it is often measured with a thermometer linked to a central venous catheter or pulmonary artery catheter.

critical t. The temperature above



TEMPERATURE REGULATION

Effects of changes in body temperature

which distinct liquid and gas phases do not exist.

inverse t. A condition in which the body temperature is higher in the morning than in the evening.

maximum t. The temperature above which bacterial growth will not take place.

mean t. The average temperature for a stated period in a given locality.

minimum t. In bacteriology, the temperature below which bacterial growth will not take place.

normal t. The temperature of the body, taken orally, in a healthy individual: normally 97.5° to 99.5°F (36° to 38°C).

optimum t. The temperature at which a procedure is best carried out, such as the culture of a given organism or the action of an enzyme.

oral t. The temperature obtained by placing a thermometer under the patient's tongue with lips closed for 3 min. It should not be taken for at least 10 min after ingestion of hot or cold liquids. It is not advisable for infants, individuals who breathe through the mouth, comatose or obtunded patients, or the critically ill.

rectal t. The temperature obtained by inserting a thermometer into the anal canal to a depth of at least 1½ in (3.8 cm) and holding it in place for 3 to

5 min. This method should not be used following a rectal operation or if the rectum is diseased. A rectal temperature is more accurate than either oral or axillary temperatures. It averages about 1°F (0.56°C) higher than the oral temperature and approx. 1.5°F (0.84°C) higher than the axillary temperature.

room t. The temperature between 65° and 80°F (18.3° and 26.7°C).

subnormal t. A body temperature below the normal range of 97.5° to 99.5°F (36° to 38°C).

tympanic t. The temperature obtained by placing an electronic probe in the ear canal. SEE: *ear thermometry; thermometer, tympanic.*

temperature sense The sensations of warmth or cold that are projected to the skin as its temperature changes. The receptors for heat and cold are free nerve endings in the dermis; sensory impulses may be perceived by the thalamus as a poorly localized temperature sensation. The sensory area of the parietal lobe can localize the sensation much more precisely. Adaptation is fairly rapid unless the temperature is extreme.

template (tēm'plăt) A pattern, mold, or form used as a guide in duplicating a molecule, shape, structure, or device.

occlusal t. Bite plate.

wax t. SEE: *waxing-up.*

temple (tēm'pl) [O.Fr. from L. *tempora*, pl. of *tempus*, temple] The region of the head in front of the ear and over the zygomatic arch.

tempolabile (tēm'pō-lā'bl) [L. *tempus*, period of time, + *labi*, to slip] Becoming altered spontaneously within a definite time.

tempora (tēm'pō-ră) [L. pl. of *tempus*, period of time] The temples.

temporal (tēm'por-ăl) [L. *temporalis*, period of time] 1. Pert. to or limited in time. 2. Rel. to the temples.

temporalis (tēm'pō-ră'lis) [L.] The muscle in the temporal fossa that elevates the mandible.

temporal lobe SEE: *under lobe.*

temporal-sequential organization The ability of a child to develop concepts of time and sequence. This function is localized in the left hemisphere of the brain. This ability is essential to the function of a child in daily activities concerned with routines such as telling time or following multistep directions. Skill in this function increases with age. SEE: *digit span test.*

temporo- [L.] Combining form meaning *temple* of the head.

temporomalar (tēm'pō-rō-mā'lăr) ["/ + *mala*, cheek] Temporozygomatic.

temporomandibular (tēm'pō-rō-măndīb'ū-lăr) ["/ + *mandibula*, lower jawbone] Pert. to the temporal and mandible bones; esp. important in dentistry

because of the articulation of the bones of the temporomandibular joint.

temporomandibular joints The encapsulated, bicondylar, synovial joints between the condyles of the mandible and the temporal bones of the skull.

temporomandibular joint syndrome ABBR: TMJ syndrome. Severe pain in and about the temporomandibular joint, made worse by chewing. The syndrome is marked by limited movement of the joint and clicking sounds during chewing. Tinnitus, pain, and rarely, deafness may be present. Causes include lesions of the temporomandibular joint tissues, malocclusion, overbite, poorly fitting dentures, and tissue changes resulting in pressure on nerves. Treatments may include bite blocks worn at night, nonsteroidal anti-inflammatory drugs, local massage, or joint surgeries. SYN: *Costen's syndrome.*

temporo-occipital (tēm'pō-rō-ök-sĭp'ĭ-tăl) ["/ + *occipitalis*, pert. to the occiput] Pert. to the temporal and occipital bones of the skull or to the temporal and occipital lobes of the brain.

temporoparietal (tēm'pō-rō-pă-rĭ'ĕ-tăl) ["/ + *paries*, wall] Concerning the temporal and parietal bones.

temporozygomatic (tēm'pō-rō-zĭ'gō-măt'ĭk) ["/ + Gr. *zygoma*, cheekbone] Concerning the temporal and zygomatic bones. SYN: *temporomalar.*

tempostabile (tēm'pō-stă'bĭl) [L. *tempus*, time, + *stabilis*, stable] Descriptive of something, esp. a chemical compound, that remains stable with the passage of time.

TEMS *Tactical emergency medical services.*

ten- SEE: *taen-*.

tenacious (tĕ-nă'shŭs) [L. *tenax*] Adhering to; adhesive; retentive.

tenacity (tĕ-năs'ĭ-tĕ) Toughness, stubbornness, obstinacy, durability.

tenaculum (tĕn-ăk'ū-lŭm) [L., a holder] Sharp, hooklike, pointed instrument with a slender shank for grasping and holding an anatomical part.

tenalgia (tĕn-ăl'jĕ-ă) [Gr. *tenon*, tendon, + *algos*, pain] Tenodynia.

tenascin (tĕn'ŭ-sĭn) A large glycoprotein expressed by normal embryonic cells during organogenesis, and by adult cells in inflammation, wound healing, and cancer.

tenascin-C (tĕn-ă'sĭn) A glycoprotein found in the extracellular matrix that influences embryological development, tissue remodeling, and angiogenesis in infectious, inflammatory, and malignant diseases.

Tenckhoff peritoneal dialysis catheter (tĕng'kof) [Henry Tenckhoff, Am. nephrologist] A large-bore, indwelling catheter used for continuous ambulatory peritoneal dialysis or peritoneal irrigation; it is inserted into the perito-

neum through the abdominal wall. SEE: *dialysis, continuous ambulatory peritoneal*.

tender loving care ABBR: TLC. The concept of administering medical and nursing care and attention to a patient in a kindly, compassionate, and humane manner.

tenderness (tĕn'dĕr-nĕs) Sensitivity to pain upon pressure.

rebound t. The production or intensification of pain when pressure that has been applied during palpation (esp. of the abdomen) is suddenly released. SYN: *Blumberg's sign*.

tendinoplasty (tĕn'dī-nō-plās'tĕ) [" + Gr. *plassein*, to form] Plastic surgery of tendons. SEE: *tendoplasty; tenontoplasty; tenoplasty*.

tendinosis (tĕn'dī-nō'sis) 1. Degeneration of a tendon from repetitive microtrauma. 2. Collagen degeneration.

tendinosuture (tĕn'dīn-ō-sū'tūr) [" + *sutura*, a seam] The suturing of a divided tendon. SEE: *tenorrhaphy*.

tendinous (tĕn'dī-nūs) [L. *tendinosus*] Pert. to, composed of, or resembling tendons.

tendo [L.] Tendon.

tendo- SEE: *teno-*.

tendolysis (tĕn-dōl'ī-sis) [" + Gr. *lysis*, dissolution] The process of freeing a tendon from adhesions. SYN: *tenolysis*.

tendon (tĕn'dŭn) [L. *tendo*, tendon] Fibrous connective tissue serving for the attachment of muscles to bones and other parts. SYN: *sineu; tendo*.

Achilles t. SEE: *Achilles tendon*.

calcaneal t. Achilles t.

central t. The central portion of the diaphragm, consisting of a flat aponeurosis into which the muscle fibers of the diaphragm are inserted.

t. of Zinn The portion of the fibrous ring (annulus tendineus communis) from which the inferior rectus muscle of the eye originates.

tendon cell One of the fibroblasts of white fibrous connective tissue of tendons that are arranged in parallel rows.

tendonitis, tendinitis (tĕn'dīn-ī'tis) [L. *tendo*, tendon, + Gr. *itis*, inflammation] Inflammation of a tendon.

rotator cuff t. A common cause of shoulder pain, thought to be due to inflammation of the intrinsic tendons of the shoulder, esp. that of the supraspinatus. The onset usually follows injury or overuse during activities involving repeated overhead arm motions, as occurs in certain occupations (e.g., construction workers, painters) and sports (e.g., baseball, tennis, swimming).

ETIOLOGY: Individuals over age 40 are particularly susceptible because of decreased vascular supply to the rotator cuff tendons. Those who perform repeated overhead motions are also at risk.

SYMPTOMS: The patient will describe pain with overhead arm motion; on examination, the extremity may be postured for comfort; muscle strength and tone of the scapular muscles may be decreased.

TREATMENT: Conservative treatment consists of the use of moist heat and strengthening and range-of-motion exercises; if the patient does not respond to these treatment methods and loss of function is present, corticosteroid injections may be helpful. Surgery to resect the coracoacromial ligament may be indicated in persons who fail other therapies.

tendon spindle A fusiform nerve ending in a tendon.

tendoplasty (tĕn'dō-plās'tĕ) [" + Gr. *plassein*, to mold] Reparative surgery of an injured tendon. SYN: *tendinoplasty; tenontoplasty; tenoplasty*.

tendosynovitis (tĕn'dō-sīn'ō-vī'tis) [" + *synovia*, joint fluid, + Gr. *itis*, inflammation] Tenosynovitis.

tendotomy (tĕn-dōt'ō-mĕ) Tenotomy.

tendovaginal (tĕn'dō-vāj'ī-nāl) [L. *tendo*, tendon, + *vagina*, sheath] Rel. to a tendon and its sheath.

tendovaginitis (tĕn'dō-vāj'īn-ī'tis) [" + " + Gr. *itis*, inflammation] Tenosynovitis.

Tenebrio (tĕ-nĕb'rĕ-ō) A genus of beetles including the species of *T. molitor*, which is an intermediate host of helminth parasites of vertebrates.

tenectomy (tĕ-nĕk'tō-mĕ) [" + *ektome*, excision] Excision of a lesion of a tendon or tendon sheath.

graduated t. Partial division of a tendon.

tenesmus (tĕ-nĕz'mŭs) [Gr. *teinesmos*, a stretching] Spasmodic contraction of anal or bladder sphincter with pain and persistent desire to empty the bowel or bladder, with involuntary ineffectual straining efforts. **tenesmic** (tĕn-ĕz'mĭk), *adj.*

teni- SEE: *taen-*.

tenia (tĕ'nĕ-ă) [L. *taenia*, tape] Taenia.

teniasis (tĕ-nī'ă-sis) [L. *taenia*, tapeworm, + Gr. *-iasis*, a condition] Presence of tapeworms in the body.

tenicide (tĕn'ī-sīd) [" + *cidus*, killing] Taeniocide.

tenifuge (tĕn'ī-fŭj) [" + *fuga*, flight] Causing or that which causes expulsion of tapeworms. SYN: *taenifuge*.

tennis elbow A condition marked by pain over the lateral epicondyle of the humerus or the head of the radius. The pain radiates to the outer side of the arm and forearm due to injury or overuse of the extensor carpi radialis brevis or longus muscle, as may occur in playing tennis. The condition is aggravated by resisted wrist extension or forearm supination, or by a stretch force with the wrist flexed, forearm pronated, and el-

bow extended. Present are weakness of the wrist and difficulty in grasping objects. A reliable diagnostic sign is increased pain when the middle finger or wrist is extended against resistance. SYN: *epicondylitis, lateral humeral*.

TREATMENT: When elbow soreness is mild, treatment includes resting the arm, using nonsteroidal anti-inflammatory drugs, or applying a wide strap around the forearm, just below the elbow. Injections of a long-acting steroid into the tendon are helpful in about two thirds of patients with slowly resolving symptoms. Physical therapy with an elastic band helps many patients. Patients who do not improve require surgery, e.g., with resection of the extensor carpi radialis brevis or decompression of the posterior interosseous nerve.

teno-, tendo- Combining form meaning *tendon*.

tenodesis (tĕn-ŏd'ĕ-sĭs) [Gr. *tenon*, tendon, + *desis*, a binding] **1.** Surgical fixation of a tendon. Usually a tendon is transferred from its initial point of origin to a new origin in order to restore muscle balance to a joint, to restore lost function, or to increase active power of joint motion. **2.** Closing of the fingers through tendon action of the extrinsic finger flexor muscles when they are stretched across the wrist joint during wrist extension. This mechanism is used for functional grip in the quadriplegic individual when paralysis is due to loss below the sixth cervical vertebra.

tenodynia (tĕn'ŏ-dĭn'ĕ-ă) [" + *odyne*, pain] Pain in a tendon. SYN: *tenalgia*.

tenofibril (tĕn'ŏ-fi'brĭl) [" + *fibrilla*, little fiber] A filament in the cytoplasm of epithelial cells; part of the cytoskeleton tonofibril. SYN: *tonofibril*.

tenolysis (tĕn-ŏl'ĭ-sĭs) [" + *lysis*, dissolution] Tendolysis.

tenomyoplasty (tĕn'ŏ-mĭ'ŏ-plăst'tĕ) [" + *mys*, muscle, + *plassein*, to form] Reparative operation upon a tendon and muscle.

tenomyotomy (tĕn'ŏ-mĭ-ŏt'ŏ-mĕ) [" + " + *tome*, incision] Excision of lateral portion of a tendon or muscle.

Tenon, Jacques R. (tĕ'nŏn) French surgeon, 1724–1816.

T. capsule A thin connective tissue envelope of the posterior eyeball behind the conjunctiva.

T. space Tissue fluid space between the sclera and Tenon's capsule. SYN: *interfacial space*.

tenonectomy (tĕn'ŏ-nĕk'tŏ-mĕ) [" + *ektome*, excision] Excision of a portion of a tendon.

tenonitis (tĕn'ŏ-nĭ'tĭs) [" + *itis*, inflammation] **1.** Inflammation of a tendon. SEE: *tendonitis*. **2.** Inflammation of Tenon's capsule.

tenonometer (tĕn'ŏ-nŏm'ĕ-tĕr) [Gr. *teinein*, to stretch, + *metron*, measure]

A device for measuring degree of intraocular tension.

tenontography (tĕn'ŏn-tŏg'ră-fĕ) [" + *graphein*, to write] A treatise on tendons.

tenontology (tĕn'ŏn-tŏl'ŏ-jĕ) [" + *logos*, word, reason] The study of tendons.

tenontomyotomy (tĕn-ŏn'tŏ-mĭ-ŏt'ŏ-mĕ) [" + " + *tome*, incision] Cutting of the principal tendon of a muscle with excision of the muscle in part or in whole. SYN: *myototomy*.

tenontoplasty (tĕn-ŏn'tŏ-plăst'tĕ) [" + *plassein*, to form] Plastic surgery of defective or injured tendons. SEE: *tenoplasty*.

tenophyte (tĕn'ŏ-fit) [" + *phyton*, a growth] A cartilaginous or osseous growth on a tendon.

tenoplasty (tĕn'ŏ-plăst'tĕ) [" + *plassein*, to form] Reparative surgery of tendons. SYN: *tendinoplasty*; *tenontoplasty*.

tenoreceptor (tĕn'ŏ-rĕ-sĕp'tor) [" + *L. receptor*, receiver] Proprioceptive nerve ending in a tendon.

Tenormin (tĕn'ĕr-mĭn") SEE: *atenolol*.

tenorrhaphy (tĕn-or'ă-fĕ) [" + *rhaphe*, seam, ridge] Suturing of a tendon.

tenostosis (tĕn'ŏs-tŏ'sis) [Gr. *tenon*, tendon, + *osteon*, bone, + *osis*, condition] Calcification of a tendon.

tenosuspension (tĕn'ŏ-sŭs-pĕn'shŭn) [" + *L. suspensio*, a hanging under] In surgery, use of a tendon to support a structure.

tenosuture (tĕn'ŏ-sŭ'chŭr) [" + *L. sutura*, a seam] Suture of a partially or completely divided tendon.

tenosynovectomy (tĕn'ŏ-sĭn'ŏ-vĕk'tŏ-mĕ) [" + *synovia*, joint fluid, + *Gr. ektome*, excision] Excision of a tendon sheath.

tenosynovitis (tĕn'ŏ-sĭn'ŏ-vĭ'tĭs) [" + " + *Gr. itis*, inflammation] An inflammation of a tendon sheath. SYN: *tendosynovitis*; *tendovaginitis*. SEE: *de Quervain's disease*.

de Quervain's t. SEE: *de Quervain's disease*.

t. hyperplastica Painless swelling of extensor tendons over the wrist joint.

tenotomy (tĕ-nŏt'ŏ-mĕ) Surgical section of a tendon. SYN: *tendotomy*.

tenovaginitis (tĕn'ŏ-văj'in-ĭ'tĭs) [" + *L. vagina*, sheath, + *Gr. itis*, inflammation] Inflammation of a tendon sheath. SYN: *tendosynovitis*.

TENS *transcutaneous electrical nerve stimulation*.

tense (tĕns) **1.** Tight, rigid. **2.** Anxious, under mental stress.

Tensilon test (tĕn'sĭ-lŏn") A test used in the diagnosis of myasthenia gravis (MG). A short-acting anticholinesterase drug, such as edrophonium chloride or neostigmine, is injected, and the patient is observed for improved muscular

strength. The patient is also observed after an injection of a placebo (e.g., saline). Improvement with the active drug, but not the placebo, is a strong indication of MG.

tensiometer (tĕn'sĕ-ŏm'ĕ-tĕr) [L. *tensio*, a stretching, + Gr. *metron*, measure] **1.** A device for determining the surface tension of liquids. **2.** A device used to measure the amount of force a muscle can produce. Also called *cable tensiometer*.

tension (tĕn'shŭn) [L. *tensio*, a stretching] **1.** Process or act of stretching; state of being strained or stretched. **2.** Pressure, force. **3.** Expansive force of a gas or vapor. **4.** Mental, emotional, or nervous strain.

arterial t. Tension resulting from the force exerted by the blood pressure on the walls of arteries.

arterial oxygen t. ABBR: PaO₂. The partial pressure of oxygen in the plasma of the arterial blood.

intraocular t. The pressure of the fluid within the eyeball. SEE: *tonometry*; *intraocular pressure*.

intravenous t. Force exerted by the blood pressure on the walls of a vein.

muscular t. Condition of a muscle in which fibers tend to shorten and thus perform work or liberate heat.

premenstrual t. Premenstrual dysphoric disorder.

surface t. Molecular property of film on surface of a liquid to resist rupture. The molecules are mutually attracted, and their cohesive state presents the smallest surface area to the surrounding medium. This accounts for the spherical shape assumed by fluids, such as drops of oil or water.

tissue t. The theoretical state of equilibrium between the cells of a tissue.

tension of gases The partial pressure of gas in a mixture. In clinical applications this is usually measured in millimeters of mercury (mm Hg) or kilopascals (kPa).

tensometer (tĕn-sŏm'ĕ-tĕr) [L. *tensio*, a stretching, + Gr. *metron*, measure] A device for testing the tensile strength of materials.

tensor (tĕn'sŏr) [L., a stretcher] Any muscle that makes a part tense.

tent (tĕnt) [O.Fr. *tente*, from L. *tenta*, stretched out] **1.** A plug of soft material used to maintain or dilate the opening to a sinus, canal, or body cavity. A variety of cylindrically shaped materials may be used. **2.** A portable covering or shelter composed of fabric.

cool mist t. An enclosure into which nebulized medications and mist are sprayed; it is used to treat croup, asthma, and other respiratory illnesses in children.

laminiaria t. A plug made of *Lami-*

naria digitata that is placed in the cervical canal of the uterus to dilate it.

medical t. A portable clinic erected to provide supportive care in outdoor settings, such as war zones, outdoor concerts, or marathon races.



oxygen t. A tent that can be placed over a bed for the continuous administration of oxygen and mist.

pleural t. In thoracoscopy or thoracic surgery, a mediastinal or subpleural blanket used to reinforce the suture line.

sponge t. A plug made of compressed sponge that is placed in the cervical canal to dilate it.

tentacle (tĕn'tă-k'l) A slender projection of invertebrates. It is used for prehension, tactile purposes, or feeding.

tentative (tĕn'tă-tĭv) [L. *tentativus*, feel, try] **1.** Rel. to a diagnosis subject to change because of insufficient data. **2.** Indecisive.

tentorial (tĕn-tŏ'rĕ-ăl) Pert. to a tentorium.

tentorial pressure cone Projection of a portion of the temporal lobe of the cerebrum through the incisure of the tentorium due to increased intracranial pressure.

tentorium (tĕn-tŏ'rĕ-ŭm) *pl.* **tentoria** [L., tent] A tentlike structure or part.

t. cerebelli The process of the dura mater between the cerebrum and cerebellum supporting the occipital lobes.

tenure (tĕn'yĕr) [L. *tenĕre*, to hold]

1. The holding of a property, place, or occupational assignment. **2.** The specification that an employee (typically someone in an academic setting) may hold a position permanently unless he or she behaves with gross negligence.

tepid (tĕp'id) [L. *tepidus*, lukewarm] Slightly warm; lukewarm.

ter- [L., thrice] Combining form meaning *three times*.

tera- A prefix used in the International System of Units (SI units) to indicate 10¹².

teras (tĕr'ăs) *pl.* **terata** [Gr.] A severely deformed fetus.

teratic (tĕr-ăt'ik) [Gr. *teratikos*, monstrous] Pert. to a severely malformed fetus.

teratism (tĕr'ă-tĭzm) [Gr. *teratismā*] An anomaly or structural abnormality either inherited or acquired.

acquired t. Abnormality resulting from a prenatal environmental influence.

atresic t. Teratism in which natural openings such as the mouth or anus fail to form.

caesmic t. Teratism in which a normal union of parts fails to occur (e.g., as in spina bifida or cleft palate).

ectogenic t. Condition in which parts are absent or defective.

ectopic t. Abnormality in which a part becomes displaced.
hypergenic t. Teratism in which a part is duplicated (e.g., polydactylism).
symphysic t. Teratism in which parts that are normally separate are fused.
terato- Combining form meaning *monster*.
teratoblastoma (tēr'ā-tō-blās-tō'mā) [Gr. *teratos*, monster, + *blastos*, germ, + *oma*, tumor] A tumor that contains embryonic material but that is not representative of all three germinal layers. SEE: *teratoma*.
teratocarcinoma (tēr'ā-tō-kār'si-nō'mā) [+ *karkinos*, cancer, + *oma*, tumor] A carcinoma that has developed from the epithelial cells of a teratoma.
teratogen (tēr-āt'ō-jěn) [+ *gennan*, to produce] Anything that adversely affects normal cellular development in the embryo or fetus. Certain chemicals, some therapeutic and illicit drugs, radiation, and intrauterine viral infections are known to adversely alter cellular development in the embryo or fetus. SEE: *table*; *mutagen*.
teratogenesis (tēr'ā-tō-gěn'ēs-sīs) [+ *genesis*, generation, birth] The development of abnormal structures in an embryo.
teratoid (tēr'ā-toyd) [Gr. *teratos*, monster, + *eidōs*, form, shape] Resembling a severely malformed fetus.
teratology (tēr-ā-tōl'ō-jē) [+ *logos*, word, reason] Branch of science dealing

with the study of congenital deformities and abnormal development. **teratologic**, *adj.*
teratoma (tēr-ā-tō'mā) [+ *oma*, tumor] A congenital tumor containing one or more of the three primary embryonic germ layers. Hair and teeth as well as endodermal elements may be present. SYN: *dermoid cyst*. SEE: *fetus in fetu*.
teratospermia (tēr'ā-tō-spēr'mē-ā) [+ *sperma*, seed] Malformed sperm in semen.
terbium (tēr'bē-üm) SYMB; Tb. A metal of the rare earths; atomic weight, 158.9254; atomic number, 65; specific gravity, 8.272.
terebrant (tēr'ē-brānt) Piercingly painful.
terebration (tēr'ē-brā'shūn) [L. *terebratio*] 1. Boring; trephination. 2. A boring pain.
teres (tē'rēz) [L., round] Round and smooth; cylindrical; used to describe certain muscles and ligaments.
tergal (tēr'gāl) [L. *tergum*, back] Concerning the back or dorsal surface.
ter in die (tēr in dē'ā) [L.] ABBR: t.i.d. Three times a day.
term [L. *terminus*, a boundary] 1. A limit or boundary. 2. A definite or limited period of duration such as the normal period of pregnancy, approx. nine calendar months or 38 to 42 weeks' gestation.
TERMA An abbreviation for the "total energy released to media," e.g., the amount of radiation to which a cancer is exposed during radiation therapy.

U.S. FDA Categories for Drugs by Teratogenic or Fetotoxic Potential*

Pregnancy Category	Description	Examples
A	Medications for which no harm has been demonstrated in well-designed studies of pregnant and lactating women.	Folic acid supplementation
B	Medications without known risk when used in human pregnancy or breastfeeding. Studies in laboratory animals have been performed with positive or negative results, but no demonstrable risk in pregnancy is yet known. Individual considerations of risk and benefit guide usage in patients.	Acyclovir, amoxicillin/clavulanate, fluoxetine, glyburide, ranitidine
C	Medications whose use in human pregnancy or breastfeeding has not been adequately studied; risk of usage cannot be excluded but has not been proven. Individual considerations of risk and benefit guide drug usage in patients.	Albuterol, hydrocodone, omeprazole, verapamil
D	Medications known to cause fetal harm when administered during pregnancy or harm to children during breastfeeding. In some specific settings the potential benefits of use may outweigh the risk.	Tetracycline antibiotics
X	Medications judged to be unsafe (contraindicated) in pregnancy. Evidence of risk has accrued from clinical trials or postmarketing surveillance.	Isotretinoin, thalidomide, warfarin

*All medication use during pregnancy should be carefully reviewed with health professionals experienced in reproductive pharmacology and patient care.

terminal (těr'mī-nāl) [L. *terminalis*]

1. Pert. to or placed at the end. 2. Final, last, ultimate. 3. Fatal.

terminal bars Minute bars of dense intercellular cement that occupy and close spaces between epithelial cells and bind them together.

terminal cancer Widespread or advanced cancer, from which recovery is not expected.

terminal duct lobular unit ABBR: TDLU. The blind ending of the lactiferous duct that contains the lobule and its duct. Most benign and malignant breast lesions arise here.

terminal extubation The sudden withdrawal of mechanical ventilation from critically ill patients who are not expected to survive without respiratory support. Although the physical process of switching a ventilator off and removing the tracheal tube are simple, there are serious ethical, familial, psychological, and religious considerations of terminal extubation.

In most jurisdictions terminal extubation is not allowed unless patients or surrogate decision makers with power of attorney have explicitly specified that, if care is futile and death imminent, they would want life-support measures withdrawn. If these conditions are met, the patient's family and the health care team may meet to discuss withdrawal of support. Negotiations are made for the timing of extubation, and the use of medications or other means to alleviate breathlessness, pain, suffering, and other conditions for withdrawal. Arrangements are made for the funeral and the advisability of or need for autopsy or organ donation. Time is set aside for the family and staff to prepare for the death and grieving process. Terminal extubation differs from terminal weaning in that the withdrawal of support is sudden. The patient may survive either method of withdrawal for minutes, hours, or occasionally, days.

terminal ganglia Ganglia of the parasympathetic division of the autonomic nervous system that are located in or close to their visceral effectors such as the heart or intestines.

terminal illness A final, fatal illness.

PATIENT CARE: The health care professional supports the patient and family by anticipating their loss and grief and helps the patient to deal with major concerns: pain and suffering, fear, hopelessness, dependency, disability, loss of self-esteem, and loss of pleasure. Hospice care is provided if desired and available. The patient receives caring comfort and help in adjusting to decreased quality of life to ensure that death occurs with dignity.

terminal infection Infection appearing in

the late stage of another disease; often fatal.

terminal weaning The gradual withdrawal of mechanical ventilation from a patient who is not expected to survive without respiratory support. It is similar to terminal extubation except that the withdrawal of support occurs incrementally, often over a span of several hours or days. At predetermined intervals the ventilatory rate is decreased and/or the fraction of inspired oxygen is decreased. The process continues until the patient is no longer receiving ventilatory support or death has occurred.

The ethical considerations that guide terminal extubation apply equally to terminal weaning. Terminal weaning takes longer than extubation: this gives the patient, his family, and professional staff more time to reflect on his life and adjust to his or her death.

termination [L. *terminatio*, limiting]

1. The distal end of a part. 2. The cessation of anything.

Terminologia Anatomica (těr'mī-nā-lō'jē-ā ān-ā-tōm'ī-kā) [NL] ABBR: TA. The current official nomenclature for human anatomy. It was developed by the Federative Committee on Anatomical Terminology (FCAT) and the 56 Member Associations of the International Federation of Associations of Anatomists (IFAA) and was released in 1998, replacing the *Nomina Anatomica*, the earlier standard. SEE: *Basle Nomina Anatomica*; *Nomina Anatomica*.

terminology (těr-mī-nōl'ō-jē) [L. *terminus*, a boundary, + Gr. *logos*, word] The vocabulary used in specific arts, sciences, technical endeavors, trades, or professions. SEE: *nomenclature*.

terminus (těr'mī-nūs) [L.] An ending; a boundary.

Ternidens deminutus (těr'nī-dēns dā-mī-nōo'tūs, -dēnz, dē-) [NL "lessened three-toothed"] A nematode that is an intestinal parasite in primates.

terpene (těr'pēn) Any member of the family of hydrocarbons of the formula $C_{10}H_{16}$.

terra (těr'ā) [L.] Earth; soil.

terror [L. *terrere*, to frighten] Great fear.

Terry's nails An abnormal finding in the fingernails of patient with cirrhosis, right-side heart failure, or type 2 diabetes mellitus, in which the proximal nail bed turns white.

Terson's syndrome Subarachnoid hemorrhage combined with subhyaloid hemorrhage.

tertian (těr'shūn) [L. *tertianus*, the third] Occurring every third day; usually pert. to a form of malarial fever.

tertiary (těr'shē-ār-ē) [L. *tertiarius*] Third in order or stage.

tertiary alcohol Alcohol containing the trivalent group $\equiv\text{COH}$.

tertiary care A level of medical care avail-

able only in large medical care institutions. It includes techniques and methods of therapy and diagnosis involving equipment and personnel not economically feasible in a smaller institution because of underutilization. SEE: *primary care; care, secondary medical.*

tertiary gain The prolongation of an illness or the feigning of disability in order to benefit someone or some agency other than oneself.

tertiary syphilis The third and most advanced stage of syphilis. SEE: under *syphilis.*

tertigravida (têr'shê-grāv'y-dā) [*t* + *gravida*, pregnant] A woman pregnant for the third time.

tertipara (têr-shîp'ā-rā) [L. *tertius*, third, + *parere*, to bring forth] A woman who has had three pregnancies terminating after the 20th week of gestation or has produced three infants weighing at least 500 g, regardless of their viability.

tesla (tês'lā) [Nikola Tesla, U.S. physicist, 1856–1943] ABBR: T. In the SI system, a measure of magnetic strength; 1 tesla equals 1 weber per square meter.

tessellated (tês'ê-lā'têd) [L. *tessella*, a square] Composed of little squares.

test [L. *testum*, earthen vessel] **1.** An examination. **2.** A method to determine the presence or nature of a substance or the presence of a disease. **3.** A chemical reaction. **4.** A reagent or substance used in making a test. Particular tests are listed under the first word. SEE: e.g., *creatinine clearance test; oral glucose tolerance test; tuberculin skin test.*

testa (tês'tā) [L.] A shell.

testalgia (tês-tāl'jê-ā) [L. *testis*, testicle, + Gr. *algos*, pain] Orchialgia.

testectomy (tês-têk'tō-mê) [*t* + Gr. *ektome*, excision] **1.** Removal of a testicle. SYN: *castration.* **2.** Removal of a corpus quadrigeminum.

testes (tês'tês) [L.] Pl. of testis.

testicle (tês'tî-kl) [L. *testiculus*, a little testis] Testis.

self-examination of t. A technique that enables a man to detect changes in the size and shape of his testicles and evaluate any tenderness. Each testicle is examined separately and in comparison with the other. The best time to perform the test is just after a warm bath or shower, when the scrotal tissue is relaxed. The man places his thumbs on the anterior surface of the testicle, supporting it with the index and middle fingers of both hands. Each testicle is gently rolled between the fingers and thumbs and carefully felt for lumps, hardness, or thickening, esp. as compared with the other testicle. The epididymis is a soft, slightly tender, tube-like body behind the testicle. Abnormal

findings should be reported immediately to a health care professional.

testicular (tês-tîk'ū-lār) Rel. to a testicle.

testicular cancer, germ-cell A group of malignant diseases of the testicles that include choriocarcinomas, embryonal carcinomas, seminomas, spermatocytic seminomas, sex cord tumors, teratomas, and tumors with mixtures of several different malignant cell types.

testis (tês'tis) *pl. testes* [L.] The male gonad; testicle. It is one of two reproductive glands located in the scrotum that produce the male reproductive cells (spermatozoa) and the male hormones testosterone and inhibin. SEE: *il-lus.*

ANATOMY: Each is an ovoid body about 4 cm long and 2 to 2.5 cm in width and thickness, enclosed within a dense inelastic fibrous tunica albuginea. The testis is divided into numerous lobules separated by septa, each lobule containing one to three seminiferous tubules within which the spermatozoa are produced by meiosis. The lobules lead to straight ducts that join a plexus, the rete testis, from which 15 to 20 efferent ducts lead to the epididymis. The epididymis leads to the ductus deferens, through which sperm are conveyed to the urethra. Between the seminiferous tubules are the interstitial cells (cells of Leydig), which secrete testosterone. Within the tubules are sustentacular cells, which secrete inhibin. The testes are suspended from the body by the spermatic cord, a structure that extends from the inguinal ring to the testis and contains the ductus deferens, testicular vessels (spermatic artery, vein, lymph vessels), and nerves.

DISORDERS: Hyperfunction (hypergonadism) may cause early maturity such as large sexual organs with early functional activity and increased growth of hair. Hypofunction (hypogonadism) is indicated by undeveloped testes, absence of body hair, high-pitched voice, sterility, smooth skin, loss of sexual desire, low metabolism, and eunuchoid or eunuch body type.

descent of t. The migration of the testis from the abdominal cavity to the scrotum during fetal development.

displaced t. A testis located abnormally within the inguinal canal or pelvis.

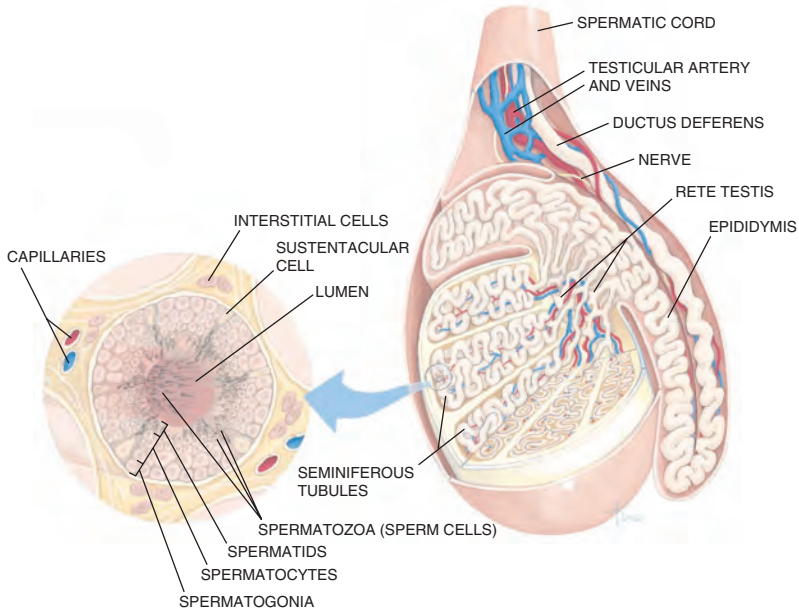
femoral t. An inguinal testis near or superior to the femoral ring.

inverted t. A testis reversed in the scrotum so that the epididymis attaches to the anterior instead of the posterior part of the gland.

perineal t. A testis located in the perineal region outside the scrotum.

undescended t. Cryptorchidism.

testis compression reflex Contraction of



TESTIS

Midsagittal section of testis and epididymis (right), cross-section through seminiferous tubule (left)

abdominal muscles following moderate compression of a testis.

testitis (tēs-tī'tīs) [L. *testis*, testicle, + Gr. *itis*, inflammation] Orchitis.

test meal A meal usually small and of definite quality and composition, given to aid in chemical analysis of the stomach contents or radiographical examination of the stomach.

testopathy (tēs-tōp'ă-thē) [ʹ + Gr. *pathos*, disease, suffering] Any disease of the testes.

testosterone (tēs-tōs'tēr-ōn) [L. *testis*, testicle] A steroid sex hormone that is responsible for the growth and development of masculine characteristics. It directly influences the maturation of male sexual organs, development of sperm within the testes, sexual drive, erectile function of the penis, and male secondary sexual characteristics (facial hair, thickened vocal cords, and pronounced musculature). In addition, it is linked to aggressive and predatory behaviors.

Testosterone is produced in the Leydig cells of the testes. It has also been synthesized for replacement therapy in men with sex hormone deficiencies (e.g., men with hypogonadal conditions such as Klinefelter's syndrome).

Testosterone adversely affects diseases of the prostate gland by sponsoring the growth of both benign hyperplasia of the gland and carcinomas of the

prostate. Both of these conditions may be treated with antiandrogenic therapies. Predatory sexual behaviors also depend on testosterone and can be treated with interventions that block the effects of the hormone.

testotoxicosis (tēs'tō-tōk'sī-kō'sīs) [ʹ + ʹ] Precocious puberty occurring in boys due to increased secretion of the male hormone, testosterone. Affected boys prematurely develop adult secondary sexual characteristics, increased height and muscle mass, and, in some instances, aggressive behavior.

test-retest reliability The degree to which a research tool or laboratory assay obtains similar results when it is used repetitively to analyze a single sample or subject cohort.

test tube A glass tube closed at one end. It is used in laboratory sciences to hold chemicals and other material.

test tube baby A baby born to a mother whose ovum was removed, fertilized outside her body, and then implanted in her uterus. The term in colloquial. SEE: *gamete intrafallopian transfer*; *in vitro fertilization*.

test type Letters or figures of various sizes printed on paper. These are used in testing visual acuity.

tetanic (tē-tān'ik) [Gr. *tetanikos*] **1.** Pert. to or producing tetanus. **2.** Any agent producing tetanic spasms.

tetanic convulsion A tonic convulsion with constant muscular contraction.

tetaniform (tē-tān'ī-form) [Gr. *tetanos*, stretched, + L. *forma*, shape] Resembling tetanus.

tetanism (tēt'ā-nīzm) [ʹ + *-ismos*, condition] Persistent muscular hypertonicity resembling tetanus, esp. in infants.

tetanization (tēt'ā-nī-zā'shūn) [Gr. *tetanos*, stretched] 1. Production of tetanus or tetanic spasms by induction of the disease. 2. Induction of tetanic contractions in a muscle by electrical stimuli.

tetanize (tēt'ā-nīz) To induce tonic muscular spasms.

tetanode (tēt'ā-nōd) [ʹ + *eidōs*, form, shape] In tetany, the quiet period between spasms.

tetanolysin (tēt'ā-nōl'ī-sīn) A hemolytic component of the toxin produced by *Clostridium tetani*, causative organism of tetanus. It does not cause the clinical signs and symptoms of this disease.

tetanomotor (tēt'ān-ō-mō'tor) [ʹ + L. *motor*, a mover] Appliance for the production of tetanic motor spasms mechanically by electrical stimulation of a nerve.

tetanolphil, tetanophilic (tēt'ān-ō-fīl, tēt'ān-ō-fīl'īk) [ʹ + *philein*, to love] Possessing an affinity for tetanus toxin.

tetanospasmin (tēt'ā-nō-spās'mīn) [ʹ + *spasmos*, a convulsion] A component of the toxin produced by *Clostridium tetani* that causes tetanus.

tetanus (tēt'ā-nūs) [Gr. *tetanos*, stretched] An acute, life-threatening illness caused by a toxin (tetanospasmin) produced in infected wounds by the bacillus *Clostridium tetani*. The disease is marked by extreme muscular rigidity, violent muscle spasms, and often, respiratory and autonomic failure. Because of proactive immunization programs in the U.S., the disease affects only 50 patients annually. In nations without effective immunization programs, the disease is exceptionally common and usually deadly. SEE: *Clostridium tetani*; *lockjaw*; *tetanolysin*; *tetanospasmin*; *trismus*.

ETIOLOGY: The responsible bacteria is most likely to proliferate in "tetanus-prone" wounds (e.g., those contaminated by soil, animal excret or debris); puncture, avulsion, or bite wounds; burns; frostbite; necrotic tissues; gangrene; injection site infections; umbilical stump infections; or uterine infections. It is less likely to infect shallow wounds with cleanly cut edges. The spores of *C. tetani* germinate in the anaerobic depths of tetanus-prone injuries, producing bacteria that release tetanospasmin. This neurotoxin is carried to the central nervous system, where it blocks impulses that modulate muscle contraction. The incubation period varies from 1 or 2 days to a few months. The

shorter the incubation, the more deadly the illness is likely to be.

SYMPTOMS: Unopposed muscular contraction leads to rigidity and spasticity, esp. of the muscles of the jaw, neck, back, abdomen, and esophagus. Lockjaw (also called trismus) is a hallmark of the disease, as are violent arching of the back muscles (opisthotonus), and a rigid, fixed smile (risus sardonius). Intense painful muscle spasms may be triggered by noises, bright lights, attempts to swallow or eat, or other stimuli. In addition, the patient may suffer profuse sweating, low-grade fever, and wild fluctuations in pulse, blood pressure, and respirations. Diagnosis usually is based on a history of trauma with no previous tetanus immunization and on the clinical picture presented.

TREATMENT: Early débridement may lessen the burden of toxin-producing bacteria in the wound. Muscle-relaxing drugs, like baclofen and diazepam, and neuromuscular blocking agents, such as vecuronium, reduce muscle spasm. Beta blockers like propranolol decrease the incidence of tachycardias and hypertension. Advanced airway and ventilatory support are best provided in an intensive care unit. Tetanus immune globulin (TIG) is given to provide passive immunity against circulating tetanus toxin. High doses of penicillin G (or alternatives for the patient with penicillin allergy) are administered intravenously to kill clostridia. Wound debridement and/or surgical exploration may be required to remove the source of the toxin.

PATIENT CARE: The patient is kept in a quiet, dimly lit room, where stimulation is minimized. A patent airway is maintained, oxygen administered to maintain oxygen saturation, and suctioning carried out gently with prehyperventilation and posthyperventilation. Oral feedings are withheld to limit esophageal spasms and the aspiration of nutrients. Intravenous access is established for administration of emergency medications, and hydration is provided. Enteral or parenteral nutrition may be needed to meet the patient's increased metabolic needs. A Foley catheter is placed to prevent urinary retention. Cardiac rhythm and vital signs are monitored, and fluid and electrolyte balance managed.



Recovery from tetanus does not guarantee natural immunity. Therefore, the patient should begin an immunization series before leaving the hospital.

PREVENTION: Initial immunization should begin in infancy. The toxoid

should be given in three doses at 4- to 8-week intervals beginning when the infant is 6 to 8 weeks old, and a fourth dose 6 to 12 months thereafter. A fifth dose is usually administered at 4 to 6 years of age before school entry. Tetanus toxoid is commonly given in combination with diphtheria toxoid and acellular pertussis vaccine. Active immunization with adsorbed tetanus toxoid provides protection for at least 10 years. Although it has been the practice to give a tetanus booster every 10 years, current advice is to give a single booster dose at age 50 if the individual received all 5 doses as a child. Tetanus booster vaccination should be given to patients with tetanus-prone wounds who have not received the toxoid in the past 3 years.

artificial t. Tetanus produced by a drug such as strychnine.

ascending t. Tetanus in which muscle spasms occur first in the lower part of the body and then spread upward, finally involving muscles of the head and neck.

cephalic t. A form of tetanus due to a wound of the head, esp. one near the eyebrow. It is marked by trismus, facial paralysis on one side, and pronounced dysphagia. It resembles rabies and is often fatal. SYN: *hydrophobic tetanus*.

chronic t. 1. A latent infection in a healed wound, reactivated on opening the wound. 2. A form of tetanus in which the onset and progress of the disease are slower and more prolonged and the symptoms are less severe.

cryptogenic t. Tetanus in which the site of entry of the organism is not known.

descending t. Tetanus in which muscle spasms occur first in the head and neck and later are manifested in other muscles of the body.

t. dorsalis Tetanus in which the body is bent backward.

extensor t. Tetanus that affects the extensor muscles.

idiopathic t. Tetanus that occurs without any visible lesion.

imitative t. A conversion disorder that simulates tetanus.

t. infantum Tetanus neonatorum.

t. lateralis A form of tetanus in which the body is bent sideways.

local t. Tetanus marked by spasticity of a group of muscles near the wound. Trismus, tonic contraction of jaw muscles, is usually absent.

t. neonatorum Tetanus of very young infants, usually due to infection of the navel caused by using nonsterile technique in ligating the umbilical cord.

t. paradoxus Cephalic tetanus combined with paralysis of the facial or other cranial nerve.

postoperative t. Tetanus that fol-

lows an operation as a result of contamination of the surgical incision.

puerperal t. Tetanus that occurs following childbirth.

toxic t. Tetanus produced by overdose of strychnine.

tetanus antitoxin Protective antibody against *Clostridium tetani*, the bacterium that causes tetanus. The antibody develops after inoculation with tetanus toxin or toxoid or after infection with *C. tetani*.

tetanus immune globulin A solution containing antibodies to *Clostridium tetani*. It is obtained from human blood and used to provide passive immunity to prevent and treat tetanus infection. The average prophylactic dose for children and adults is 250 to 500 units injected intramuscularly.

tetanus toxoid Tetanus toxin modified so that its toxicity is greatly reduced, while retaining its capacity to promote active immunity.

tetany (tēt'ă-nē) [Gr. *tetanos*, stretched] Intermittent tonic muscular spasms that typically involve the arms or legs.

SYMPTOMS: Spasms may be accompanied by numbness, tingling, loss of function, and pain in affected muscle groups.

SIGNS: Characteristic diagnostic signs are Trousseau's sign, Chvostek's sign, and the peroneal sign. Prolongation of the isoelectric phase of the S-T segment of the electrocardiogram may be present with tetany that is caused by a low serum calcium level. SEE: *Chvostek's sign*; *hyperventilation*; *Trousseau's sign*.

ETIOLOGY: It may occur in infants, esp. newborns in intensive care and those who have had perinatal asphyxia. Other causative factors include hypocalcemia (e.g., in hypoparathyroidism or after parathyroid surgery), hypomagnesemia, hypokalemia, alkalosis (e.g., in hyperventilation), infection with *Clostridium tetani*, and vitamin D deficiency.

alkalotic t. Tetany resulting from respiratory alkalosis, as in hyperventilation, or from metabolic alkalosis induced by excessive intake of sodium bicarbonate or excessive loss of chlorides by vomiting, gastric lavage, or suction.

duration t. Continuous contraction, esp. in degenerated muscles, in response to a continuous electric current.

hyperventilation t. Tetany caused by continued hyperventilation.

hypocalcemic t. Tetany due to low serum calcium and high serum phosphate levels. This may be due to lack of vitamin D, factors that interfere with calcium absorption such as steatorrhea or infantile diarrhea, or defective renal excretion of phosphorus.

latent t. Tetany that requires me-

chemical or electrical stimulation of nerves to show characteristic signs of excitability; the opposition of manifest tetany.

manifest t. Tetany in which the characteristic symptoms such as carpopedal spasm, laryngospasm, and convulsions are present; the opposite of latent tetany.

parathyroid t. Tetany resulting from excision of the parathyroid glands or from hyposecretion of the parathyroid glands as a result of disease or disorders of the glands. SEE: *hypoparathyroidism*.

rachitic t. Tetany due to hypocalcemia accompanying vitamin D deficiency.

thyreoprival t. Tetany resulting from removal of the thyroid gland, accompanied by inadvertent removal of the parathyroid glands.

tetartanopia, tetartanopsia (tēt'ār-tān-ō'pē-ā, -ōp'sē-ā) [" + *opsis*, vision] Symmetrical blindness in the same quadrant of each visual field. SYN: *quadrantanopsia*.

tethering Binding or attachment, e.g., of white blood cells as they migrate through tissues.

tetra-, tetr- Combining forms meaning *four*.

tetrabasic (tēt'rā-bā'sīk) [Gr. *tetras*, four, + *basis*, base] Having four replaceable hydrogen atoms, said of an acid or acid salt.

tetrabromofluorescein (tēt'rā-brōm'ō-flū-or-ēs'in, -ē-in) A dye, $C_{20}H_8Br_4O_5$, obtained from the action of bromine on fluorescein, used as a stain in microscopy. SYN: *eosin*.

tetrachlorethylene (tēt'rā-klor-ēth'ī-lēn) A clear, colorless liquid with a characteristic odor, used as a solvent.

tetrachloride (tēt'rā-klō'rīd) A radical with four atoms of chlorine.

tetracid (tē-trās'id) [" + L. *acidus*, sour] 1. Able to react with four molecules of a monoacid or two of a diacid to form a salt or ester, said of a base or alcohol. This term is disapproved by some authorities. 2. Having four hydrogen atoms replaceable by basic atoms or radicals, said of acids.

tetracrotic (tēt'rā-krōt'īk) [" + *krotos*, beat] Noting a pulse or pulse tracing with four upward strokes in the descending limb of the wave.

tetracycline (tēt'rā-sī'klēn) A bacteriostatic antibiotic used, for example, to treat acne, chlamydia, and atypical pneumonia.

tetrad (tēt'rād) [Gr. *tetras*, four] 1. A group of four things with something in common. 2. An element having a valence or combining power of four. 3. A group of four parts, said of cells produced by division in two planes. 4. The group of four chromosomes in prophase I of mitosis; the pairs of homologous chromosomes, each having two chromatids, that line up together on the spindle fibers. SEE: *meiosis* for illud.

tetradactyly (tēt'rā-dāk'tī-lē) [" + *daktylos*, finger] Having four digits on a hand or foot.

tetraethylphosphosphate (tēt-rā-ēth'īl-pī-rō-fōs'fat) ABBR: TEPP. A powerful cholinesterase inhibitor used as an insecticide. It is poisonous to humans; the antidote is atropine.

tetrahydrocannabinol (tēt'rā-hī'drō-kā-nāb'ī-nōl) ABBR: THC. A chemical, $C_{21}H_{30}O_2$, that is the principal active component in cannabis, or marijuana.

tetraiodothyronine (tēt'rā-ī'ō-dō-thī'rō-nēn) Thyroxine.

tetralogy (tē-trāl'ō-jē) The combination of four symptoms or elements.

tetralogy of Fallot (tē-trāl'ā-jē, fāl-ō') [Etienne L. A. Fallot, Fr. physician, 1850–1911] A congenital malformation of the heart and great vessels marked by a defect in the interventricular septum, pulmonary artery stenosis, dextroposition of the aorta, and right ventricular hypertrophy. The defect can be repaired surgically.

tetramastia, tetramazia (tēt'rā-mās'tē-ā, tēt'rā-mā-zē-ā) [" + *mastos*, *mazos*, breast] A condition characterized by the presence of four breasts.

tetramastigote (tēt'rā-mās'tī-gōt) [" + *mastix*, lash] Having four flagella.

tetrameric, tetramerous (tēt'rā-mēr'īk, tēt-rām'ēr-ūs) [" + *meros*, a part] Having four parts.

tetranopsia (tēt'rā-nōp'sē-ā) [" + *an-*, not, + *opsis*, vision] Quadrantanopia.

tetraparesis (tēt'rā-pār'ēs-īs) [" + *parienai*, to let fall] Muscular weakness of all four extremities.

tetrapeptide (tēt'rā-pēp'tīd) A peptide that yields four amino acids when it is hydrolyzed.

tetraplegia (tēt'rā-plē'jē-ā) [" + *plege*, a stroke] Quadriplegia.

tetraploid (tēt'rā-ploid) [" + *ploos*, a fold, + *eidos*, form, shape] 1. Concerning tetraploidy, the state of having twice the diploid number of chromosomes. 2. Having four sets of chromosomes.

tetrasomic (tēt-rā-sō'mīk) [" + *soma*, body] Possessing four instead of the usual pair of chromosomes in an otherwise diploid cell; that is, having a chromosome number of $2n + 2$.

tetraster (tēt-rās'tēr) [" + *aster*, star] A mitotic figure in which there are four



Tetracyclines should not be given to pregnant women or young children, because they damage developing teeth and bones.

asters instead of the usual two; occurring abnormally in mitosis.

tetravalent (tět'rá-vā'lěnt) Having a valence or combining power of four. SYN: *quadrivalent*.

tetrodotoxin (tět'rō-dō-tōks'ín) A powerful neurotoxin that blocks the movement of sodium ions through voltage-gated sodium channels in neuronal cell membranes. It prevents depolarization of nerves and the propagation of electrical impulses from one nerve to another. Most cases of human intoxication result from consumption of the fugu, a puffer fish prepared as a delicacy.

tetroxide (tē-trōk'síd) A chemical compound containing four oxygen atoms.

textarin (těks'tār-in) [Fm. (*Pseudonaja*) *textilis*, a species name] A serine proteinase that activates thrombin and causes bleeding. It is present in the venom of the Australian eastern brown snake. Purified textarin is used in laboratory assays to determine the presence of lupus anticoagulants.

textiform (těks'ti-form) [L. *textum*, something woven, + *forma*, shape] Resembling a network, web, or mesh.

textoblastic (těks'tō-blās'tík) [L. *textus*, tissue, + Gr. *blastos*, germ] Forming adult tissue; regenerative.

textural (těks'tū-rāl) [L. *textura*, weaving] Concerning the texture or constitution of a tissue.

texture (těks'tūr) [L. *textura*] The organization of a tissue or structure.

textus (těks'tūs) [L.] Tissue.

Th Symbol for the element thorium.

thalamic (thāl-ām'ík) [Gr. *thalamos*, inner chamber] Pert. to the thalamus.

thalamic pain syndrome Pain affecting one half of the body (alternately, anesthesia affecting half the body) that results from a stroke or other injury to the thalamus.

thalamo- Combining form meaning *thalamus*.

thalamocortical (thāl'ām-ō-kor'ti-kāl) [" + L. *cortex*, rind] Pert. to the thalamus and the cerebral cortex.

thalamotomy (thāl-ā-mōt'ō-mē) [" + *to*me, incision] Destruction of a portion of the thalamus—used to treat intractable pain or movement disorders such as Parkinson's disease.

thalamus (thāl'ā-mūs) *pl.* **thalami** [L.] The largest subdivision of the diencephalon on either side, consisting chiefly of an ovoid gray nuclear mass in the lateral wall of the third ventricle. Each consists of a number of nuclei (anterior, medial, lateral, and ventral), the medial and lateral geniculate bodies, and the pulvinar.

FUNCTION: All sensory stimuli, with the exception of olfactory, are received by the thalamus. These are associated, integrated, and then relayed through thalamocortical radiations to specific

cortical areas. Impulses are also received from the cortex, hypothalamus, and corpus striatum and relayed to visceral and somatic effectors. The thalamus is also the center for appreciation of primitive uncritical sensations of pain, crude touch, and temperature.

thalassemia (thāl-ā-sē'mē-ā) [Gr. *thalassa*, sea, + *haima*, blood] A group of hereditary anemias occurring in populations bordering the Mediterranean and in Southeast Asia. Anemia is produced by either a defective production rate of the alpha or beta hemoglobin polypeptide chain or a decreased synthesis of the beta chain. Heterozygotes are usually asymptomatic. The severity in homozygotes varies according to the complexity of the inheritance pattern, but thalassemia may be fatal. SEE: *anemia*, *sickle cell*.

t. intermedia A chronic hemolytic anemia caused by deficient alpha chain synthesis. It is also called *hemoglobin H disease*.

t. major The homozygous form of deficient beta chain synthesis, which presents during childhood. This inherited blood disorder most commonly affects people of Mediterranean, Middle Eastern, Indian, Asian, and Southeast Asian descent. Malaria is endemic in these areas, and the thalassemia trait (carrier status that is generally asymptomatic) may provide protection against malaria. When both parents have the trait and pass it on to a child (25% chance in each pregnancy), the child develops the disorder. The different forms of thalassemia vary in severity, but each affects the body's ability to produce a specific type of hemoglobin. The most severe form is B thalassemia major (Cooley's anemia), which prevents or greatly reduces the body's ability to produce "adult" hemoglobin (HbA). Clinically thalassemia is characterized by fatigue, splenomegaly, severe anemia, enlargement of the heart, mild jaundice, leg ulcers, and cholelithiasis. When untreated, bone marrow expands as the body attempts to increase blood cell formation, causes thickening of the cranial bones, and increases cheekbone eminences.

PATIENT CARE: The only cure for B thalassemia major is a bone marrow transplant from a matched sibling. The parents and siblings of a child with thalassemia may undergo human leukocyte antigen testing to identify a potential bone marrow donor. Generally patients under age 15 who have no liver disease and are well chelated have the highest success rates from bone marrow transplant. Without a match, treatment involves transfusions to restore hemoglobin levels and chelation therapy to remove excess transfused iron from the

body. Parents are taught to prepare chelation at home for their affected children, select and rotate subcutaneous administration sites, and recognize adverse drug reactions and signs of infection. Complications of chelation therapy include swelling and itching at the site of administration, blurred vision, and high-frequency hearing loss, sometimes accompanied by tinnitus. Young children may develop knock knees (genu valgus) as other metals are removed by the therapy. The child thus requires annual hearing and vision examinations and long-bone x-rays to screen for these problems. When a problem is identified, the drug is discontinued until the adverse reaction resolves and is later restarted at a lower dose. Motivation for this arduous therapy is difficult, and an associated psychosocial problem may be the need for a "holiday" from treatment, esp. among adolescents and young adults. The primary health care provider monitors blood ferritin levels to assess compliance with therapy. Patients and their families require ongoing support and education. SYN: *Coolley's anemia*.

t. minor A mild disease produced by heterozygosity for either beta or alpha chain. It may be completely asymptomatic. It is usually revealed by chance or as a result of study of the family of an individual having thalassemia major. The prognosis is excellent.

thalassophobia (thäl-äs"ō-fō'bē-ä) [Gr. *thalassa*, sea, + *phobos*, fear] An abnormal fear of the sea.

thalassotherapy (thäl-äs"sō-thēr'ä-pē) [" + *therapeia*, treatment] Treatment of disease by living at the seaside, bathing in the sea, taking sea voyages, or consuming or being wrapped in seaweed.

thalidomide (thä-lid'ō-mid) A sedative/hypnotic drug that was removed from the market when it was discovered to be the cause of severe birth defects (malformations of the limbs of exposed fetuses). It has been found to be useful in treating erythema nodosum leprosum, multiple myeloma, Kaposi's sarcoma, and several other cancers, and skin and immunological diseases. SEE: *phocomelia*.



This drug should not be administered to women of childbearing age.

thallium (thäl'ē-üm) [Gr. *thallos*, a young shoot] SYMB: Tl. A metallic element. Atomic weight, 204.37; atomic number, 81; specific gravity, 11.85. Its salts may be poisonous in overdose; its radioisotope is used to assess myocardial perfusion and viability.

t. 201 A radionuclide used to diagnose ischemic heart disease. When in-

jected at the peak of exercise during a graded exercise tolerance test, it circulates to the myocardium. Images of the heart can then be obtained to aid in the diagnosis of impaired coronary blood flow or prior myocardial infarction. SEE: *exercise tolerance test; redistribution*.

t. sulfate A chemical used as a rodenticide. It is also toxic to humans.

thanato- Combining form meaning *death*.

thanatognomonic (thän"ät-ög-nō-mōn'ik) [" + *gnomonikos*, knowing] Indicative of the approach of death.

thanatology (thän"ä-töl'ō-jē) [Gr. *thanatos*, death, + *logos*, word, reason] The study of death.

thanomania (thän"ä-tō-mā-nē-ä) [" + *mania*, madness] Homicidal or suicidal mania.

thanatophoric dysplasia ABBR: TD. A frequently lethal form of osteochondrodysplasia in which abnormalities of bone and cartilage development are accompanied by underdevelopment of the lungs. It is detectable in utero with prenatal ultrasound.

Thayer-Martin medium (thä'ēr-mär'tin) A special medium used for growing the causative organism of gonorrhea, *Neisseria gonorrhoeae*.

theater sign Pain in the anterior knee that is felt after prolonged sitting, a symptom sometimes reported by patients with patellofemoral pain syndrome.

thebaine (thē-bā'in) An alkaloid present in opiates and poppy seeds.

theca (thē'kā) *pl. thecae* [Gr. *theke*, sheath] A sheath or investing membrane.

thecal (thē'käl) [Gr. *theke*, sheath] Pert. to a sheath.

thecitis (thē-sī'tis) [" + *itis*, inflammation] Inflammation of the sheath of a tendon.

theco- Combining form meaning *sheath, case, receptacle*.

thecodont (thē'kō-dōnt) [Gr. *theke*, sheath, + *odous*, tooth] Having teeth that are inserted in sockets.

thecoma (thē-kō'mä) [" + *oma*, tumor] A spindle-cell tumor of the ovary often occurring during or after menopause. It is usually benign but may present with elevated serum tumor markers, adhesions to neighboring structures, or ascites, all of which may initially suggest prior to its removal that the tumor is malignant.

thecomatosis (thē'kō-mä-tō'sis) [" + " + *osis*, condition] Increased connective tissue in the ovary.

thel-, thelo- Combining forms meaning *nipple*.

thelalgia (thē-läl'jē-ä) [Gr. *thele*, nipple, + *algos*, pain] Pain in the nipples.

thelarche (thē-lär'kē) [" + *arche*, be-

ginning] The beginning of breast development, a milestone that typically occurs by about age 13 in the U.S. SEE: *pubarche*; *semenarche*.

Thelazia (thē-lā-zē-ā) [Gr. *thelazo*, to suck] A genus of nematodes that inhabit the conjunctival sac and lacrimal ducts of various species of vertebrates. Occasionally species of *Thelazia* are found in humans.

thelaziasis (thē-lā-zī-ā-sīs) [ʹ + *-iasis*, condition] Infestation by worms of the genus *Thelazia*.

theloplasty (thē-lē-plās-tē) [Gr. *thele*, nipple, + *plassein*, to form] Plastic surgery of the nipple. SYN: *mammilloplasty*.

thelitis (thē-lī-tīs) [ʹ + *itis*, inflammation] Inflammation of the nipples. SYN: *acromastitis*.

thelium (thē-lē-ūm) *pl.* **thelia** [L.] **1.** A papilla. **2.** A nipple. **3.** A cellular layer.

thelorrhagia (thē-lō-rā-jē-ā) [ʹ + *rhegynnai*, to burst forth] Bleeding from a nipple. This finding is sometimes caused by an underlying breast cancer.

thematic apperception test A projective test in which the subject is shown life situations in pictures that could be interpreted in several ways. The subject is asked to provide a story of what the picture represents. The results may provide insights into the subject's personality.

thenad (thē-nād) [Gr. *thenar*, palm, + L. *ad*, toward] Toward the palm or the thenar eminence.

thenal (thē-nāl) [Gr. *thenar*, palm] Pert. to the palm or thenar eminence.

thenar (thē-nār) [Gr. *thenar*, palm] **1.** The palm of the hand or sole of the foot. **2.** A fleshy eminence at the base of the thumb. **3.** Concerning the palm.

thenar cleft A fascial cleft of the palm overlying the volar surface of the adductor pollicis muscle.

thenar fascia A thin membrane covering the short muscles of the thumb.

theobromine (thē-ō-brō-mēn) [Gr. *theos*, god, + *broma*, food] A white powder obtained from *Theobroma cacao*, the plant from which chocolate is obtained. It dilates blood vessels in the heart and peripherally. It is used as a mild stimulant and as a diuretic.

theomania (thē-ō-mā-nē-ā) [Gr. *theos*, god, + *mania*, madness] Religious insanity; esp. that in which the patient thinks he or she is a deity or has divine inspiration.

theophylline (thē-ō-fī-lēn, -īn) [L. *thea*, tea, + Gr. *phyllon*, plant] A white crystalline powder used as an oral agent for reactive airway diseases such as asthma. The drug has a narrow therapeutic index, and toxicity to this agent, marked by gastrointestinal upset, tremor, cardiac arrhythmias, and other complications, is common in clinical

practice. Other drugs for reactive airway diseases, such as inhaled beta-agonists and inhaled steroids, are often prescribed instead of theophylline to avoid its toxicities. SEE: *aminophylline*. **theophylline poisoning** SEE: under *poisoning*.

theorem (thē-ō-rēm) [Gr. *theoremata*, principle arrived at by speculation] A proposition that can be proved by use of logic, or by argument, from information previously accepted as being valid.

Bayes' t. SEE: *Bayes' theorem*.

theory (thē-ō-rē) [Gr. *theoria*, speculation as opposed to practice] A statement that best explains all the available evidence on a given topic. If evidence that contradicts the theory becomes available, the theory must be abandoned, modified, or changed to incorporate it. When a theory becomes generally accepted and firmly established, it may be called a doctrine or principle.

activity t. A social theory of aging that asserts that the more active older persons are, the higher their life satisfaction and morale. According to this theory, individuals who are aging successfully cultivate substitutes for former societal roles that they may have had to relinquish.

t. of aging Any coherent set of concepts that explains the aging process at the cellular, biological, psychological, and sociological levels.

atomic t. **1.** The theory that all matter is composed of atoms. **2.** Theories pert. to the structure, properties, and behavior of the atom.

clonal selection t. of immunity The theory that precursor cell lines for lymphocytes are made up of innumerable clones with identical antigen receptors. The clones capable of reacting with "self" components (i.e., the individual's own cells) are eliminated or suppressed in the prenatal period. Those clones not eliminated or suppressed react only with specific foreign antigens that fit their receptors, leading to the proliferation of that lymphocyte cell line. Within the body, there are many different lymphocyte clones, each of which only reacts to one antigen (clonal restriction).

five elements t. A fundamental premise in traditional Chinese medicine and some branches of alternative medicine that holds that illness results from imbalances in these elements: wood, fire, earth, metal, and water. A similar concept in ancient Western and medieval medicine held that diseases resulted from imbalances in four elements: earth, air, fire, and water. SEE: *feng shui*.

germ t. The proposition that infectious diseases are caused by microorganisms.

grand t. A set of abstract ideas that together make a broad statement about human beings, the environment, health, or nursing. A grand theory is less abstract than a conceptual model and less concrete than a middle-range theory. Its intent is to enhance understanding of key concepts and principles within nursing, not to highlight specific concepts or variables. Grand theories cannot be tested directly. Examples include Newman's "Health as Expanding Consciousness," Parse's "Theory of Human Becoming," and Leininger's "Theory of Culture Care Diversity and Universality." SEE: *Nursing Theory Appendix*.

health belief t. A theory of how and why people choose to make healthy choices in their lives. The theory suggests that people make such decisions intentionally, evaluating their risks for diseases, the likely severity of illnesses, and the potential benefits from taking action, and that they act when they perceive a clear benefit. Other theories about healthy behavior stress physiological or psychological reasons for health-related decisions.

learning t. An approach to understanding how learning comes about by applying certain laws of learning; learning represents a change in behavior that has come about as a result of practice, education, and experience.

middle-range t. A theory comprising limited numbers of variables, each of limited scope. Middle-range theories may be descriptive, explanatory (specifying relationships between two or more concepts), or predictive (envisioning relationships between concepts or effects of certain concepts on others). Examples include the Health Belief Model, the Theory of Maternal Attachment, Erikson's Theory of Psychosocial Development, Watson's Theory of Human Caring, and Maslow's Hierarchy of Needs Theory.

nursing t. SEE: *nursing theory*.

quantum t. The proposition that energy can be emitted in discrete quantities (quanta) and that atomic particles can exist only in certain energy states. Quanta are measured by multiplying the frequency of the radiation, ν , by Planck's constant, h .

recapitulation t. The theory that during development an individual organism goes through the same progressive stages as did the species in developing from the lower to the higher forms of life; the theory that ontogeny recapitulates phylogeny.

social learning t. The theory that learning social standards and behavior occurs by observing and imitating others (e.g., family members, peers, or role models). Social learning also includes conforming, learning in context, and

modeling. Theories of social learning were developed by the American psychologist, Albert Bandura, who used them, e.g., to explain the impact of media violence on the behavior of children and adolescents.

summation t. The concept that excessive or intense stimulation of nerves will eventually produce a disagreeable sensation—the sensation of pain.

target t. A model used in radiobiology to describe cellular and chromosomal injury caused by radiation. The disruption of some intracellular targets by radiation can produce mutations; the disruption of critical targets is lethal to the cell.

Theory of Clinical Nursing A nursing theory developed by Reva Rubin that focuses on patients' experiences of tension or stress during illness. The goal of nursing is to help patients adjust to, endure through, and usefully integrate health problem situations. SEE: *Nursing Theory Appendix*.

Theory of Culture Care Diversity and Universality A nursing theory developed by Madeleine Leininger that focuses on diversities and universalities in human care. The goal of nursing is to provide culturally congruent care to people. SEE: *Nursing Theory Appendix*.

Theory of Goal Attainment A middle-range nursing theory developed by Imogene King that helps to identify the nature of nurse-client interactions leading to goal attainment. This theory concentrates on working with clients to attain, maintain, and restore health through communication, goal setting, and goal achievement. SEE: *general systems framework; Nursing Theory Appendix*.

Theory of Health as Expanding Consciousness A nursing theory developed by Margaret Newman that proposes that all people in every situation, no matter how disordered and hopeless the situation may seem, are part of a universal process of expanding consciousness. The goal of nursing is the authentic involvement of nurse and patient in a mutual relationship of pattern recognition and augmentation. SEE: *Nursing Theory Appendix*.

Theory of Human Becoming A nursing theory developed by Rosemarie Parse that focuses on the individual's experiences of health. The goal of nursing is to respect and facilitate the quality of life as perceived by the individual and the family. Also known as the Human becoming School of Thought. SEE: *Nursing Theory Appendix*.

Theory of Human Caring A nursing theory developed by Jean Watson that focuses on the transpersonal caring relationship between nurse and patient and the caring actions or interventions used by nurses. The goal of nursing is to help

individuals to gain a higher degree of harmony within the mind, body, and soul through the use of 10 curative factors or nursing interventions. SEE: *Nursing Theory Appendix*.

theory of infinitesimals One of the three "natural laws" of Samuel Hahnemann, the founder of homeopathy. He proposed that properly diluted substances become more and more powerful as remedies the more dilute they become.

Theory of Interpersonal Relations A nursing theory developed by Hildegard Peplau that identifies the three phases of the interpersonal process between the nurse and the patient: orientation, working, and termination. In this theory, the goal of nursing is to resolve the patient's perceived health difficulties. SEE: *Nursing Theory Appendix*.

Theory of Modeling and Role Modeling ABBR: MRM. A nursing theory in which the nurse uses the client's assumptions and beliefs on health and disease to plan and implement sound, holistic, and healing interventions. MRM was developed by Helen Cook Erickson, Evelyn Malcolm Tomlin, and Mary Ann Price Swain. SEE: *Nursing Theory Appendix*.

theory of planned behavior/reasoned action ABBR: TpB. A model used to explain health-seeking behavior that suggests that such behavior depends on personal intention. In this theory an intention to promote health develops from the specific attitudes one holds about the proposed choice, the social pressure one faces—e.g., from peers—if one were to make that choice, and one's sense of empowerment (i.e., the confidence one holds that one's choice will be faithfully translated into fruitful action).

theory of Psora (sō'rá) One of the three "natural laws" of Samuel Hahnemann, the founder of homeopathy; this one specifies that most chronic diseases result from suppressed itching.

Theory of the Deliberative Nursing Process A nursing theory developed by Ida Jean Orlando that focuses on how the nurse identifies patients' immediate needs for help. The goal of nursing is to identify and meet patients' immediate needs for help through use of the deliberative nursing process. SEE: *Nursing Theory Appendix*.

theotherapy (thē'ō-thēr'ā-pē) [Gr. *theos*, god, + *therapeia*, treatment] The treatment of disease by spiritual and religious methods.

thèque (těk) [Fr., a box] A nest of nevus cells or other cells close to the basal layer of the epidermis.

theranostics The use of diagnostic tests for specific biomarkers to stratify patients into those most likely to respond to particular treatment regimens

and to monitor the response of patients to the treatments administered.

therapeutic (thēr-ā-pū'tik) [Gr. *therapeutikos*, treating] 1. Pert. to results obtained from treatment. 2. Having medicinal or healing properties. 3. A healing agent.

therapeutic cloning The use of human embryos as a source of stem cells for the treatment of diseases and medical conditions, e.g., leukemias, Parkinson's disease, and spinal cord injury. Therapeutic cloning is banned in the U.S. and is a topic of ethical and religious debate in those countries in which it has been legalized.

therapeutic equivalents Drugs that have the same pharmacological effects and actions in the treatment of illnesses, even though the drugs may not be chemically equivalent.

therapeutic humor Humor therapy.

therapeutic misconception The mistaken impression held by patients enrolled in medical research trials that the research in which they are participating will be beneficial to them personally, e.g., that the investigation gives them their last best hope of a cure.

therapeutic radiology Radiation therapy.

therapeutic ratio The ratio obtained by dividing the effective therapeutic dose by the minimum lethal dose. SYN: *curative ratio*.

therapeutic recreation A specialized field within recreation whose specialists plan and direct recreational activities for patients recovering from physical or mental illness or who are attempting to cope with a permanent or temporary disability.

therapeutic regimen management, readiness for enhanced A pattern of regulating and integrating into daily living programs for treatment of illness and its sequelae that are sufficient for meeting health-related goals and can be strengthened. SEE: *Nursing Diagnoses Appendix*.

therapeutic regimen management: effective A pattern of regulating and integrating into daily living a program for treatment of illness and its sequelae that is satisfactory for meeting specific health goals. SEE: *Nursing Diagnoses Appendix*.

therapeutic regimen management: ineffective A pattern of regulating and integrating into daily living a program for treatment of illness and the sequelae of illness that is unsatisfactory for meeting specific health goals. SEE: *Nursing Diagnoses Appendix*.

therapeutic regimen management: ineffective community A pattern of regulating and integrating into community processes programs for treatment of illness and the sequelae of illness that is

unsatisfactory for meeting health-related goals. SEE: *Nursing Diagnoses Appendix*.

therapeutic regimen management: ineffective family A pattern of regulating and integrating into family processes a program for treatment of illness and the sequelae of illness that is unsatisfactory for meeting specific health needs. SEE: *Nursing Diagnoses Appendix*.

therapeutics (thĕr'ă-pū'tiks) [Gr. *therapeutike*, treatment] That branch of medicine concerned with the application of remedies and the treatment of disease.

Theraphosidae (thĕr'ă-fōs'ī-dē) [NL] The scientific name for the family of mildly venomous, hairy spiders known popularly as tarantulas.

therapist (thĕr'ă-pĭst) [Gr. *therapeia*, treatment] A person skilled in giving therapy, usually in a specific field of health care.

Particular therapists are listed under the first word. SEE: e.g., *occupational therapist*; *physical therapist*; *respiratory therapist*.

therapy (thĕr'ă-pē) [Gr. *therapeia*, treatment] Treatment. Particular therapies are listed under the first word. SEE: e.g., *hormone replacement therapy*; *occupational therapy*; *physical therapy*.

therapy putty The generic name for a malleable plastic material to provide resistance in various hand exercises.

therm (thĕrm) [Gr. *therme*, heat] Term used to indicate a variety of quantities of heat. SEE: *MET*.

thermocogenesis (thĕr'mă-kō-jĕn'ĕs-ĭs) [Gr. *therme*, heat, + *genesis*, generation, birth] An increase of body temperature by drug therapy or biological methods (e.g., in the past, injection of malarial parasites).

thermal (thĕr'māl) [Gr. *therme*, heat] Pert. to heat.

thermal death point In bacteriology, the degree of heat that will kill organisms in a fluid culture in 10 min.

thermalgia (thĕr'māl-jĕ'zē-ă) [" + *algosis*, sense of pain] Pain caused by heat. SYN: *thermoalgia*.

thermalgia (thĕr-māl'jĕ-ă) [" + *algos*, pain] Neuralgia accompanied by an intense burning sensation, pain, redness, and sweating of the area involved. SYN: *causalgia*.

thermal sense Thermesthesia.

thermatology (thĕr-mă-tōl'ō-jĕ) [Gr. *therme*, heat, + *logos*, word, reason] The study of heat in the treatment of disease.

thermelometer (thĕr'mĕl-ōm'ĕ-tĕr) [" + *elektron*, amber, + Gr. *metron*, a measure] An electric thermometer used to indicate temperature changes too slight to be measured on an ordinary thermometer.

thermesthesia (thĕr'mĕs-thĕ'zē-ă) [" +

aisthesis, sensation] The capability of perceiving heat and cold; temperature sense. SYN: *thermal sense*; *thermoesthesia*.

thermesthiometer (thĕrm'ĕs-thĕ-zē-ōm'ĕt-ĕr) [" + *aisthesis*, sensation, + *metron*, a measure] A device for determining sensibility to heat.

thermic (thĕr'mĭk) [Gr. *therme*, heat] Pert. to heat.

thermic effect of food ABBR: TEF. The increase in the body's metabolic rate that is produced by the consumption, digestion, metabolism, and storage of food. Foods with relatively low thermic effects include most carbohydrates, since carbohydrates, esp. sugars, cost the body relatively little energy to digest and metabolize. Protein-rich meals have a higher TEF, which is the rationale for low-carbohydrate diets, such as the Atkins and South Beach diets. SYN: *specific dynamic action of food*.

thermic sense The temperature sense; ability to react to heat stimuli.

thermistor (thĕr-mĭs'tor) An apparatus for quickly determining very small changes in temperature. Materials that alter their resistance to the flow of electricity as the temperature changes are used in these devices.

thermo- Combining form indicating *hot*, *heat*.

thermoalgisia (thĕr'mō-ăl-jĕ'zē-ă) [Gr. *therme*, heat, + *algosis*, sense of pain] Thermalgia.

thermoanesthesia (thĕr'mō-ăn'ĕs-thĕ'zē-ă) [" + " + *aisthesis*, sensation] 1. Inability to distinguish between heat and cold. 2. Insensibility to heat or temperature changes.

thermobiosis (thĕr'mō-bĭ-ō'sĭs) [" + *biosis*, way of life] The ability to withstand high temperature. **thermobiotic**, *adj.*

thermocautery (thĕr'mō-kaw'tĕr-ĕ) 1. Cautery by application of heat. 2. Cauterizing iron.

thermochemistry (thĕr'mō-kĕm'ĭs-trĕ) The branch of science concerned with the interrelationship of heat and chemical reactions.

thermochroism (thĕr-mōk'rō-ĭzm) [" + *chroa*, color] Property of a substance reflecting or transmitting portions of thermal radiation and absorbing or altering others. **thermochoic**, *adj.*

thermocoagulation (thĕr'mō-kō-ăg-ū-lă'shŭn) [" + L. *coagulatio*, clotting] The use of high-frequency currents to produce coagulation to destroy tissue. SYN: *endocoagulation*.

thermocouple (thĕr'mō-kŭ'pl) [" + L. *copula*, a bond] Thermopile.


thermocurrent (thĕr'mō-kŭr'ĕnt) An electric current produced by thermo-electric means.

thermocycler (thĕr'mō-sĭk'lĕr) A device used to heat and cool clinical and labo-

ratory specimens rapidly. It is used in polymerase chain reaction (PCR) assays.

thermode (thēr'mōd) A device for heating or cooling a part of the body.

thermodiffusion (thēr'mō-dī-fū'zhūn) Increased diffusion of a substance as a result of increased heat.

thermodilution (thēr'mō-dī-lū'shūn)  The use of an injected cold liquid such as sterile saline into the bloodstream and measurement of the temperature change downstream. This technique has been used to determine cardiac output.

thermogenic (thēr'mō-dūr'ik) Pert. to bacteria that thrive best at high temperatures between 40° and 70°C (104° and 158°F).

thermodynamics (thēr'mō-dī-nām'iks) [*'* + *dynamis*, power] The branch of physics concerned with laws that govern the production of heat and its conversion into other forms of energy.

thermoelasticity (thēr'mō-ī-lās-tīs'-ī-tē) The ability of a material (e.g., a component of a prosthesis) to stretch in response to changes in temperature.

thermoelectric (thēr'mō-ē-lēk'trik) Concerning thermoelectricity.

thermoelectricity (thēr'mō-ē-lēk-trīs'ī-tē) Electricity generated by heat.

thermoesthesia (thēr'mō-ēs-thē'zē-ā) [Gr. *therme*, heat, + *aisthesis*, sensation] Thermesthesia.

thermoexcitatory (thēr'mō-ēk-sī'tā-tor-ē) [*'* + L. *excitare*, to irritate] Stimulating the production of heat in the body.

thermogenesis (thēr'mō-jēn'ē-sīs) [*'* + *genesis*, generation, birth] The production of heat, esp. in the body.

dietary t. The heat-producing response to ingesting food. For several hours after eating, the metabolic rate increases. Heat is a by-product of the digestion, absorption, and breakdown of consumed foods, and the synthesis and storage of proteins and fats. Because the calories used in the thermic response are expended, they are not stored as fat.

nonshivering t. A limited physiological response of the newborn infant to chilling. Hypothermia stimulates sympathetic catabolism of brown fat, which is not coupled with ATP formation, and therefore releases most energy in the form of heat. Brown fat is located mainly in the neck and chest of the infant. SEE: *hypothermia*.

thermograph (thēr'mō-grāf) [*'* + *graphein*, to write] A device for registering variations of heat.

thermography (thēr'mōg'rā-fē) The detection of the heat present in body parts, such as blood vessels, muscles and tendons, or skin. Thermography has a wide range of uses. It has been employed in the study of arterial blood flow, the

cause of lameness in animals, and breast cancer.

thermohyperalgesia (thēr'mō-hī'pēr-āl-jē'zē-ā) [*'* + *hyper*, excessive, + *algesis*, sense of pain] Unbearable pain on the application of heat.

thermohyperesthesia (thēr'mō-hī'pēr-ēs-thē'zē-ā) [*'* + *hyper*, excessive, + *aisthesis*, sensation] Exceptional sensitivity to heat.

thermohypesthesia (thēr'mō-hī'pēs-thē'zē-ā) [*'* + *hypo*, below, + *aisthesis*, sensation] Diminished perception of heat.

thermoinhibitory (thēr'mō-īn-hīb'ī-tor'ē) [*'* + L. *inhibere*, to restrain] Arresting or impeding the generation of body heat.

thermolamp (thēr'mō-lāmp) [*'* + *lampe*, torch] A lamp used for providing heat.

thermology (thēr-mōl'ō-jē) [*'* + *logos*, word, reason] The science of heat.

thermoluminescent dosimeter (thēr'mō-loo-mī-nēs'ēt) A monitoring device consisting of a small crystal in a container that can be attached to a patient or to a health care worker. It stores energy when struck by ionizing radiation. When heated, it will emit light proportional to the amount of radiation to which it has been exposed.

thermolysis (thēr-mōl'ī-sis) [*'* + *lysis*, dissolution] 1. Loss of body heat, as by evaporation. 2. Chemical decomposition by heat.

thermolytic (thēr'mō-līt'ik) [*'* + *lytikos*, dissolving] Promoting thermolysis.

thermomassage (thēr'mō-mā-sāzh') Massage by use of heat.

thermometer (thēr-mōm'ē-tēr) [*'* + *metron*, measure] An instrument for indicating the degree of heat or cold.

thermometric (thēr'mō-mēt'rik), *adj.*

alcohol t. A thermometer containing alcohol.

Celsius t. A thermometric scale generally used in scientific notation. Temperature of boiling water at sea level is 100°C and the freezing point is 0°C. SYN: *centigrade thermometer*. SEE: tables.

centigrade t. Celsius t.

clinical t. A thermometer for measuring the body temperature. SEE: *clinical thermometry*.

differential t. A thermometer recording slight variations of temperature.

Fahrenheit t. A thermometric scale used in English-speaking countries, in which the boiling point is 212°F and the freezing point is 32°F. SEE: tables at *Celsius t.*

gas t. A thermometer filled with gas, such as air, helium, or oxygen.

Kelvin t. A thermometric scale in which absolute zero is 0°K; the freezing point of water is 273.15°K; and the boiling point of water is 373.15°K. Thus 1°K

Comparative Thermometric Scale

	Celsius*	Fahrenheit
Boiling point of water	100°	212°
	90	194
	80	176
	70	158
	60	140
	50	122
	40	104
Body temperature	37°	98.6°
	30	86
	20	68
	10	50
Freezing point of water	0°	32°
	-10	14
	-20	-4

*Also called *Centigrade*.

on the Kelvin scale is exactly equivalent to 1°C.

mercury t. A thermometer containing mercury for measurement of temperature. Mercury thermometers are seldom employed because they are an important source of heavy metal pollution of rivers, streams, and aquatic life.

recording t. A device with a suitable

sensor that continuously monitors and records temperature.

rectal t. A thermometer with a round bulb that is inserted into the rectum for determining body temperature.

self-registering t. A thermometer recording variations of temperature.

surface t. A thermometer for indicating the temperature of the body's surface. Used, for example, in infant warmers.

tympanic t. A thermometer that determines the temperature electronically by measuring it from the tympanic membrane of the ear. SEE: *ear thermometry; temperature, tympanic.*

wet-and-dry-bulb t. Psychrometer.

thermometer, disinfection of Disinfection of a thermometer with a substance that is able to kill ordinary bacteria and *Mycobacterium tuberculosis* as well as viruses. A variety of chemical solutions are used, but the effectiveness of these agents can be greatly diminished if the thermometer is not washed thoroughly before being disinfected.

thermometry (thér-môm'è-trè) Measurement of temperature.

clinical t. Measurement of the temperature of warm-blooded organisms, esp. humans. The oral temperature of the healthy human body ranges between 96.6° and 100°F (35.9° and 37.8°C). During a 24-hr period, a per-

Thermometric Equivalents (Celsius and Fahrenheit)

C°	F°	C°	F°	C°	F°	C°	F°
0	32	27	80.6	54	129.2	81	177.8
1	33.8	28	82.4	55	131	82	179.6
2	35.6	29	84.2	56	132.8	83	181.4
3	37.4	30	86.0	57	134.6	84	183.2
4	39.2	31	87.8	58	136.4	85	185
5	41	32	89.6	59	138.2	86	186.8
6	42.8	33	91.4	60	140	87	188.6
7	44.6	34	93.2	61	141.8	88	190.4
8	46.4	35	95	62	143.6	89	192.2
9	48.2	36	96.8	63	145.4	90	194
10	50	37	98.6	64	147.2	91	195.8
11	51.8	38	100.4	65	149	92	197.6
12	53.6	39	102.2	66	150.8	93	199.4
13	55.4	40	104	67	152.6	94	201.2
14	57.2	41	105.8	68	154.4	95	203
15	59	42	107.6	69	156.2	96	204.8
16	60.8	43	109.4	70	158	97	206.6
17	62.6	44	111.2	71	159.8	98	208.4
18	64.4	45	113	72	161.6	99	210.2
19	66.2	46	114.8	73	163.4	100	212
20	68	47	116.6	74	165.2		
21	69.8	48	118.4	75	167		
22	71.6	49	120.2	76	168.8		
23	73.4	50	122	77	170.6		
24	75.2	51	123.8	78	172.4		
25	77	52	125.6	79	174.2		
26	78.8	53	127.4	80	176		

CONVERSION: *Fahrenheit to Celsius*: Subtract 32 and multiply by 5/9. *Celsius to Fahrenheit*: Multiply by 9/5 and add 32.

son's body temperature may vary from 0.5° to 2.0°F (0.28° to 1.1°C). It is highest in late afternoon and lowest during sleep in the early hours of the morning. It is slightly increased by eating, exercising, and external heat, and is reduced about 1.5°F (0.8°C) during sleep. In disease, the temperature of the body deviates several degrees above or below that considered the average in healthy persons.

In acute infections such as meningitis or pneumonia, body temperature sometimes rises as high as 106° to 107°F (41.1° to 41.7°C).

Subnormal temperatures are sometimes seen in exposure, sepsis, or myxedema coma. In general, for every degree of fever, the pulse rises 10 beats per minute.

thermonuclear (thēr'mō-nū'klār) Pertaining to atomic reactions that result in the fission or fusion of nuclei and the release of large quantities of energy.

thermopenetration (thēr'mō-pēn-ē-trā'shūn) [*"* + *L. penetrare*, to go within] Application of heat to the deeper tissues of the body by diathermy. SEE: *thermoradiotherapy*.

thermophile (thēr'mō-fīl) *pl.* **thermophils** Organism that grows best at elevated temperatures (i.e., 40° to 70°C).

thermopile (thēr'mō-pīl) [*"* + *L. pila*, pile] A thermoelectric battery used in measuring small variations in the degree of heat. It consists of a number of connected dissimilar metallic plates. Under the influence of heat, these plates produce an electric current. SYN: *thermocouple*.

thermoplastic (thēr'mō-plās'tik) Concerning or being softened or made malleable by heat.

thermoradiotherapy (thēr'mō-rā'dē-ō-thēr'ā-pē) [*"* + *L. radius*, ray, + *Gr. therapeia*, treatment] Application of heat to the deep tissues by diathermy. SYN: *thermopenetration*.

thermoreception The ability to detect or sense heat.

thermoreceptor (thēr'mō-rē-sēp'tor) [*"* + *L. receptor*, a receiver] A sensory receptor that is stimulated by a rise of body temperature.

thermoregulation (thēr'mō-rēg'ū-lā'shūn) Heat regulation.

ineffective t. The state in which the individual's temperature fluctuates between hypothermia and hyperthermia. SEE: *Nursing Diagnoses Appendix*.

thermoregulatory (thēr'mō-rēg'ū-lā-tor'ē) Pert. to the regulation of temperature, esp. body temperature.

thermoreistant (thēr'mō-rē-zis'tánt) [*"* + *L. resistentia*, resistance] An ability to survive in relatively high temperature; characteristic of some types of bacteria.

thermostabile (thēr'mō-stā'bīl) [*"* + *L.*

stabilis, stable] Not changed or destroyed by heat.

thermostat (thēr'mō-stāt) [*"* + *statio*, standing] An automatic device for regulating the temperature.

thermotaxis (thēr'mō-tāks'is) [*"* + *taxis*, arrangement] **1.** Regulation of bodily temperature. **2.** The movement of certain organisms or cells toward (positive thermotaxis) or away from (negative thermotaxis) heat.

thermotherapy (thēr'mō-thēr'ā-pē) [*"* + *therapeia*, treatment] The therapeutic application of heat to the body, or to specific diseased tissues. Heat may be applied with many modalities ranging from hot water bottles to lasers or ultrasound.

thermotolerant (thēr'mō-tōl'ēr-ánt) [*"* + *L. tolerare*, to tolerate] Able to live normally in high temperature.

thermotonometer (thēr'mō-tō-nōm'ē-tēr) [*"* + *tonos*, tension, + *metron*, measure] A device for measuring muscle contraction caused by heat stimuli.

theroid (thé'royd) [*Gr. theriodes*, beast-like] Having animal instincts and characteristics.

thiaminase (thī-ām'ī-nās) An enzyme that hydrolyzes thiamine.

thiamine hydrochloride (thī'ā-mīn, -mēn') [*"* + *"*] C₁₂H₁₇ClN₄OS·HCl; a water-soluble, white crystalline compound that occurs naturally or can be synthesized. It is found in a wide variety of foods including sunflower seeds, pork, whole and enriched grains, legumes, brewers yeast, and fortified baked goods. The daily requirement for adults is 1.2 mg/day for men and 1.1 mg/day for women. SYN: *vitamin B₁*.

FUNCTION: It acts as a coenzyme of carboxylases in the decarboxylation of pyruvic acid and is therefore essential for the liberation of energy and the transfer of pyruvic acid into the Krebs cycle.

DEFICIENCY SYMPTOMS: Symptoms may include fatigue, muscle tenderness and increased irritability, disturbances of extraocular movement, loss of appetite, or cardiovascular disturbances. Alcoholics are especially prone to develop thiamine deficiency. Prolonged severe deficiency (e.g., during starvation) results in beriberi.

thiamine pyrophosphate (thī'ā-mīn, -mēn' pī'rō-fōs'fāt') An enzyme important in carbohydrate metabolism. It is the active form of thiamine. In people suspected of malnutrition, administering thiamine before the infusion of glucose-containing solutions prevents brain damage (Wernicke-Korsakoff's encephalopathy). SYN: *cocarboxylase*.

thiazolidinedione (thī'ā-zō'li-dēn-dī-ōn) A class of oral hypoglycemic agents that lowers blood sugars by reducing insulin resistance (improving tissue sensitivity

to the effects of insulin) in fat and muscle, as well as the liver. A commonly used agent in this class is pioglitazone.



Side effects of medications in this class include increased fluid retention, fractures, heart failure, liver injury, and weight gain.

thickened liquids A diet designed to prevent aspiration in patients with dysphagia. Solid particles that make liquids more viscous are added to liquid nutrients to achieve dense but pourable liquids, or liquids that have the consistency of honey or pudding, depending on the patient's needs.

thienopyridines (thī-ē-nō-pīr'ā-dēnz) Any of a group of drugs that block the aggregation of platelets. Drugs in this class are used to prevent arterial clotting and are effective in the prevention of strokes, heart attacks, stent thromboses, and peripheral arterial disease. Examples include ticlopidine and clopidogrel. Their most common side effect is bleeding.

thigh (thī) [AS. *theoh*] The proximal portion of the lower extremity; the portion lying between the hip joint and the knee. SEE: *femur*; *hip*; *pectineus*; *sartorius*.

thigmesthesia (thīg'mēs-thē'zē-ā) [Gr. *thigma*, touch, + *aisthesis*, sensation] Sensitivity to touch.

thigmotaxis (thīg'mō-tāks'is) ["/ + *taxis*, arrangement] The negative or positive response of certain motile cells to touch.

thigmotropism (thīg-mōt'rō-pīzm) ["/ + *tropos*, a turning, + *-ismos*, condition] The response of certain motile cells to move toward something that touches them.

thimerosal (thī-mēr'ō-sāl) An organic mercurial antiseptic used topically and as a preservative in pharmaceutical preparations.



Children and pregnant women should not be given immune globulin or vaccinations that use thimerosal as a preservative.

thin basement membrane disease Benign familial hematuria.

thinking Intellectual activity. Thinking includes the interpretation and ordering of symbols, learning, planning, forming ideas and opinions, organizing information, and problem solving.

abstract t. The ability to calculate, sort, categorize, conceptualize, draw conclusions, or interpret and condense complex ideas. In clinical medicine, abstract thinking is assessed by asking patients to interpret proverbs. Patients

with dementia or other cognitive deficits may fail to do so, as they fail to see the relationships between similar objects and ideas.

concrete t. Thinking in simple, tangible, real, or nonidealized terms, without drawing relations between objects or concepts.

critical t. A purposeful approach to problem solving that relies on flexibility, creativity, perspective, and communication to achieve desired outcomes. Critical thinking focuses on goals rather than processes or tasks.

thiocyanate (thī'ō-sī'ā-nāt) Any compound containing the radical —SCN.

thiogenic (thī'ō-jēn'ik) [Gr. *theon*, sulfur, + *gennan*, to produce] Able to convert hydrogen sulfide into more complex sulfur compounds, said of bacteria in the water of some mineral springs.

thioglycosidase (thī'ō-glū-kō'si-dās) An enzyme that catalyzes the hydrolysis of thioglycoside to a thiol and a sugar.

thiopeptic, thiopexic (thī-ō-pēk'tik, -pēks'ik) ["/ + *pexis*, fixation] Pert. to the fixation of sulfur.

thiophil, thiophilic (thī'ō-fil, thī'ō-fil'ik) [Gr. *theon*, sulfur, + *philein*, to love] Thriving in the presence of sulfur or its compounds, which is true of some bacteria.

thiosulfate (thī'ō-sūl'fāt) Any salt of thiosulfuric acid.

thiourea (thī'ō-ūr-ē'ā) [Gr. *theon*, sulfur, + *ouron*, urine] H_2NCSNH_2 ; A colorless crystalline compound of urea in which sulfur replaces the oxygen. SYN: *sulfourea*.

third-party payer An entity (other than the patient or the health care provider) that reimburses and manages health care expenses. Third-party payers include insurance companies, governmental agencies, and employers.

thirst [AS. *thurst*] The sensation resulting from the lack of adequate body water or desire for liquids. Excessive thirst may be an early symptom of diabetes as the kidneys excrete extra water in an effort to decrease circulating glucose levels. Thirst is common following fever, vomiting, diarrhea, bleeding, vigorous exercise, or other causes of hypovolemia or hyperosmolality. In addition, thirst may be associated with the use of diuretics, tricyclic antidepressants, and some antihistamines, among other drugs.

thirteenth step A colloquial term for sexual intercourse between two members of a 12-step recovery program to treat addiction.

thixolabile (thīk'sō-lā'bīl) Esp. susceptible to being changed by shaking.

thixotropy (thīks-ōt'rō-pē) [Gr. *thixis*, a touching, + *trope*, turning] The property of certain gels in which they liquefy

when agitated and revert to a gel on standing.

Thomas splint (tōm'ūs) [Hugh Owen Thomas, Brit. orthopedic surgeon, 1834–1891] A splint originally developed to treat hip-joint disease. It is now used mainly to place traction on the leg in its long axis, in treating fractures of the upper leg. It consists of a proximal ring that fits around the upper leg and to which two long rigid slender steel rods are attached. These extend down to another smaller ring distal to the foot.

Thomas test A test used to identify hip flexor contractures. Lying supine with the legs off the end of the table, the patient flexes the knee and tries to pull the thigh to the chest. Inability to perform this maneuver or extension of the opposite knee indicates tightness of the iliopsoas or rectus femoris muscle.

Thompson test (tōmp'sōn) A test to evaluate the integrity of the Achilles tendon. The patient kneels on the examination table with the feet hanging off; the examiner squeezes the calf while observing for plantar flexion. The result is positive if there is no movement of the foot; this indicates an Achilles tendon rupture.

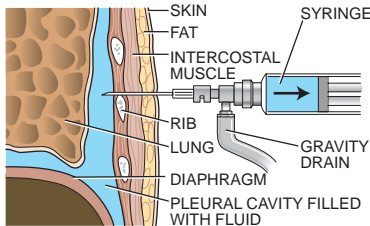
Thomsen's disease (tōm'sēnz) [Asmus Julius Thomsen, Danish physician, 1815–1896] Myotonia congenita.

thorac- SEE: *thoraco-*.

thoracalgia (thō'rāk-āl'jē-ă) [Gr. *thorax*, chest, + *algos*, pain] Thoracic pain.

thoracotomy (thō'ră-sĕk'tō-mē) [" + *ektome*, excision] Incision of the chest wall with resection of a portion of rib.

thoracentesis (thō'ră-sĕn-tē'sis) [" + *kentesis*, a puncture] Inserting a needle through the chest wall and into the pleural space, usually to remove fluid for diagnostic or therapeutic purposes. SYN: *pleurocentesis*; *thoracocentesis*. SEE: *illus.*



THORACENTESIS

The needle is inserted just above the rib to avoid the neurovascular bundle beneath each rib

PATIENT CARE: Before the procedure, the patient is carefully examined, a history is taken, and radiological studies, such as chest x-rays or ultrasonograms, are reviewed. The procedure

should be explained to the patient and sensation information provided (stinging with anesthesia instillation). The risks (e.g., bleeding, puncture of the lung with subsequent lung collapse, or introduction of infection), as well as the benefits and alternatives to the procedure, should be carefully reviewed. If the patient wishes to proceed, a consent form with the patient's signature must be completed. Allergies to local anesthetics are noted. Baseline vital signs will be obtained and supplemental oxygen administered. Cardiac monitoring is usually performed. A nurse or respiratory therapist may assist the physician and support the patient throughout the procedure. Equipment is assembled for the procedure, and in most instances, the fluid is identified with ultrasound to avoid injury to the liver, lung, or other tissues. The patient is positioned to make pleural fluid accessible to the examiner.

The patient's skin is prepared per protocol, the area is draped, and local anesthesia is injected subcutaneously. After allowing a short time for this to become effective, the thoracentesis needle is inserted above the rib to avoid damaging intercostal vessels, which run in a neurovascular bundle beneath each rib. The patient is advised not to move, cough, or take a deep breath during the procedure to reduce the risk of injury. When the needle contacts the fluid pocket, fluid can be withdrawn by gravity drainage or with suction.

During thoracentesis, health care professionals should assess the patient for difficulty breathing, dizziness, faintness, chest pain, nausea, pallor or cyanosis, weakness, sweating, cough, alterations in vital signs, oxygen saturation levels, or cardiac rhythm. An occlusive dressing should be applied to the puncture site as the needle or cannula is removed, preventing air entry. The fluid obtained is labeled and sent for diagnostic tests as ordered (typically Gram stain, cultures, cell count, measurements of fluid chemistries, pH, and, when appropriate, cytology). The amount, color, and character of the fluid is documented, along with the time of the procedure, the exact location of the puncture, and the patient's reaction. After the procedure, a chest x-ray is often obtained to assess results or determine if any injury has occurred (e.g., pneumothorax). The patient should be positioned comfortably. Vital signs are monitored until stable, then as needed. The patient is advised to call for assistance immediately, if difficulty in breathing or pleuritic pain is experienced.

thoraci- SEE: *thoraco-*.

thoracic (thō-rās'ik) [Gr. *thorax*, chest] Pert. to the chest or thorax.

thoracic cage The bony structure surrounding the thorax, consisting of the 12 paired ribs, the thoracic vertebrae, and the sternum.

thoracic duct The main lymphatic duct, originating at the cisterna chyli in the abdomen. It passes upward through the diaphragm into the thorax, continuing upward alongside the aorta and esophagus to the neck, where it turns to the left and enters the left subclavian vein near its junction with the left internal jugular vein. It receives lymph from all parts of the body except the right side of the head, neck, thorax, and upper extremity. SEE: *lymphatic system* for illus.

thoracic gas volume ABBR: VTG. The volume of gas contained within the chest during body plethysmography when the mouth shutter is closed. This measurement is a rough estimate of the functional residual capacity of the lung.

thoracic limb SEE: under *limb*.

thoracic outlet compression syndrome, thoracic outlet syndrome ABBR: TOS. A symptom complex caused by the compression of nerves and/or vessels in the neck, such as by the first rib pressing against the clavicle or entrapment of brachial nerves and vessels between the pectoralis minor muscle and the ribs. It is marked by brachial neuritis with or without vascular or vasomotor disturbance in the upper extremities. The practitioner must differentiate TOS from cervical disk lesions, osteoarthritis affecting cervical vertebrae, bursitis, brachial plexus injury, angina, lung cancer, and carpal tunnel syndrome.

thoracic squeeze Compression of the lungs and rupture of alveolar capillaries as a result of breath holding during deep underwater diving.

thoracic surgery Surgery involving the rib cage and structures contained within the chest. It is used to biopsy or remove masses in the hilum, lung, or mediastinum, to drain abscesses or treat empyema, to repair cardiac valves or vessels, or to implant devices, such as cardioverter/defibrillators in the chest.

PATIENT CARE: *Preoperative:* Preparation involves the usual preoperative teaching, with special emphasis on breathing and coughing, incentive spirometry, incisional splinting, pain evaluation, invasive and noninvasive relief measures that will be available, and basic information about the chest drainage tube and system that will be required in most such surgeries. The health care professional should encourage the patient to voice fears and concerns, allay misapprehensions, and correct misconceptions. *Postoperative care:* All general patient care concerns apply. Vital signs and breath sounds should be monitored. Water-seal chest drainage

should be maintained as prescribed, and the volume and characteristics of drainage should be monitored. The health care professional should maintain sterile impervious wound dressings; provide analgesia and comfort measures to ensure patient cooperation with respiratory toilet, exercises, and rest and activity; provide emotional support and encouragement; and provide instructions to be followed by the patient and family after discharge and follow-up care. As necessary, the respiratory therapist provides mechanical ventilation in the immediate postoperative period and evaluates the patient for weaning from the ventilator.

thoraco-, thorac-, thoraci- Combining forms meaning *chest, chest wall*.

thoracoacromial (thō'rá-kō-á-krō'mē-ál) Concerning the thorax and acromion.

thoracoceloschisis (thō'rāk-ō-sē-lōs'kī-sīs) [Gr. *thorakos*, chest, + *koiilia*, belly, + *schisis*, a splitting] A congenital fissure of the thoracic and abdominal cavities.

thoracodelphus (thō'rāk-ō-dēl'fūs) [" + *adelphos*, brother] A deformed fetus with a single head and thorax, but four legs.

thoracodynia (thō'rāk-ō-dīn'ē-ā) [" + *odyne*, pain] Thoracic pain.

thoracograph (thō'rāk-ō-gräf) [" + *graphein*, to write] A device for plotting and recording the contour of the thorax and its change during inspiration and expiration.

thoracolumbar (thō'rāk-ō-lūm'bar) [" + *L. lumbus*, loin] Pert. to the thoracic and lumbar parts of the spinal cord; denoting their ganglia and the fibers of the sympathetic nervous system.

thoracolysis (thō'rāk-ōl'i-sīs) [" + *lysis*, dissolution] Pneumolysis.

thoracometer (thō'rāk-ōm'ē-tēr) [Gr. *thorakos*, chest, + *metron*, measure] A device for measuring the expansion of the chest.

thoracometry (thō'rāk-ōm'ēt-rē) [" + *metron*, measure] The measurement of the thorax.

thoracomyodynia (thō'rāk-ō-mī'ō-dīn'ē-ā) [" + *mys*, muscle, + *odyne*, pain] Pain in the chest muscles.

thoracopathy (thō'rāk-ōp'ā-thē) [" + *pathos*, disease, suffering] Any disease of the thorax, thoracic organs, or tissues.

thoracoplasty (thō'rāk-ō-plās'tē, thō'rāk-ō-plās'tē) [" + *plassein*, to form] A plastic operation on the thorax; removal of portions of the ribs in stages to collapse diseased areas of the lung. It has been used on occasion to manage empyema or pulmonary tuberculosis, among other illnesses. SEE: *empyema*.

thoracopneumoplasty (thō'rāk-ō-nū'mō-plās-tē) [" + *pneumon*, lung, + *plas-*

sein, to form] Plastic surgery involving the chest and lung.

thoracoschisis (thō'ra-kōs'kī-sīs) [" + *schisis*, a splitting] A congenital fissure of the chest wall.

thoracoscope (thō-rā'kō-skōp, -rāk'ō-skōp) [" + *skopein*, to examine] An endoscope used to inspect the lungs, pleura, and other chest structures. It is inserted into the pleural space via an incision made through the chest wall.

thoracoscopy (thō'ra-kōs'kō-pē) A diagnostic examination and/or therapeutic procedure within the pleural cavity with an endoscope.

thoracostenosis (thō'ra-kō-stēn-ō'sīs) [" + *stenosis*, act of narrowing] Narrowness of the thorax due to atrophy of trunk muscles.

thoracostomy (thō'rāk-ōs'tō-mē) [" + *stoma*, mouth] Incision into the chest wall, usually followed by insertion of a tube between the pleurae and a system for draining fluid from that space.

thoracostomy tube A tube inserted into the pleural space via the chest wall to remove air or fluid present in the space.

thoracotomy (thō'rāk-ōt'ō-mē) [" + *tome*, incision] Surgical incision of the chest wall. **SEE:** *illus.*



THORACOTOMY SCAR

thorax (thō'rāks) *pl.* **thoraces, thoraxes** [Gr., chest] That part of the body between the base of the neck superiorly and the diaphragm inferiorly. **SYN:** *chest*. **SEE:** *rib*.

The surface of the thorax is divided into regions as follows: *Anterior surface:* supraclavicular, above the clavicles; suprasternal, above the sternum; clavicular, over the clavicles; sternal, over the sternum; mammary, the space between the third and sixth ribs on either side; inframammary, below the mammae and above the lower border of the 12th rib on either side. *Posterior surface:* scapular, over the scapulae; interscapular, between the scapulae; infrascapular, below the scapulae. *On sides:* axillary, above the sixth rib.

barrel-shaped t. A malformed chest rounded like a barrel, seen in advanced pulmonary emphysema.

bony t. The part of the skeleton that is made up of the thoracic vertebrae, 12 pairs of ribs, and the sternum.

Peyrot's t. A chest that has an obliquely oval deformed shape, seen with large pleural effusions.

thorium (thō'rē-ūm) **SYMB:** Th. A radioactive metallic element. Atomic weight, 232.038; atomic number, 90. At one time, it was used to outline blood vessels in radiography.

thoron (thō'rōn) **SYMB:** Tn. A radioactive isotope of radon having a half-life of 51.5 sec; atomic weight, 220; atomic number, 86.

thought processes, disturbed A state in which an individual experiences a disruption in cognitive operations and activities. **SEE:** *Nursing Diagnoses Appendix*.

thr threonine.

thread (thrēd) **1.** Any thin filamentous structure (e.g., a stringy substance present in the urine in some infectious diseases of the urinary tract). **2.** Suture material.

threadworm (thrēd'wūrm") Any long, slender nematode worm. **SEE:** *Enterobius*.

three-day fever Sandfly fever.

three-day measles A colloquial term for rubella.

three-glass test A test to identify the site of a urinary tract infection. On awakening, the patient empties the bladder by passing urine sequentially into three test tubes (glasses). The amount of cellular debris visible to the naked eye in the glasses helps to determine whether the infection is located in the anterior urethra, posterior urethra, or prostate. If the first glass is turbid and the other two are clear, the anterior urethra is inflamed but the rest of the urinary tract is clear. If the initial specimen is clear and the second and third ones are turbid, the posterior urethra or prostate is inflamed. If only the third specimen is turbid, then only the prostate is inflamed.

threonine (thrē'ō-nīn) **ABBR:** thr. $C_4H_9NO_3$ Alpha-amino-beta-hydroxybutyric acid, an essential amino acid.

threshold (thrēsh'ōld) [AS. *therscold*] **1.** Point at which a psychological or physiological effect begins to be produced. **2.** A measure of the sensitivity of an organ or function that is obtained by finding the lowest value of the appropriate stimulus that will give the response.

absolute t. The lowest amount or intensity of a stimulus that will give rise to a sensation or a response.

acoustic reflex t. The decibel level that provokes reflex contraction of the stapedius muscle. Tests that measure the triggering of the acoustic stapedius

reflex are used to determine the presence of sensorineural hearing loss.

anaerobic t. The point at which increased carbon dioxide production and minute ventilation result from increased levels of lactic acid during exercise.

auditory t. Minimum audible sound perceived.

t. of consciousness SEE: under *consciousness*.

differential t. The lowest limit at which two stimuli can be differentiated from each other.

erythema t. The stage of ultraviolet skin injury in which erythema of the skin due to radiation begins.

ketosis t. The lower limit at which ketone bodies (acetoacetic acid, hydroxybutyric acid, and acetone), on their accumulation in the blood, are excreted by the kidney. At that point, ketone bodies are being produced faster by the liver than the body can oxidize them.

pain t. Pain threshold.

renal t. The concentration at which a substance in the blood normally not excreted by the kidney begins to appear in the urine. The renal threshold for glucose is 160 to 180 mg/dl.

sensory t. The minimal stimulus for any sensory receptor that will give rise to a sensation.

viability t. The body weight or gestational age of an infant below which the ability to survive is doubtful.

threshold dose Minimal erythema dose.

threshold substance A substance present in the blood that, on being filtered through glomeruli of the kidney, is reabsorbed by the tubules up to a certain limit, that being the upper limit of the concentration of the substance in normal plasma. High-threshold substances (e.g., chlorides or glucose) are entirely or almost entirely reabsorbed. Low-threshold substances (e.g., phosphates or urea) are reabsorbed in limited quantities. No-threshold substances (e.g., creatinine sulfate) are excreted entirely.

thrifty Thriving, growing vigorously, and being healthy, esp. when assessing the health status of animals or plants.

thrill (thrĭl) [ME. *thrillen*, to pierce]

1. An abnormal tremor accompanying a vascular or cardiac murmur felt on palpation. SYN: *fremitus*. **2.** A tingling or shivering sensation of tremulous excitement as from pain, pleasure, or horror.

aneurysmal t. A thrill felt on palpation of an aneurysm.

aortic t. A thrill perceived over the aorta or aortic valve.

arterial t. A thrill perceived over an artery.

diastolic t. A thrill perceived over the heart during ventricular diastole.

hydatid t. A peculiar tremor felt on palpation of a hydatid cyst.

presystolic t. A thrill sometimes felt over the apex of the heart preceding ventricular contraction.

systolic t. A thrill felt during systole over the precordium. It may be associated with aortic or pulmonary stenosis or an interventricular septal defect.

thrix (thriks) Hair.

t. annulata Hair with light and dark segments alternating along the shaft.

-thrix [Gr. *thrix*, hair] A word ending indicating hair.

throat (thröt) [AS. *throte*] **1.** The pharynx and fauces. **2.** The cavity from the arch of the palate to the glottis and superior opening of the esophagus. **3.** The anterior portion of the neck. **4.** Any narrow orifice.

throat, foreign bodies in The presence of foreign objects in the pharynx or throat. Symptoms depend somewhat on the location and size of the foreign body, and vary from simple discomfort to severe coughing and difficulty in breathing. If the airway is obstructed, suffocation occurs, resulting in unconsciousness and death.

FIRST AID: If complete airway obstruction is present, as evidenced by an inability to speak, breathe, or cough, the Heimlich maneuver should be performed. This consists of wrapping one's arms around the victim's waist from behind; making a fist with one hand and placing it against the victim's abdomen between the navel and rib cage; and clapping the fist with the free hand and pressing in with a quick, forceful upward thrust. This may be repeated several times if necessary. If the airway remains obstructed, tracheostomy will be required to save the patient's life. SEE: *Heimlich maneuver* for illus.



The Heimlich maneuver should not be performed unless complete airway obstruction is present. If the patient can cough, this maneuver should not be performed. In infants, extremely obese patients, and obviously pregnant patients, chest thrusts are used instead of abdominal thrusts to facilitate removal of the obstruction.

throb (thröb) [ME. *throbben*, of imitative origin] **1.** A beat or pulsation, as of the heart. **2.** To pulsate.

throbbing (thröb'ing) Pulsation.

Throckmorton's reflex (throk'mor'tünz) [Thomas Bentley Throckmorton, U.S. neurologist, 1885–1961] The extension of the great toe and flexion of the other toes when the dorsum of the foot is percussed in the metatarsophalangeal region.

thrombase (throm'bäs) Thrombin.

thrombasthenia (thrŏm"bās-thē'nē-ā) [Gr. *thrombos*, clot, + *asthēneia*, weakness] A bleeding disorder caused by abnormal platelet function characterized by abnormal clot retraction, prolonged bleeding time, and lack of aggregation of the platelets.

thrombectomy (thrŏm-bĕk'tō-mē) [" + *ektome*, excision] Surgical removal of a thrombus.

thrombi (thrŏm'bī) Pl. of thrombus.

thrombin (thrŏm'bīn) [Gr. *thrombos*, clot] **1.** An enzyme formed in coagulating blood from prothrombin, which reacts with soluble fibrinogen converting it to fibrin, which forms the basis of a blood clot. SEE: *coagulation, blood*. **2.** A sterile protein prepared from prothrombin of bovine origin. It is used topically to control capillary oozing during surgical procedures. When used alone, it is not capable of controlling arterial bleeding.

topical t. A type of fibrin glue that may be applied locally (not injected) to a bleeding wound to stop blood loss.

thrombo- Combining form meaning *clot*.
thromboangiitis (thrŏm"bō-ān"jē-ī'tīs) [Gr. *thrombos*, clot, + *angeion*, vessel, + *itis*, inflammation] Inflammation of the intimal layer of a blood vessel, with clot formation. SEE: *thrombosis*.

t. obliterans Buerger's disease. SEE: under *Buerger, Leo*.

thromboarteritis (thrŏm"bō-ār-tĕ-rī'tīs) [" + *arteria*, artery, + *itis*, inflammation] Inflammation of an artery in connection with thrombosis. SYN: *thromboendarteritis*.

thromboclasia (thrŏm-bŏk'lā-sīs) [" + *klasis*, a breaking] Thrombolysis.

thromboclastic (thrŏm"bō-klās'tik) Thrombolytic.

thrombocyst (thrŏm"bō-sīst) [Gr. *thrombos*, clot, + *kystis*, a sac] A membranous sac enveloping a thrombus. SYN: *thrombocystis*.

thrombocystis (thrŏm"bō-sī'tīs) Thrombocyst.

thrombocyte (thrŏm"bō-sīt) [" + *kytos*, cell] Platelet.

thrombocythemia (thrŏm"bō-sī-thē'mē-ā) [" + " + *haima*, blood] An absolute increase in the number of platelets in the blood.

thrombocytolysis (thrŏm"bō-sī-tŏl'ī-sīs) [" + " + *lysis*, dissolution] Dissolution of thrombocytes.

thrombocytopathy (thrŏm"bō-sī-tŏp'ā-thē) [" + " + *pathos*, disease, suffering] Deficient function of platelets.

thrombocytopenia (thrŏm"bō-sī'tŏ-pĕ-nē-ā) [" + " + *penia*, lack] An abnormal decrease in the number of platelets. SYN: *thrombopenia*.

ETIOLOGY: Acute infections (e.g., sepsis), chronic infections (e.g., HIV), drugs (e.g., alcohol, heparin, or chemotherapy agents), immune disorders

(e.g., idiopathic thrombocytopenic purpura), leukemia and aplastic anemia, and portal hypertension (e.g., in cirrhosis) can all cause low platelet counts. Because platelets play a vital role in blood clotting, low levels may increase the risk of bleeding. Platelet counts below 50,000/mm³ increase the risk of hemorrhage with minor trauma; spontaneous bleeding can occur when less than 20,000 are present in a milliliter of blood. Treatment is directed at removing offending drugs or managing the underlying condition.

PATIENT CARE: The patient is watched for evidence of internal hemorrhage, esp. intracranial bleeding, as well as hematuria, hematemesis, bleeding gums, abdominal distention, melena, prolonged menstruation, epistaxis, ecchymosis, petechiae, or purpura, and is handled carefully (e.g., during blood drawing) to prevent trauma and hemorrhage. Bleeding is controlled by applying pressure to bleeding sites for at least 20 min. If arterial blood collection is necessary (i.e., for blood gases), a patient care plan should be developed with the physician and the laboratory/blood collection staff to ensure that occult bleeding does not occur. The patient's head should be elevated when lying down. Use of a soft toothbrush or sponge stick helps to prevent injury to oral tissues. Dental flossing is avoided. Normal saline (0.9%) nasal spray or use of a humidifier moistens nasal passages and helps to prevent nosebleeds. An electric razor should be used for shaving. Stools are tested for occult bleeding. Straining at stool and coughing are discouraged; stool softeners are provided as necessary. The patient is advised never to go barefoot and to wear properly fitting shoes and socks.

During periods of active bleeding, bedrest is maintained. Platelet transfusions are administered as prescribed, and the patient is observed for chills, rigors, fever, or allergic reactions. Acetaminophen and diphenhydramine may prevent or relieve minor transfusion reactions. The platelet growth factor oprelvekin (Neumega) may be prescribed to reduce the need for platelet transfusions after chemotherapy. Aspirin and other nonsteroidal anti-inflammatory agents should be avoided, as well as herbs such as feverfew, ginkgo, ginseng, and kava because these substances may inhibit platelet function. Drugs like corticosteroids, immunoglobulin, or gamma globulin may be prescribed to decrease platelet destruction in immune-mediated thrombocytopenia. Folate stimulates bone marrow production of platelets in patients with folate deficiency. When splenectomy is performed to decrease platelet destruc-

tion, preoperative and postoperative nursing care is provided as required.

gestational t. An abnormally low platelet count occurring during pregnancy (usually less than 70,000 platelets/mm³). Serious illnesses that cause low platelet counts (e.g., disseminated intravascular coagulation, HELLP syndrome, idiopathic thrombocytopenic purpura, pre-eclampsia, systemic lupus erythematosus, or leukemia) should be ruled out. If no illness is present, the condition is usually benign.

heparin-induced t. A decrease in the platelet count caused by an immune reaction to heparin. It may lead to widespread or potentially life-threatening blood clotting rather than bleeding. SEE: *white-clot syndrome*.



Patients whose platelet counts drop significantly during exposure to heparin should discontinue the drug immediately.

thrombocytopenia (thrŏm'bŏ-jĕn'ĕ-sĭs) [" + " + *poiesis*, production] The formation of platelets.

thrombocytosis (thrŏm'bŏ-sĭ-tŏ'sĭs) [" + *kytos*, cell] An increase in the number of platelets.

thromboelastogram (thrŏm'bŏ-ĕ-lās'tŏ-grām) ABBR: TEG. A device used to determine the presence of intravascular fibrinolysis and to monitor the effect of antifibrinolytic therapy on the formation and dissolution of clots.

thromboembolism (thrŏm'bŏ-ĕm'bŏ-lĭzm) [" + *embolos*, thrown in, + *-ismos*, condition] The blocking of a blood vessel by a clot (or part of a clot) that has broken off from the place where it formed and traveled to another organ. SYN: *embolic thrombosis*.

thromboendarterectomy (thrŏm'bŏ-ĕnd'ār-tĕr-ĕk'tŏ-mĕ) [" + *endon*, within, + *arteria*, artery, + *ektome*, excision] Surgical removal of a thrombus from an artery, and removal of the diseased intima of the artery.

thromboendarteritis (thrŏm'bŏ-ĕnd-ār'tĕr-ĭ'tĭs) [" + " + " + *itis*, inflammation] Thromboarteritis.

thromboendocarditis (thrŏm'bŏ-ĕn'dŏ-kār-dĭ'tĭs) [" + *endon*, within, + *kardia*, heart, + *itis*, inflammation] Formation of a clot on an inflamed surface of a heart valve.

thromboerythrocyte (thrŏm'bŏ-ĕ-rĭth'rŏ-sĭt) [" + "] A synthetic blood product consisting of red blood cells to whose surface a peptide with the following amino acid sequence (arginine-glycine-aspartic acid) has been covalently bonded. Such cells aggregate with activated platelets and may be used as platelet substitutes in patients with severe platelet deficiencies.

thrombogenesis (thrŏm'bŏ-jĕn'ĕ-sĭs) [" + *genesis*, generation, birth] The formation of a blood clot.

thrombogenic (thrŏm'bŏ-jĕn'ĭk) [" + "]
1. Capable of producing a blood clot.
2. Likely to produce a blood clot.

thromboid (thrŏm'boyd) [" + *eidos*, form, shape] Resembling a thrombus or clot.

thrombokinase (thrŏm'bŏ-kĭn'ās) [" + *kinesis*, movement] Obsolete term for the 10th blood coagulation factor (factor X) or Stuart factor.

thrombokinesis (thrŏm'bŏ-kĭ-nĕ'sĭs) [" + *kinesis*, movement] The coagulation of the blood.

thromboectomy (thrŏm'bŏ-lĕk'tŭ-mĕ) Surgical removal of a blood clot.

thrombolympangitis (thrŏm'bŏ-lĭm'fān-jĭ'tĭs) [" + L. *lymphā*, lymph, + Gr. *angeion*, vessel, + *itis*, inflammation] Inflammation of a lymphatic vessel due to obstruction by thrombus formation.

thrombolysis (thrŏm'bŏl'ĭ-sĭs) [" + *lysis*, dissolution] The breaking up of a thrombus. Thrombolytic enzyme therapy is used for lysis of thrombi obstructing coronary arteries in acute MI, management of acute massive pulmonary embolism, acute ischemic stroke within 3 hr of symptom onset, after intracranial bleeding has been ruled out, and to lyse deep vein thrombosis via catheter-directed delivery. SYN: *thrombolysis*.

PATIENT CARE: The health care provider should obtain a complete history of previous illnesses before administering thrombolytic drugs. Recent surgeries, traumatic events, and invasive procedures are all contraindications to their use, as are uncontrolled hypertension, the presence of brain tumors, a history of abnormal bleeding, pregnancy, and other conditions. In ischemic stroke, the strict time limit for use of thrombolysis is within 3 hr of initial symptoms. Usage later in the course leads to increased risk of intracranial bleeding and death. The use and administration of the drug should be explained to the patient and family. Each thrombolytic enzyme has specific instructions for reconstitution and dosing, and all are administered intravenously. The drugs should be given through a dedicated IV catheter and line, and administered via an infusion controller. Health care professionals should be prepared to initiate anticoagulant and antiplatelet therapy as prescribed during or immediately after thrombolytic treatment to decrease the risk of rethrombosis. The patient's vital signs, heart rhythm, and neurologic status require intensive monitoring throughout and following therapy. Strict bedrest is required. In patients treated for acute myocardial infarction, reperfusion-in-

duced arrhythmias are treated as prescribed or according to Advanced Cardiac Life Support protocols. Spontaneous bleeding (cerebral, retroperitoneal, GI, and GU) may occur with thrombolysis; the patient should be assessed every 15 min initially, then every 30 min, then hourly, then every 4 hr (time span for each varies with the particular drug used). Invasive procedures should be avoided; all puncture sites assessed and reassessed. Patient movement should be restricted, but when necessary, it should be performed gently. Antihistamines or corticosteroids may be used to treat mild allergic responses, but infusion should be stopped if a severe allergic response occurs. Bleeding is the most common adverse effect, occurring internally and at external puncture sites. If uncontrollable bleeding occurs, the infusion should be stopped immediately and the prescriber notified.

thrombolytic (thrŏm-bŏ-līt'ik) Pert. to or causing the breaking up of a blood clot. SYN: *thromboclastic*.

thrombolytic therapy The use of drugs that degrade blood clots to treat acute myocardial infarction, pulmonary embolism, or stroke.

thrombomodulin (thrŏm'bŏ-mŏ'dū-līn) A protein released by the vascular endothelium. Acting in concert with other factors, it helps to prevent formation of intravascular thrombi.

thrombon (thrŏm'bŏn) [Gr. *thrombos*, clot] The portion of the hematopoietic system concerned with platelet formation.

thrombopathy (thrŏm-bŏp'ă-thē) [+ *pathos*, disease, suffering] A defect in coagulation.

thrombopenia (thrŏm-bŏ-pē'nē-ă) [+ *penia*, lack] Thrombocytopenia.

thrombophilia (thrŏm-bŏ-fil'ē-ă) [+ *philein*, to love] A tendency to form blood clots; esp., any disease such as that caused by the factor V Leiden mutation.

thrombophlebitis (thrŏm'bŏ-flē-bī'tīs) [+ *phleps*, vein, + *itis*, inflammation] Inflammation of a vein in conjunction with the formation of a thrombus. It usually occurs in an extremity, most frequently a leg. SEE: *deep venous thrombosis*; *phlebitis*; *Nursing Diagnoses Appendix*.

TREATMENT: Drug therapies include heparins or warfarin.

PATIENT CARE: Prevention includes identifying patients at risk and encouraging leg exercises, use of antiembolic stockings, intermittent pneumatic compression devices, and early ambulation to prevent venous stasis. The at-risk patient (see below) should be assessed at regular intervals for signs of inflammation, tenderness, aching, and

differences in calf circumference measurements. Noninvasive venous ultrasonography provides definitive diagnosis of thrombophlebitis (DVT). It is performed in patients with risk factors for DVT who have a swollen limb and an elevated level of D-dimer in the blood. Anticoagulants are administered as prescribed, the patient is evaluated for signs of bleeding, and coagulation results are monitored to maintain an international normalized ratio (INR) of 2–3. The patient is assessed for signs of pulmonary emboli, dyspnea, tachypnea, hypotension, chest pain, changes of level of consciousness, arterial blood gas abnormalities, and electrocardiogram changes. The patient is prepared for the diagnostic procedures and medical or surgical interventions prescribed.

Patients at greatest risk for thrombophlebitis are those on prolonged bedrest; those with major trauma, congestive heart failure or respiratory failure, obesity, nephrotic syndrome, inflammatory bowel disorders, myeloproliferative disorders, cancer and cancer therapies; pregnancy, recent childbirth, and use of combination hormonal contraceptives or postmenopausal hormone therapy; smoking; varicose veins or previous DVT; central venous catheterization; and people older than 65 years. At highest risk are those individuals with multiple risk factors. Patients who are at risk should be taught preventive measures. Long-distance travelers (flying, train, or automobile) should keep well-hydrated (avoiding alcoholic beverages), avoid constrictive clothing, not cross their legs, walk about frequently, and stretch calf muscles while sitting. Properly fitted below-the-knee graduated compression stockings that provide 15 to 30 mm Hg pressure at the ankle can be worn.

t. migrans Recurring attacks of thrombophlebitis in various sites.

postpartum iliofemoral t. Thrombophlebitis of the iliofemoral artery that occurs after childbirth.

thromboplastic (thrŏm'bŏ-plās'tik) [+ *plassein*, to form] Pert. to or causing blood clot formation.

thromboplastid (thrŏm'bŏ-plās'tid) A platelet.

thromboplastin (thrŏm'bŏ-plās'tin) [+ *plassein*, to form] Blood coagulation factor (III), a substance found in both blood and tissues. It accelerates the clotting of blood.

thromboplastinogen (thrŏm'bŏ-plās'tin'ŏ-jĕn) Blood clotting factor VIII. SEE: *coagulation factor*.

thrombopoiesis (thrŏm'bŏ-pŏy-ē'sis) [+ "] The formation of platelets.

thrombopoietin (thrŏm'bŏ-pŏy-ē'tin) ABBR: TPO. A growth factor that acts on the bone marrow to stimulate plate-

let production as well as the proliferation of other cell lines.

thrombosed (thrōm'bōzd) [Gr. *thrombos*, a clot] 1. Coagulated; clotted. 2. Denoting a vessel containing a thrombus.

thrombosis (thrōm-bō'sis) [r + *osis*, condition] The formation or presence of a blood clot within the vascular system. This is a life-saving process when it occurs during hemorrhage. It is a life-threatening event when it occurs at any other time because the clot can occlude a vessel and stop the blood supply to an organ or a part. The thrombus, if detached, can travel through the bloodstream and occlude a vessel at a distance from the original site; for example, a clot in the leg may break off and cause a pulmonary embolus.

ETIOLOGY: Trauma (esp. following an operation and parturition), cardiac and vascular disorders, obesity, hereditary coagulation disorders, age over 65, an excess of erythrocytes and of platelets, an overproduction of fibrinogen, and sepsis are predisposing causes.

SYMPTOMS: *Lungs:* Obstruction of the smaller vessels in the lungs causes an infarct that may be accompanied by sudden pain in the side of the chest, similar to pleurisy; also present are the spitting of blood, a pleural friction rub, and signs of consolidation. *Kidneys:* Blood appears in the urine. *Skin:* Small hemorrhagic spots may appear in the skin. *Spleen:* Pain is felt in the left upper abdomen. *Extremities:* If a large artery in one of the extremities, such as the arm, is suddenly obstructed, the part becomes cold, pale, bluish, and the pulse disappears below the obstructed site. Gangrene of the digits or of the whole limb may ensue. The same symptoms may be present with an embolism.

If the limb is swollen, one should watch for pressure sores. Burning with a hot water bottle or electric pad should be guarded against. Prolonged bedrest may be necessary, depending on the patient's condition.

TREATMENT: Pathological clots are treated with thrombolytic agents (e.g., streptokinase), antiplatelet drugs (e.g., heparin or aspirin), anticoagulants (e.g., warfarin), or platelet glycoprotein receptor antagonists (e.g., abciximab). When a thrombus or embolus is large and life threatening, surgical removal may be attempted.

cardiac t. Coronary t.

cerebral sinovenous t. A blood clot in one of the main veins that carry blood from the brain, such as the superior sagittal sinus, the lateral sinus, or the straight sinus.

coagulation t. Thrombosis due to coagulation of fibrin in a blood vessel.

coronary t. A blood clot in a coronary

artery, the most common cause of an acute coronary syndrome or a myocardial infarction (heart attack). SYN: *cardiac thrombosis*.

deep venous t. ABBR: DVT. A blood clot in one or more of the deep veins of the legs (the most common site) or the veins of arms, pelvis, neck, axilla, or chest. The clot may damage the vein or may embolize to other organs (e.g., the heart or lungs). Such emboli are occasionally fatal. SEE: *embolism, pulmonary*.

ETIOLOGY: DVT results from one or more of the following conditions: blood stasis (e.g., bedrest); endothelial injury (e.g., after surgery or trauma); hypercoagulability (e.g., factor V Leiden or deficiencies of antithrombin III, protein C, or protein S); congestive heart failure; estrogen use; malignancy; nephrotic syndrome; obesity; pregnancy; thrombocytosis; or many other conditions. DVT is a common occurrence among hospitalized patients, many of whom cannot walk or have one or more of the other risk factors just mentioned.

SYMPTOMS: The patient may report a dull ache or heaviness in the limb, and swelling or redness may be present, but just as often patients have vague symptoms, making clinical diagnosis unreliable.

DIAGNOSIS: Compression ultrasonography is commonly used to diagnose DVT (failure of a vein to compress is evidence of a clot within its walls). Other diagnostic techniques include impedance plethysmography and venography.

TREATMENT: Unfractionated heparin or low molecular weight heparin (LMWH) is given initially, followed by several months of therapy with an oral anticoagulant such as warfarin. The duration of therapy depends on whether the patient has had previous thrombosis and whether, at the end of a specified period of treatment, the patient has an elevated D-dimer level: patients with increased D-dimers after several months of treatment with anticoagulants are more likely than other patients to have recurrent clots if their anticoagulant regimen is discontinued.

COMPLICATIONS: Pulmonary emboli are common and may compromise oxygenation or result in frank cardiac arrest. Postphlebotic syndrome, a chronic swelling and aching of the affected limb, also occurs often.

PREVENTION: In hospitalized patients and other immobilized persons, early ambulation, pneumatic compression stockings, or low doses of unfractionated heparin, LMWH, or warfarin may be given to reduce the risk of DVT.

effort t. Paget-Schreutler syndrome

embolic t. Thromboembolism.

hepatic vein t. An often fatal throm-

botic occlusion of the hepatic veins, marked clinically by hepatomegaly, weight gain, ascites, and abdominal pain. SYN: *Budd-Chiari syndrome*.

infective t. Thrombosis in which there is bacterial infection.

marasmic t. Thrombosis due to wasting diseases.

mural t. Mural thrombus.

placental t. Thrombi in the placenta and veins of the uterus.

plate t. Thrombus formed from an accumulation of platelets.

puerperal t. Coagulation in veins following labor.

septic t. An infected blood clot usually found in the heart or the venous sinuses of the brain.

sinus t. Formation of a blood clot in a venous sinus.

traumatic t. Thrombosis due to a wound or injury of a part.

venous t. Thrombosis of a vein. SEE:

Nursing Diagnoses Appendix.

thrombosphere (thrōm'bō-sfēr) [" + "]

An albumin molecule bonded with fibrinogen. It may serve as a platelet substitute in patients with severe thrombocytopenia and impaired hemostasis.

thrombospondin (thrōm'bō-spōn'dīn)

ABBR: TSP. A glycoprotein secreted by cells whose functions include the ability to prevent both cell-to-cell adhesion and angiogenesis. Thrombospondin is secreted by some parasites and may enhance their ability to cause disease. It is also found in malignant tumors, where it may block tumor growth and metastasis.

thrombostasis (thrōm-bōs'tā-sīs) [" +

stasis, standing still] Stasis of blood in a part, causing or caused by formation of a thrombus.

thrombostenin (thrōm'bō-sthē'nīn) ["

+ *sthenos*, strength] A contractile protein present in platelets. This protein is active in clot retraction.

thrombotic (thrōm-bōt'ik) [Gr. *throm-*

bos, clot] Related to, caused by, or of the nature of a thrombus.

thromboxane A₂ (thrōm-bōk'sān) ABBR:

TXA₂. An unstable compound synthesized in platelets and other cells from a prostaglandin, PGH₂. It acts to aggregate platelets, is a potent vasoconstrictor, and mediates inflammation. SEE: *eicosanoid*; *prostaglandin*; *prostanoids*.

thrombus (thrōm'būs) [Gr. *thrombos*] A

blood clot that adheres to the wall of a blood vessel or organ. In many cases it may obstruct the vessel or organ in which it resides, preventing the flow of blood. Anticoagulants are used to prevent and treat this condition.

agonal t. A blood clot formed in the heart just at the time of death.

annular t. A thrombus whose circumference is attached to the walls of a ves-

sel, while an opening still remains in the center.

antemortem t. A clot formed in the heart or large vessels before death.

ball t. A round clot in the heart, esp. in the atria.

hyaline t. A thrombus having a glassy appearance, usually occurring in smaller blood vessels.

lateral t. Mural t.

milk t. A curdled milk tumor in the female breast caused by obstruction in a lactiferous duct.

mural t. A blood clot that forms on the wall of the heart, esp. along an immobile section of the heart damaged by myocardial infarction or cardiomyopathy. Such clots may occasionally embolize, causing stroke or organ damage. SYN: *lateral thrombus*; *mural thrombosis*; *parietal thrombus*.

obstructing t. A thrombus completely occluding the lumen of a vessel.

occluding t. A thrombus that completely closes the vessel.

parietal t. Mural t.

postmortem t. Blood clot formed in the heart or a large blood vessel after death.

progressive t. Propagated t.

propagated t. A thrombus that increases in size. SYN: *progressive thrombus*.

stratified t. A thrombus composed of layers.

white t. A pale thrombus in any site; made up principally of platelets.

throughput (throo'pūt') **1.** In hospital

management, the sum of the services provided by a health care institution per unit of time. It includes the number of patients treated, admitted, and discharged; the total number of procedures performed; and the quantity of laboratory or radiological services rendered. It is a measure of institutional volume or capacity and a determinant of productivity. **2.** In the laboratory, the analysis, processing, or testing of multiple samples. Techniques that foster the rapid or simultaneous processing of multiple samples are called *high-throughput*.

throwback (thrō'bāk) **1.** To reflect. SEE: *atavism*. **2.** To impair progress.

thrush (thrūsh) [D. *troshe*, rotten wood]

Infection of the mucosa of the mouth caused by *Candida albicans*. In patients with healthy immune systems, it occurs when the balance of normal flora is destroyed during antibiotic therapy or after the use of corticosteroid-based inhalers, which suppress normal white blood cell function in the mouth. It is also common in patients receiving immunosuppressive therapy for organ transplants, in cancer patients, and in those with acquired immunodeficiency syndrome, in whom oral candida infection may be chronic. Occasionally,

healthy neonates and persons who wear dentures develop thrush.

On physical examination, white, raised, creamy, easily removable patches are present on the tongue and other oral mucosal surfaces. The organism is identified by a microscopic examination of scrapings. The infection is treated with a single dose of fluconazole, with clotrimazole lozenges, or with a nystatin oral solution (which must be held in the mouth for 3 min before swallowing) for 14 days; long-term suppressive therapy may be needed for patients with impaired immunity. Dentures should be soaked in an antifungal solution of nystatin. Careful handwashing is essential before doing oral care. SEE: *aphtha*; *candidiasis*; *stomatitis*.

thrust 1. To move forward suddenly and forcibly, as in tongue thrust when the tongue is pushed against the teeth or alveolar ridge at the beginning of deglutition. This may cause open bite or malformed jaws. 2. In physical medicine, a manipulative technique in which the therapist applies a rapid movement to tear adhesions and increase flexibility of restricted joint capsules.

abdominal t. Treatment of airway obstruction that consists of inward and upward thrusts of the thumb side of a closed fist in the area between the umbilicus and the xiphoid process. If the patient is conscious, the procedure is performed from behind the person standing; if the patient is unconscious, it can be performed while kneeling beside or straddling the patient and using the heel of the hand rather than a closed fist. SEE: *Heimlich maneuver*.



This technique is no longer taught for the unconscious patient as the American Heart Association Guidelines replaced it with chest thrusts or CPR compression.

subdiaphragmatic abdominal t. Treatment for patients suspected of having a complete airway obstruction. For conscious, standing adults, it consists of upward and inward thrusts of the thumb side of the rescuer's closed fist, coming from behind the victim, in the area between the umbilicus and the xiphoid process. SEE: *Heimlich maneuver*.

substernal t. A palpable heaving of the chest in the substernal area. This is a physical finding detectable in some persons with right ventricular hypertrophy. SEE: *apical heave*.

thrypsis (thrip'sis) [Gr., breaking in pieces] A fracture in which the bone is splintered or crushed.

thulium (thū'lē-ūm) SYMB: Tm. A lanthanide element; atomic weight, 168.934; atomic number, 69.

thumb (thūm) [AS. *thuma*, thumb] The short, thick first finger on the radial side of the hand, having two phalanges and being opposable to the other four digits. SYN: *pollex*. SEE: *hand* for illus.

gamekeeper's t. Skier's t.

skier's t. An injury to the ulnar collateral ligament of the metacarpophalangeal joint of the thumb. SYN: *gamekeeper's thumb*.

tennis t. Calcification and inflammation of the tendon of the flexor pollicis longus muscle owing to repeated irritation and stress while playing tennis.

thumb sign Protrusion of the thumb across the palm and beyond the clenched fist; seen in Marfan's syndrome.

thumb sucking The habit of sucking one's thumb. Intermittent thumb sucking is not abnormal, but prolonged and intensive thumb sucking past the time the first permanent teeth erupt at 5 or 6 years of age can lead to a misshapen mouth and displaced teeth. If the habit persists, combined dental and psychological therapy should be instituted.

thump (thūmp) To punch or strike with a fist or a mechanical device.

precordial t. A forceful punch delivered to a patient's sternum in an attempt to terminate a lethal cardiac rhythm, such as ventricular fibrillation or ventricular tachycardia.



This procedure is not routinely used. The critical time it consumes during resuscitation may be better used by starting chest compressions and assigning a second rescuer to obtain an automated external defibrillator.

Thunder God vine A toxic plant, *Tripterygium wilfordii*, from which extracts have been obtained that can be used to treat rheumatoid arthritis.

Thygeson's disease [Phillips Thygeson, U.S. physician, 1903–2003] Bilateral corneal inflammation of unknown cause; it often creates a sensation of dry eyes or of a foreign body in the eye, tearing, and photophobia. The cornea is dotted, pitted, or grooved by inflamed channels. Corticosteroids applied topically are effective treatments.

thymectomy (thī-mēk'tō-mē) [Gr. *thymos*, mind, + *ektome*, excision] Surgical removal of the thymus gland.

thymelcosis (thī'mēl-kō'sis) [" + *helcosis*, ulceration] Ulceration of the thymus gland.

-thymia [Gr. *thymos*, mind] A word ending indicating a state of the mind.

thymic (thī'mik) [L. *thymicus*] Rel. to the thymus gland.

t. hormone Any of the hormones produced by the thymus that may help attract lymphoid stem cells to the thymus and stimulate their development into

mature T lymphocytes. These hormones include thymulin, thymopoietin, and thymosin.

thymicolymphatic (thī'mī-kō-līm-fāt'ik) Rel. to the thymus and lymph glands.

thymidine (thī'mī-dēn) A nucleoside present in deoxyribonucleotide. It is formed from the condensation product of thymine and deoxyribose.

thymine (thī'mīn) $C_5N_2H_6O_2$; a pyrimidine base present in DNA (not RNA) where it is paired with adenine.

thymitis (thī-mī'tis) [l' + 'n] Inflammation of the thymus.

thymo- 1. Combining form meaning *thymus*. 2. Combining form meaning *mind*.

thymocyte (thī'mō-sīt) [Gr. *thymos*, mind, + *kytos*, cell] Immature T lymphocytes that reside in the thymus. Fewer than 1% of the lymphoid stem cells that migrate to the thymus reproduce and develop into T lymphocytes capable of binding with specific antigens.

thymokinetic (thī'mō-kī-nēt'ik) [l' + *kinesis*, movement] Stimulating the thymus gland.

thymoma (thī-mō'mā) [l' + 'n] A rare neoplasm, usually found in the anterior mediastinum and originating in the epithelial cells of the thymus. It is often associated with myasthenia gravis and autoimmune diseases. Treatments may include surgical removal, radiation therapy, or chemotherapy.

thymopathy (thī-mōp'ā-thē) A disease of the thymus.

thymopoietin (thī'mō-poy'ē-tīn) A peptide hormone secreted by the thymus that helps thymocytes to mature and respond to specific antigenic stimuli.

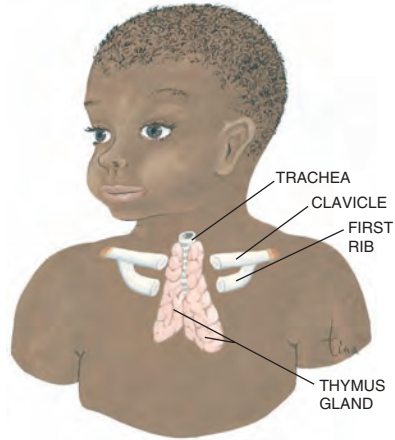
thymoprivic (thī'mō-prīv'ik) [l' + L. *privus*, deprived of] Concerning or caused by removal of the thymus.

thymosin (thī'mō-sin) A peptide hormone, produced in cells of the thymus and believed to play a part in T lymphocyte development.

thymulin (thī'mū-līn) A peptide hormone, released by the thymus, with immune modulating and analgesic actions.

thymus (thī'mūs) [Gr. *thymos*] A lymphoid organ located in the mediastinal cavity anterior to and above the heart, composed of two fused lobes each containing multiple lobules roughly divided into an outer cortex and inner medulla. Immature T cells (thymocytes) make up most of the cortex and some of the medulla. The remaining cells are epithelial cells, with some macrophages. Epithelial cells in some areas of the medulla develop hard cores and are known as Hassall's corpuscles; their purpose is unknown. **SEE: illus.**

The thymus is the primary site for T lymphocyte differentiation. During the prenatal period, lymphoid stem cells migrate from the bone marrow to the thy-



THYMUS IN A YOUNG CHILD

mus. They fill and expand the interstitial spaces between epithelial cells and proliferate rapidly. Almost all of these immature thymocytes are destroyed to eliminate those that would attack self-antigens. Approximately 1% of the thymocytes mature into T cells, with either a CD4 or a CD8 protein marker and receptors capable of binding with specific antigens. The mature T lymphocytes leave the thymus and migrate to the spleen, lymph nodes, and other lymphoid tissue, where they control cell-mediated immune responses.

The thymus weighs from 15 g to 35 g at birth and continues to grow until puberty, when it begins to shrink and the lymphoid tissue is replaced by fibrotic tissue; only about 5 g of thymic tissue remains in adulthood. The reason for involution may be that the organ has produced enough T lymphocytes to seed the tissues of the immune system and is no longer necessary. Removal of the thymus in an adult does not cause the decrease in immune function seen when the gland is removed from children.

PATHOLOGY: Lack of a thymus or thymus hypoplasia is one component of DiGeorge syndrome, which is marked by severe lack of cell-mediated immunity. Thymic hyperplasia results from the growth of lymph follicles containing both B lymphocytes and dendritic cells. It is found in myasthenia gravis and, occasionally, in other autoimmune diseases (e.g., Graves' disease, rheumatoid arthritis, and systemic lupus erythematosus). Thymomas involve only the thymic epithelial cells. Other tumors, including those associated with Hodgkin's disease and lymphomas, involve thymocytes.

accessory t. A lobule isolated from the mass of the thymus gland. It is also

called a supernumerary thymus. SYN: *supernumerary thymus*.

persistent hyperplastic t. Thymus persisting into adulthood, sometimes hypertrophying.

supernumerary t. Accessory t.

thyr- SEE: *thyroido-*.

thyreo- [Gr. *thyreos*, shield] Combining form indicating *thyroid*.

thyro- SEE: *thyroido-*.

thyroadenitis (thī'rō-ād-ē-nī'tis) [" + *aden*, gland, + *itis*, inflammation] Inflammation of the thyroid gland.

thyroaplasia (thī'rō-ā-plā'zē-ā) [" + *a-*, not, + *plasis*, a molding] Imperfect development of the thyroid gland.

thyroarytenoid (thī'rō-ā-rīt'ēn-oyd) [" + *arytaina*, ladle, + *eidosis*, form, shape] Rel. to the thyroid and arytenoid cartilages.

thyrocalcitonin (thī'rō-kāl'tī-sī-tō'nīn) Calcitonin.

thyrocardiac (thī'rō-kār'dē-āk) [" + *kardia*, heart] **1.** Pert. to the heart and thyroid gland. **2.** A person suffering from thyroid disease complicated by a heart disorder.

thyrocele (thī'rō-sēl) [" + *kele*, tumor, swelling] Goiter.

thyrocolloid (thī'rō-kōl'oyd) Colloid contained in the thyroid gland.

thyrocricotomy (thī'rō-krī-kōt'ō-mē) [" + *krikos*, ring, + *tome*, incision] A division of the cricothyroid membrane.

thyroepiglottic (thī'rō-ēp'ī-glōt'īk) [" + *epi*, upon, + *glottis*, back of tongue] Rel. to the thyroid and epiglottis.

thyrofissure (thī'rō-fīsh'ūr) Surgical creation of an opening through the thyroid cartilage to expose the inside of the larynx.

thyrogenic, thyrogenous (thī-rō-jēn'īk, thī-rōj'ē-nūs) [" + *gennan*, to produce] Having its origin in the thyroid.

thyroglobulin (thī'rō-glōb'ū-līn) [" + *L. globulus*, globule] **1.** An iodine-containing glycoprotein secreted by the thyroid gland and stored within its colloid, from which thyroxine and triiodothyronine are derived. **2.** A substance obtained by the fractionation of thyroid glands from the hog, *Sus scrofa*.

thyroglossal (thī'rō-glōs'sāl) [" + *glossa*, tongue] Pert. to the thyroid gland and the tongue.

thyrohyal (thī'rō-hī'āl) Concerning the thyroid cartilage and the hyoid bone.

thyrohyoid (thī'rō-hī'oyd) [" + *hyooides*, U-shaped] Rel. to thyroid cartilage and hyoid bone.

thyroid (thī'royd) [" + *eidosis*, form, shape] **1.** Thyroid gland. **2.** The cleaned, dried, and powdered thyroid gland of animals (also known as thyroid extract). Thyroid extract is used infrequently to treat hypothyroidism and goiter because of its unpredictable potency.

thyroid- SEE: *thyroido-*.

thyroid cachexia Exophthalmic goiter. SEE: *hyperthyroidism*.

thyroid cartilage SEE: under *cartilage*.

thyroidea accessoria, thyroidea ima (thī-roy'dē-ā) Accessory thyroid.

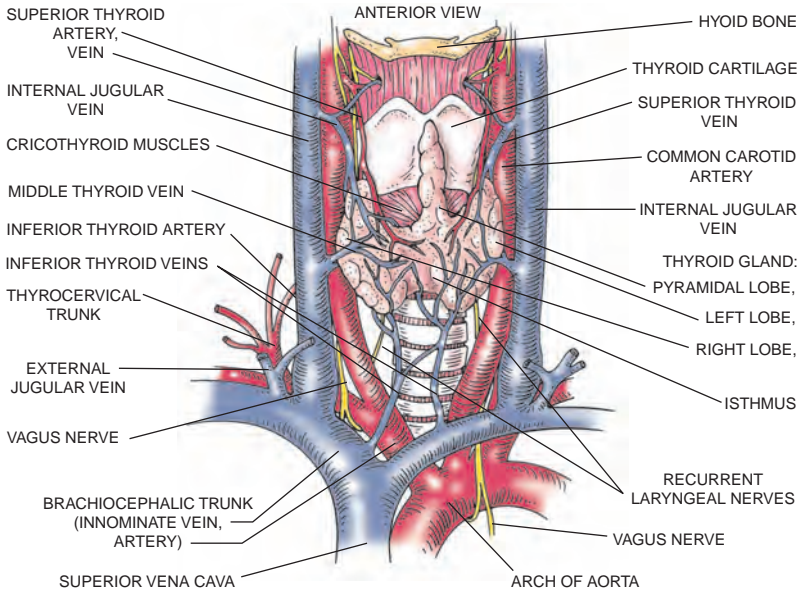
thyroidectomy (thī'royd-ēk'tō-mē) Excision of the thyroid gland, used typically to treat thyroid cancers, goiters, or Grave's disease. SEE: *Nursing Diagnosis Appendix*.

PATIENT CARE: Preoperative: The patient is taught about postoperative care measures and pain management.

Postoperative: All general patient care concerns apply. Attention to airway compromise due to either hemorrhage or recurrent laryngeal nerve injury is emphasized. The patient is maintained in a semi-Fowler's position, with head and neck well supported to ease incisional tension. A Hemovac, or similar low-suction drain, may be in place for the first 24 to 48 hr. The patient is checked for dysphagia and hoarseness, signs of laryngeal nerve injury, and for bleeding or infection. Evidence of hypocalcemia resulting from unrecognized removal of the parathyroid glands must also be assessed both with postoperative parathyroid hormone levels and with physical assessments for tetany. The patient is watched closely for signs of respiratory distress, and in both the recovery room and the patient care setting, there should be equipment for immediate resuscitation: airway reintubation, tracheostomy tray, or both, as well as various pharmacological agents (e.g., calcium chloride, antithyroid agents, and antihypertensives). Immediate notification of the surgeon for suspected problems is mandatory. Discharge teaching focuses on incisional care and signs of infection to be reported immediately. Regular follow-up care is required to manage hypothyroidism, which develops 2 to 4 weeks after total thyroidectomy, and to assess thyroid size and status following subtotal resection.

subtotal t. Surgical excision of part of the thyroid gland, as is performed for benign conditions, equivocal or limited forms of low-grade malignancy, and other conditions. The risk of accidental removal of the parathyroid glands is lessened by this procedure.

thyroid function test A test for evidence of increased or decreased thyroid function, including a clinical physical examination, which is usually reliable, and a variety of reliable laboratory tests. The most commonly used test to assess thyroid function is the measurement of thyroid-stimulating hormone (TSH) with supersensitive assays. Usually, TSH levels are high in hypothyroidism and suppressed in hyperthyroidism, although in patients with



THYROID GLAND AND RELATED STRUCTURES

pituitary masses this pattern may be reversed. Other thyroid function tests include measurements of free and total thyroxine (T_4) and triiodothyronine (T_3), tests of thyroid-binding globulin levels, antithyroid antibody tests, and thyroid gland radioactive iodine uptake (RAIU) measurement. Many of these test results are more difficult to interpret than are TSH results because their normal ranges may vary with pregnancy, liver disease, nutritional status, and other medical conditions. SEE: *hyperthyroidism*; *hypothyroidism*.

thyroid gland A large endocrine gland located in the center of the base of the neck. The gland is composed of two lobes, one on each side of the trachea, and an isthmus of tissue connecting the lower two thirds of each lobe. The isthmus is usually located at the level of the second to third tracheal rings. The whole gland is surrounded by a thin fibrous capsule attached in back to the cricoid cartilage and the first few tracheal rings. The lobes of the thyroid lie under the sternothyroid and sternohyoid muscles. The thyroid is filled with capillary networks (supplied by the superior and inferior thyroid arteries) that surround the many spherical units (follicles) packed inside the gland. Thyroid follicles consist of a ring of follicular cells surrounding a space filled with a clear colloid (a mixture of thyroglobulin proteins and iodine), from which the thyroid hormones (thyroxine and related molecules) are synthesized. These

hormones regulate the rate of cellular metabolism throughout the body. All the steps in synthesizing and releasing thyroid hormones are stimulated by thyroid-stimulating hormone (TSH) secreted by the pituitary gland. Another class of thyroid cells, the parafollicular or C cells, is found outside the follicles; C cells secrete calcitonin, a calcium-lowering hormone. SEE: *illus.*

thyroiditis (thī'royd-ī'tis) [*θ* + *eidōs*, form, shape, + *itis*, inflammation] Inflammation of the thyroid gland. SEE: *struma*, *Riedel's*.

giant cell t. Thyroiditis characterized by the presence of giant cells, round-cell infiltration, fibrosis, and destruction of follicles.

Hashimoto's t. SEE: *Hashimoto's thyroiditis*.

Reidel's t. A rare form of thyroiditis characterized by fibrotic destruction of the thyroid gland. The fibrotic tissue extends beyond the capsule of the gland into the surrounding structures of the neck and may develop sufficiently to compress the trachea. The etiology is unknown.

thyroido-, thyroid-, thyro-, thyr- [Gr. *thyrooedēs*, fr. *thyroos*, shield + *eidōs*, form] Combining forms meaning *thyroid gland*.

thyroidotomy (thī'royd-ōt'ō-mē) [*θ* + *tōmē*, incision] Incision of the thyroid gland.

thyroid stimulating hormone-releasing factor ABBR: TSH-RF. An obsolete term for thyrotropin releasing hormone.

thyroid storm A rare but often life-threatening medical emergency resulting from untreated hyperthyroidism. It is marked by fevers, sweating, restlessness, irritability, tachycardia, hypertension, heart failure, shock, and cardiac arrhythmias, delirium, and coma, among other findings. It may begin when a patient with hyperthyroidism suffers a second illness (e.g., an infection), after thyroid gland surgery, or after withdrawal from antithyroid drug treatment. SYN: *thyroid crisis*; *thyrotoxic crisis*.

TREATMENT: Antithyroid medications (e.g., propylthiouracil) to block sympathetic effects, beta blockers (e.g., propranolol) to manage tachycardia, high-dose steroids (corticosteroid) to inhibit conversion of T_4 to T_3 and to replace depleted cortisol, and an iodide to block release of thyroid hormone, as well as volume infusions, are needed. Any secondary illness should be aggressively treated as well.

PATIENT CARE: Supplemental oxygen is administered, along with nutrients and vitamins to manage the hypermetabolic state, and sedatives. A calm cool, darkened, and quiet reassuring atmosphere helps to reduce restlessness. Underlying infections are treated with antibiotics. Acetaminophen is given to reduce fevers; anxiolytic drugs are used to reduce psychological distress. Cardiac status, level of consciousness, fluid and electrolyte balance, and blood glucose are monitored closely. After the crisis resolves, adherence to prescribed medications and the close outpatient follow-up may be needed with health care providers. Medical management of hyperthyroidism on an outpatient basis involves adjustment of drug doses, regular follow-up of thyroid function tests, complete blood counts, and prompt evaluation of fevers, sore throat, tachycardias, or other complications. Surgical referral may be needed for the patient requiring thyroidectomy.

thyromegaly (thī'rō-mēg'ă-lē) [" + *me-gas*, large] Enlargement of the thyroid gland.

thyroparathyroidectomy (thī'rō-pār"ă-thī'royd-ĕk'tō-mē) [" + *para*, beside, + *thyreos*, shield, + *eidōs*, form, shape, + *ektōme*, excision] Surgical removal of the thyroid and parathyroid glands.

thyropathy (thī-rōp'ă-thē) [" + *pathos*, disease, suffering] Any disease of the thyroid.

thyroplasty (thī'rō-plās'tē) A surgical procedure for altering the configuration of the thyroid cartilage adjacent to the vocal cords. This is done to treat certain types of dysphonia. SYN: *laryngeal framework surgery*.

thyroprivia (thī'rō-priv'ē-ă) [" + L. *priv-*

us, single, set apart] Hypothyroidism due to deficient action of or removal of the thyroid. **thyroprival**, *adj.*

thyroptosis (thī'rōp-tō'sis) [" + *ptōsis*, a dropping] Downward displacement of the thyroid into the thorax.

thyrotome (thī'rō-tōm) [" + *tōme*, incision] A knife for cutting the thyroid cartilage.

thyrotomy (thī-rōt'ō-mē) **1.** The splitting of the thyroid cartilage anteriorly in midline to expose laryngeal structures. **2.** Surgery on the thyroid gland.

thyrotoxic (thī'rō-tōks'ik) [" + *toxikon*, poison] Pertaining to, affected by, or marked by toxic activity of the thyroid gland.

thyrotoxic heart disease A disease due to increased activity of the thyroid gland, marked by cardiac enlargement, atrial fibrillation, and high-output heart failure. SEE: *thyrotoxicosis*.

thyrotoxicosis (thī'rō-tōks'ī-kō'sis) [" + " + *osis*, condition] Hyperthyroidism.

thyrotroph (thī'rā-trōf") Thyroid hormone producing. The term is usually used to denote cells or adenomas in the pituitary gland that secrete thyroid-stimulating hormone.

thyrotropic (thī'rō-trōp'ik) [" + *tropē*, a turning] That which has an affinity for or stimulates the thyroid gland.

thyrotropin (thī-rōt'rō-pīn) A hormone secreted by the anterior lobe of the pituitary that stimulates the thyroid gland. SYN: *thyroid-stimulating hormone*; *thyrotropic hormone*.

thyrotropism (thī-rōt'rō-pīzm) Affinity for the thyroid.

thyroxine (thī-rōks'īn) [Gr. *thyreos*, shield] ABBR: T_4 . One of the principal hormones secreted by the thyroid gland that increases the use of all food types for energy production and increases the rate of protein synthesis in most tissues. It is used to treat hypothyroidism. Chemically, it is 3,5,3',5'-tetraiodothyronine. SYN: *tetraiodothyronine*. SEE: *thyroid*; *thyroid function test*; *triiodothyronine*.

Ti **1.** Symbol for the element titanium.

2. Inspiratory time; the time it takes to inhale.

TIA *transient ischemic attack*.

tibia (tib'ē-ă) [L., *tibia*, shinbone] The inner and larger bone of the leg between the knee and the ankle; it articulates with the femur above and with the talus below.

saber-shaped t. A deformity caused by gummatous periostitis (syphilitic) in which the tibia curves outward.

t. valga A bulging of the lower legs in which the convexity is inward. SYN: *genu valgum*.

t. vara Blount's disease.

tibial (tib'ē-ăl) [L. *tibialis*] Concerning the tibia.

tibialgia (tib'ē-āl'jē-ā) [t' + Gr. *algos*, pain] Pain in the tibia.

tibialis (tib'ē-ā'lis) [L.] Pert. to the tibia.

tibioadductor reflex (tib'ē-ō-ād-dūk'tor) [*L. tibia*, shinbone, + *adducere*, to lead to] Adduction of either the stimulated leg or the opposite one when the tibia is percussed on the inner side.

tibiocalcanean (tib'ē-ō-kāl-kā'nē-ān) Concerning the tibia and calcaneus.

tibiofemoral (tib'ē-ō-fēm'or-āl) [t' + L. *femur*, thigh] Rel. to the tibia and femur.

tibiofibular (tib'ē-ō-fīb'ū-lār) [t' + L. *fibula*, pin] Pert. to the tibia and fibula.

tibionavicular (tib'ē-ō-nā-vīk'ū-lār) Pert. to the tibia and navicular bones.

tibiotalar (tib'ē-ō-tār'sāl) [t' + Gr. *tarsos*, broad, flat surface] Rel. to the tibia and tarsus.

tic (tik) [Fr.] A spasmodic muscular contraction, most commonly involving the face, mouth, eyes, head, neck, or shoulder muscles. The spasms may be tonic or clonic. The movement appears purposeful, is often repeated, is involuntary, and can be inhibited for a short time only to burst forth with increased severity.

Children between the ages of 5 and 10 years are esp. likely to develop tics. SEE: *Tourette's syndrome*.

ETIOLOGY: In most cases, the cause is unknown. In some people, the tic is worsened by anxiety and nervous tension.

convulsive t. Spasm of the facial muscles supplied by the seventh cranial nerve.

t. douloureux Trigeminal neuralgia. SEE: *Nursing Diagnoses Appendix*.

facial t. Tic of the facial muscles.

habit t. Habitual repetition of a grimace or muscular action.

t. rotatoire Spasmodic torticollis in which the head and neck are forcibly rotated or turned from one side to the other.

vocal t. Grunts and barking sounds that may be made by persons with Tourette's syndrome.

tick (tik) [ME, *tyke*] Any of the numerous bloodsucking arthropods of the order Acarida. Ixodidae is the hard tick family and Argasidae the soft. Ticks transmit many diseases to humans and animals. SEE: *illus.*

t. bite SEE: *under bite*.

wood t. *Dermacentor andersoni*, an important North American species of tick, which causes tick paralysis and transmits causative organisms of Rocky Mountain spotted fever and tularemia. SEE: *tick for illus.*

tick-borne rickettsiosis The spotted-fever group (SFG) of tick-borne rickettsioses. Included are infections caused by the pathogenic organism *Rickettsia rickettsii*, which causes Rocky Mountain



WOOD TICK

Dermacentor (×4)

spotted fever. There are six other pathogenic SFG rickettsial species, five of which (*R. conorii*, *R. sibirica*, *R. japonica*, *R. australis*, and *R. africae*) are most likely to be transmitted by a tick bite. *R. akari*, which causes rickettsialpox, is transmitted to humans by mouse mites.

tickle (tik'l) [ME. *tikelen*] 1. Peculiar sensation caused by titillation or touching, esp. in certain areas of the body, resulting in reflex muscular movements, laughter, or other forms of emotional expression. 2. To arouse such a sensation by touching a surface lightly.

tickling (tik'ling) Gentle stimulation of a sensitive surface and its reflex effect, such as involuntary laughter. SYN: *titillation*.

t.i.d. *L. ter in die*, three times a day.

tidal (ti'dāl) Periodically rising and falling, increasing and decreasing.

tide [AS. *tid*, time] Alternate rise and fall; a space of time.

acid t. Temporary increase in acidity of urine caused by increased secretion of alkaline substances into the duodenum or by fasting.

alkaline t. Temporary decrease in acidity of urine following awakening and after meals. The former results from an increased rate of breathing, in which excess carbon dioxide is eliminated; the latter results from an increase of base in the blood following the secretion of HCl into gastric juice.

fat t. Increased fat in the lymph and blood after a fatty meal.

-tidine (ti-dēn") A suffix used in pharmacology to designate an H₂receptor antagonist.

Tietze's syndrome (tēt'sēz) [Alexander Tietze, Ger. surgeon, 1864–1927] Inflammation of the costochondral cartilages. This self-limiting disease is of unknown etiology. The pain may be confused with that of myocardial infarction. There is no specific therapy, but

some relief is provided by injecting the area with local anesthetics or corticosteroids. SYN: *costochondritis*.

tigretier (tĕ-grĕt'ĕ-ă) [Fr.] A dancing mania or form of tarantism caused by the bite of a poisonous spider, occurring in Tigre, Ethiopia.

tigroid (tĭ'grōyd) [Gr. *tigroëides*, tiger-spotted] Striped, spotted, or marked like a tiger.

tigroid bodies Masses of chromophil substance present in the cell bodies of neurons. SEE: *Nissl body*.

tigrolysis (tĭg'rōl'ĭ-sĭs) Chromatolysis.

tilmus (tĭl'mūs) [Gr. *tilmos*, a plucking] Carphology.

tiltometer (tĭl-tŏm'ĕ-tĕr) A device for measuring the degree of tilt of a bed or operating table; used to determine which end of the spinal canal is lower when spinal anesthesia has been given.

timbre (tĭm'bĕr, tām'br) [Fr., a bell to be struck with a hammer] The resonance quality of a sound by which it is distinguished, other than pitch or intensity, depending on the number and character of the vibrating body's overtones.

time (tĭm) [AS. *tīma*, time] The interval between beginning and ending; measured duration.

association t. SEE: *association test*.

backup t. In radiography, the time setting selected before an automated exposure, usually 150% of the anticipated total exposure time for projection.

bleeding t. The time required for blood to stop flowing from a small wound or pinprick. It is assessed using one of several techniques. Depending on the method used, the time may vary from 1 to 3 min (Duke method) or from 1 to 9 min (Ivy method). The Duke method consists of timing the cessation of bleeding after the ear lobe has received a standardized puncture. The Ivy method is done in a similar manner following puncture of the skin of the forearm. The validity of this test to predict clinically significant bleeding has been questioned.

clot retraction t. The time required following withdrawal of blood for a clot to completely contract and express the serum entrapped within the fibrin net. The normal time is about 1 hr. Clot retraction depends on the number of platelets in the specimen.

coagulation t. The time required for a small amount of blood to clot. This can be determined by collecting blood in a small test tube and noting elapsed time from the moment blood is shed to the time it coagulates.

cycle t. The period between regular events, e.g., inflations of an automated blood pressure monitor.

doubling t. The length of time needed for a malignant tumor cell population to double in size.

dwelt t. The length of time a therapeutic substance will be retained in the body.

intestinal transit t. The speed with which consumed food passes through the gut. It is slowed by anticholinergic agents (e.g., tricyclic antidepressants) and by neuropathic diseases of the stomach or intestines (e.g., diabetes mellitus). Many agents increase intestinal transit, including erythromycin and nonabsorbable laxatives.

median lethal t. The time required for half of a population to die after exposure to ionizing radiation.

partial thromboplastin t. The time needed for plasma to clot after the addition of partial thromboplastin; used to test for defects of the clotting system.

prothrombin t. SEE: *prothrombin time*.

reaction t. The period between application of a stimulus and the response.

recovery t. 1. The time between the end of an anesthetic infusion and the opening of a patient's eyes. 2. The time between the end of an anesthetic infusion and the patient's ability to oxygenate and ventilate without mechanical assistance.

response t. 1. The delay between the first administration of a medication and the onset of or recovery from its effects. 2. Duration of reaction.

setting t. The time required for a material to polymerize or harden, as in dental amalgam, cement, plaster, resin, or stone.

thermal death t. The time required to kill a bacterium at a certain temperature.

turn-around-time ABBR: TAT. The time it takes to process an order and carry it out (e.g., the time it takes to order and receive laboratory test results).

time diary Time inventory.

timed up-and-go test ABBR: TUGT. A test that measures mobility by assessing the time it takes for a person to rise from a chair, walk a measured distance, and turn around. The test is used to assess balance and gait, esp. in the elderly.

time inventory A personal record of how time is used or managed by a patient or client. It provides a detailed outline of daily activities, including the subject's primary and secondary activities, social interaction, and places where daily activities occur. SYN: *time diary*.

time-out A method of discipline that involves removing a child from social interaction and placing him or her in a nonstimulating location (i.e., in a quiet room) for a few minutes because of unacceptable behavior.

time pressure The psychological stress that results from having to get things

done in less time than is needed or desired.

timer (tīm'ēr) A device for measuring, signaling, recording, or otherwise indicating elapsed time. Various forms of timers are used in radiographic, surgical, and laboratory work.

time use survey An inventory of the activities of a population of interest, used, e.g., to measure economic productivity, health risks, leisure pursuits, and traffic flow.

time zone change syndrome Desynchronization.

timothy grass (tīm'ō-thē grās) [Timothy Hanson, 18th century American farmer who cultivated the grass] *Phleum pratense*.

tin (tīn) [AS.] SYMB; Sn. A metallic element used in various industries and in making certain tissue stains; atomic weight, 118.69; atomic number, 50. SEE: *tin poisoning*.

tinct (tīnkt) *tincture*.

tinctable (tīnk'tā-bl) Stainable.

tincture (tīnk'shūn) [L. *tingere*, to dye]

1. The process of staining. 2. A stain.

tinctorial (tīnk-tō'rē-āl) [L. *tinctorius*, dyeing] Rel. to staining or color.

tincturation (tīnk'tū-rā'shūn) Making a tincture from an appropriate drug.

tincture (tīnk'chūr) [L. *tincture*, a dyeing] An alcoholic extract of vegetable or animal substances. SYN: *tinctura*.

tincture of iodine Obsolete term for a simple alcoholic solution of iodine.

tine (tīn) A sharp, pointed prong.

tinea (tīn'ē-ā) [L., worm] Any fungal skin disease occurring on various parts of the body. SEE: *dermatomycosis*.

FINDINGS: There are two types of findings. Superficial findings are marked by scaling, slight itching, reddish or grayish patches, and dry, brittle hair that is easily extracted with the hair shaft. The deep type is characterized by flat, reddish, kerion-like tumors, the surface studded with dead or broken hairs or by gaping follicular orifices. Nodules may be broken down in the center, discharging pus through dilated follicular openings.

TREATMENT: Griseofulvin, terbinafine, or ketoconazole is given orally for all types of true trichophyton infections. Local treatment alone is of little benefit in ringworm of the scalp, nails, and in most cases the feet. Topical preparations containing fungicidal agents are useful in the treatment of tinea cruris and tinea pedis.

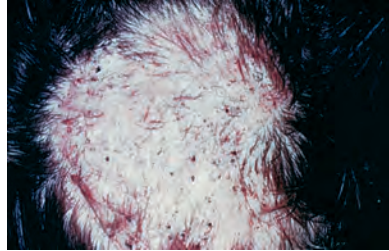
Personal hygiene is important in controlling these two common diseases. The use of antiseptic foot baths to control tinea pedis does not prevent spread of the infection from one person to another. Persons affected should not let others use their personal items such as clothes, towels, and sports equipment.

Tinea of the scalp, tinea capitis, is particularly resistant if due to *Microsporum audouinii*. It should not be treated topically. Systemic griseofulvin is quite effective.

t. amiantacea Sticky scaling of the scalp following infection or trauma.

t. barbae Barber's itch.

t. capitis A fungal infection of the scalp. It may be due to one of several types of *Microsporum* or to *Trichophyton tonsurans*. SEE: *illus.*; *kerion*.



TINEA CAPITIS

t. corporis Tinea of the body. It begins with red, slightly elevated scaly patches that on examination reveal minute vesicles or papules. New patches spring from the periphery while the central portion clears. There is often considerable itching. SEE: *illus.*



TINEA CORPORIS

t. cruris A fungus skin disease of surfaces of contact in the scrotal, crural, anal, and genital areas. Also called "jock itch." SYN: *dhobie itch*. SEE: *illus.*

t. imbricata Chronic tinea caused by *Trichophyton concentricum*. It is present in tropical regions. The annular lesions have scales at their periphery.

t. incognita Tinea corporis that grows rapidly and in unusual patterns after the use of topical steroids.

t. kerion Kerion.

t. nigra An asymptomatic superficial fungal infection that affects the skin of the palms. Caused by *Cladosporium werneckii* or *C. mansonii*, it is characterized by deeply pigmented, macular, nonscaly patches. SYN: *pityriasis nigra*.

t. nodosa Sheathlike nodular



TINEA CRURIS (inner thigh)

masses in the hair of the beard and mustache from growth of either *Piedraia hortae*, which causes black piedra, or *Trichosporon beigeli*, which causes white piedra. The masses surround the hairs, which become brittle; hairs may be penetrated by fungus and thus split. SYN: *piedra*.

t. pedis Athlete's foot.

t. profunda Majocchi's disease.

t. sycosis Barber's itch (2).

t. tonsurans Tinea capitis.

t. unguium Onychomycosis.

t. versicolor A fungus infection of the skin producing yellow or fawn-colored branny patches. A topically applied azole antifungal cream or 2% selenium sulfide lotion is effective in treating the causative agent, the fungus *Malassezia furfur*. SYN: *pityriasis versicolor*. SEE: *illius*.



TINEA VERSICOLOR (on back)

Tinel's sign (tīn-ĕlz') [Jules Tinel, Fr. neurologist, 1879–1952] A cutaneous tingling sensation produced by pressing on or tapping the nerve trunk that has been damaged or is regenerating following trauma.

tine test Tuberculin tine test.

Tinetti test (tī-nĕt'tĕ) A measurement of

functional ability that incorporates observation of performance of 13 activities. The activities include sitting, rising from a chair, standing, turning, reaching up, and bending down. The rating scale is normal, adaptive, or abnormal.

tingibility (tīn'jī-bil'ī-tē) The property of being stainable.

tingible (tīn'jī-bl) [L. *tingere*, to stain] Capable of being stained by a dye.

tingle (tīng'gl) A prickling or stinging sensation that may be caused by cold or nerve injury.

tinnitus (tīn-ī'tūs) [L., a jingling] A subjective ringing, buzzing, tinkling, or hissing sound in the ear. For some patients, this causes only minor irritation; for others, it is disabling.

ETIOLOGY: It may be caused by impacted cerumen, myringitis, otitis media, Ménière's disease, otosclerosis, or drug toxicities (esp. salicylates and quinine).

tip (tip) [ME.] A point, end, or apex of a part.

tipped uterus Malposition of the uterus. In the past, this has been invoked as the cause of numerous conditions, including pelvic pain, back pain, abnormal uterine bleeding, infertility, and emotional difficulties. Simple malposition of the uterus without evidence of a specific disease condition that accounts for the malposition is felt to be harmless and virtually symptomless. It is essential, therefore, that individuals who have been told that a tipped uterus is the cause of their symptoms be carefully examined to attempt to find a specific organic cause for the symptoms. If in the absence of other findings a vaginal pessary relieves symptoms associated with a retrodisplaced uterus and these symptoms return when the pessary is removed, then surgical suspension of the uterus is indicated. If surgery is not acceptable to the patient, the pessary may be worn intermittently. Evidence is lacking that a tipped uterus is an important cause of pelvic pain and discomfort.

tipping (tīp'ing) Angulation of a structure, such as a tooth about its long axis, the patella when it moves away from the frontal plane of the femur, or the scapula when the inferior angle moves away from the rib cage.

TIPS (tips) *transjugular intrahepatic portosystemic shunt*.

tiqueur (tī-kĕr') [Fr.] One afflicted with a tic.

tire (tīr) [AS. *teorian*, to tire] 1. To become fatigued. 2. To exhaust or fatigue.

tires (tīrz) Trembles.

tiring (tīr'ing) Fastening wire around the fragments of a bone.

tissue (tīsh'ū) [O.Fr. *tissu*, from L. *texere*, to weave] A group or collection of similar cells and their intercellular sub-

stance that perform a particular function. The four major groups are epithelial, connective, muscular, and nervous tissues.

adipose t. Fat.

areolar t. A form of loose connective tissue consisting of fibroblasts in a matrix of tissue fluid and collagen and elastin fibers. Many white blood cells are present. It is found subcutaneously and beneath the epithelium of all mucous membranes. SEE: *connective t.* for illus.

bone t. Osseous t.

bronchus-associated lymphoid t. ABBR: BALT. Lymph nodules that contain clusters of T and B lymphocytes and macrophages within the mucosa of the bronchial wall; a component of the mucosal immune system that defends all mucosal surfaces against pathogens. SEE: *immune system, mucosal.*

brown adipose t. ABBR: BAT. Brown fat.

cancellous t. Spongy bone with many marrow cavities. It is present at the ends of long bones and in the interior of most flat bones.

chondroid t. Embryonic cartilage.

chordal t. Tissue of the notochord or derived from it. The nucleus pulposus is derived from the notochord.

chromaffin t. Chromaffin system.

connective t. Tissue that supports and connects other tissues and parts of the body. Connective tissue has comparatively few cells. Its bulk consists of intercellular substance or matrix, whose nature gives each type of connective tissue its particular properties. The vascular supply varies: cartilage, none; fibrous, poor; adipose, good; and bone, abundant. Connective tissue includes the following types: areolar, adipose, fibrous, elastic, reticular, cartilage, and bone. Blood may also be considered a connective tissue. SEE: *illus.*

elastic t. A form of connective tissue in which yellow elastic fibers predominate. It is found in certain ligaments, the walls of blood vessels, esp. the larger arteries, and around the alveoli of the lungs.

embryonic t. Any tissue as yet undifferentiated or fully specialized.

endothelial t. Endothelium.

epithelial t. Epithelium.

erectile t. Spongy tissue, the spaces of which fill with blood, causing it to harden and expand. It is found in the penis, clitoris, and nipples.

fatty t. Fat.

fibrous t. Connective tissue consisting principally of collagen fibers. Also called white fibrous or dense connective tissue; may be regular (parallel fibers) or irregular.

gelatinous t. Tissue from which gelatin may be obtained by treating it with hot water.

glandular t. A group of epithelial cells capable of producing secretions.

granulation t. The newly formed vascular and connective tissue produced in the early stages of wound healing.

hard t. In dentistry, the term used to denote any of the three calcified tissue components of the tooth: enamel, dentin, and cementum.

homologous t. Tissues that are identical in structure.

indifferent t. Tissue composed of undifferentiated cells as in embryonic tissue.

interstitial t. Connective tissue that forms a network with the cellular portions of an organ.

lymphadenoid t. Aggregates of lymphatic tissue found in the spleen and lymph nodes.

lymphoid t. Collections of lymphocytes in all stages of development found in the spleen, thymus, lymph nodes, lymph nodules of the digestive tract (tonsils, Peyer's patches), and the respiratory, urinary, and reproductive tracts.

mesenchymal t. The embryonic mesenchyme.

mucosa-associated lymphoid t. ABBR: MALT. Aggregates of T and B lymphocytes found in all mucous membranes, a line of defense against infection. Examples include Peyer's patches in the small intestine and lymph nodules in the colon, trachea, and bronchi. MALT contains CD4+ and CD8+ T cells and activated B cells and may occasionally undergo malignant transformation into lymphomas. SEE: *mucosal immune system.*

mucous t. The jellylike connective tissue of the umbilical cord.

muscular t. Muscle.

myeloid t. The bone marrow in which most blood cells are formed.

nerve t. The neurons and neuroglia of the nervous system. SEE: *neuron.*

osseous t. Bone, a connective tissue with a matrix of calcium phosphate and calcium carbonate surrounding osteocytes SYN: *bone tissue.* SEE: *bone.*

reticular t. A type of connective tissue consisting of delicate fibers forming interlacing networks. Fibers stain selectively with silver stains and are called argyrophil fibers. Reticular tissue supports blood cells in lymph nodes, bone marrow, and the spleen.

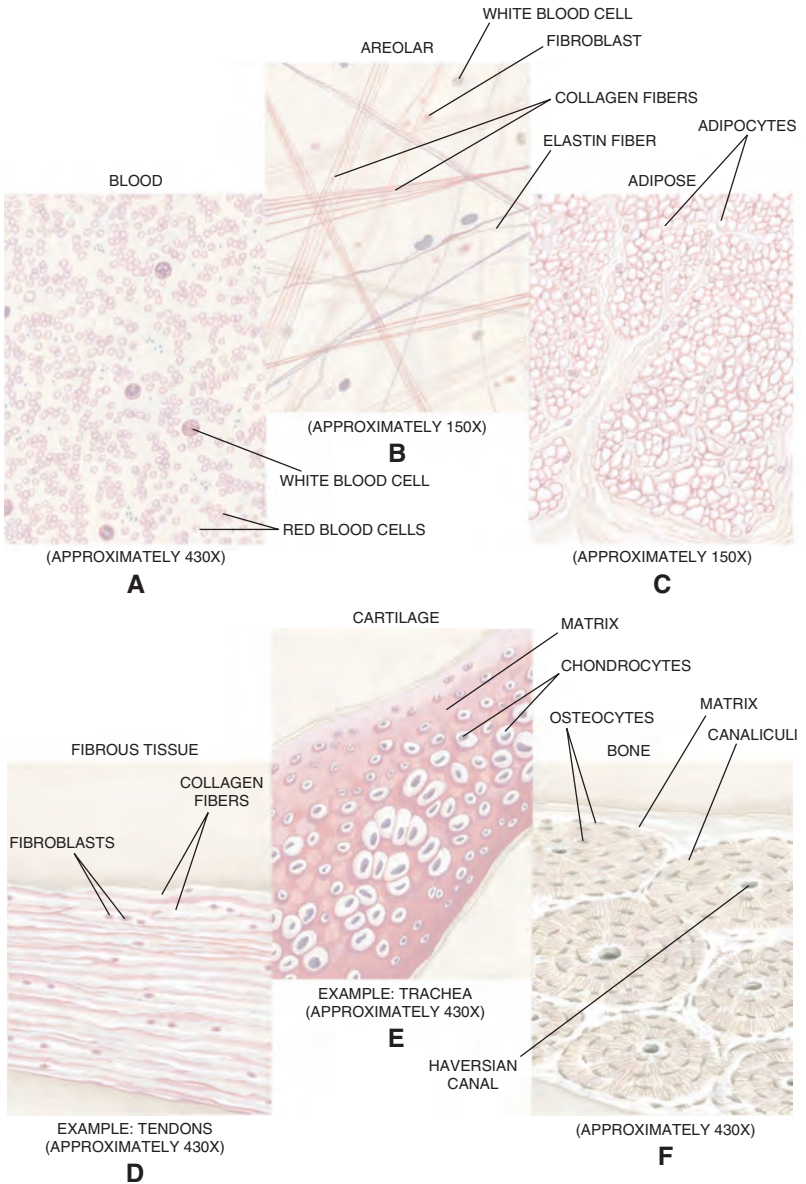
sclerous t. Firm connective tissue such as bone and cartilage.

skeletal t. Bone.

splenic t. The highly vascular splenic pulp.

subcutaneous t. Superficial fascia.

tissue ablation The coagulation, cooking, drying, or destruction of tissues, e.g., with cautery, chemicals, or thermotherapy.



CONNECTIVE TISSUES

(A) blood, (B) areolar, (C) adipose, (D) fibrous, (E) cartilage, (F) bone

tissue air ratio In radiation therapy, the ratio of the absorbed dose at a given depth to the absorbed dose at the same point in free space.

tissue bank A facility for collecting, processing, and storing tissue for later transplantation. Tissue stored includes bone, skin, nerve, fascia, tendon, heart

valve, dura mater, cornea, and bone marrow. These are tested for microbial pathogens and stored either in a freeze-dried or frozen state.

tissue expansion, soft A technique used in plastic surgery to expand skin prior to excising an area to achieve a more cosmetic wound closure. One or more

expander balloons are inserted under the skin. The balloons are then expanded by progressively increasing the amount of saline solution in them. This is done on a weekly basis for whatever time is required to sufficiently stretch the overlying skin. After the expansion is completed, the plastic surgical procedure is performed. This permits removal of skin without having to cover the area by a skin graft. SEE: *surgery, plastic; W-plasty; Z-plasty.*

tissue factor ABBR: TF. Coagulation factor III.

tissue filler Any substance used to smooth body contours, eliminate defects in body structure, or improve cosmesis.

tissue integrity, impaired A state in which an individual experiences damage to mucous membrane or corneal, integumentary, or subcutaneous tissue. SEE: *Nursing Diagnoses Appendix.*

tissue perfusion, ineffective (specific type): renal, cerebral, cardiopulmonary, gastrointestinal, peripheral The state in which an individual experiences a decrease in nutrition and oxygenation at the cellular level due to a deficit in capillary blood supply. SEE: *Nursing Diagnoses Appendix.*

tissue plasminogen activator ABBR: TPA. **1.** A natural enzyme that helps degrade blood clots by freeing plasmin from plasminogen. Plasmin in turn breaks down fibrin, the substance that forms the structural meshwork of clots. **2.** A recombinant enzyme, produced in the laboratory by *Escherichia coli*, for use in the treatment of thrombosis, esp. in myocardial infarction and ischemic stroke. Recombinant TPA is one of several thrombolytic drugs that can be given to patients during myocardial infarction (MI) to restore the flow of blood through occluded coronary arteries. Restoring perfusion keeps heart muscle from dying, reduces the damage caused by the infarction, and reduces the subsequent risk of congestive heart failure and death. SYN: *recombinant TPA.* SEE: *thrombolysis.*

tissue processor **1.** A device that prepares tissue samples for sectioning and microscopic examination in the clinical laboratory. **2.** A device that disinfects tissues to use in transplantation or allograft surgery.

tissue reaction The response of living tissues to altered conditions or types of restorative materials, metals or cements.

tissular (tish'ū-lār) Concerning living tissues.

titanium (tī-tā'nē-ūm) [L. *titan*, the sun] SYMB: Ti. A metallic element found in combination with minerals; atomic weight, 47.90; atomic number, 22; specific gravity, 4.54. In dentistry, it is used as an alloy chiefly for appliances and

implants because of its biological acceptance and resistance to corrosion.

t. dioxide A chemical used to protect the skin from the sun. It is also used in industrial applications to produce white in paints and plastics.

Türk's irritation cell A cell resembling a plasma cell, found in cases of severe anemia or chronic infection.

titer (tī'tēr) [F. *titre*, standard] Standard of strength per volume of a volumetric test solution.

agglutination t. The highest dilution of a serum that will cause clumping (agglutination) of the antigen being tested.

antibody t. The concentration of a specific antibody in plasma. Antibody titers are used to establish the diagnosis of some infectious diseases: a rising titer indicates a recent exposure to a specific infectious antigen.

titillation (tīt'īl-ā'shūn) [L. *titillatio*, a tickling] **1.** The act of tickling. **2.** The state of being tickled. **3.** The sensation produced by tickling.

titin (tī'tin) An elastic protein in sarcomeres that anchors myosin filaments to the Z disks.

titrate (tī'trāt) To determine or estimate by titration.

titration (tī-trā'shūn) [Fr. *titre*, a standard] **1.** Estimation of the concentration of a chemical solution by adding known amounts of standard reagents until alteration in color or electrical state occurs. **2.** Determination of the quantity of antibody in an antiserum.

titre (tīt'ēr) Titer.

titrimetric (tī'trī-mēt'rīk) [" + Gr. *metron*, measure] Employing the process of titration.

titrimetry (tī-trīm'ē-trē) [*titration* + Gr. *metron*, measure] Analysis by titration.

titubation (tīt'ū-bā'shūn) [L. *titubatio*, a staggering] A coarse and backward tremor of the trunk. In patients with cerebellar disease, standing sometimes provokes this tremor.

lingual t. Stuttering.

Tl Symbol for the element thallium.

TLC **1.** *tender loving care*. **2.** *total lung capacity*. **3.** *thin-layer chromatography*.

TLD *thermoluminescent dosimeter*.

T.L.R. *tonic labyrinthine reflex*.

Tm **1.** Symbol for the element thulium.

2. Symbol for maximal tubular excretory capacity of the kidneys.

TMJ *temporomandibular joint*.

TMP *trimethoprim*.

Tn Symbol for normal intraocular tension.

TNF *tumor necrosis factor*.

TNM classification Method of classifying malignant tumors with respect to primary tumor, involvement of regional lymph nodes, and presence or absence of metastases. SEE: *cancer*.

TNT *trinitrotoluene*.

toadskin (tōd'skīn) A condition characterized by excessive dryness, wrinkling, and scaling of skin sometimes seen in vitamin deficiencies.

toadstool (tōd'stool) Any of various fungi with an umbrella-shaped cap, esp. a poisonous mushroom.

tobacco (tō-bāk'ō) [Sp. *tabaco*] A plant (scientific name *Nicotiana tabacum*) whose leaves are cultivated, dried, and adulterated for use in smoking, chewing, and snuffing. The use of tobacco creates more preventable disability and death than the use of any other commercially available product. The tobacco leaf contains nicotine, a highly addictive alkaloid, and numerous other chemicals. During its combustion, it releases thousands of hydrocarbons into the oral, digestive, and respiratory tract of the smoker. These substances have been linked to coronary and peripheral arterial disease, emphysema, chronic bronchitis, peptic ulcer disease, and cancers of the lungs, oral cavity, and gastrointestinal tract. SEE: *risk factor*; *passive smoking*; *smokeless tobacco*.

smokeless t. Tobacco used in the form of snuff, tobacco powder, or chewing tobacco. These products irritate the oral mucosa and gingiva, and their continued use results in an increased risk of cancer of the mouth, larynx, throat, and esophagus. Smokeless tobacco contains nicotine and is addictive. Its use is greatest among adolescents, esp. males. An estimated 1.4% to 8.8% of adults in the U.S. use smokeless tobacco products. SEE: *snuff* (2).

spit t. SEE: *smokeless t.*

TOTEC *total body electrical conductivity.* One of several means of estimating or measuring body composition.

Tobias syndrome Apical lung cancer.

toco- Combining form indicating relationship to *labor* or *childbirth*.

tocodynamograph (tō'kō-dī'nā-grāf) [Gr. *tokos*, birth, + *dynamis*, power, + *graphein*, to write] A record obtained by using a tocodynamometer.

tocodynamometer (tō'kō-dī'nām-ōm'ē-tēr) [+ *dynamis*, power, + *metron*, a measure] A device for estimating the force of uterine contractions in labor.

tocograph (tōk'ō-grāf) [+ *graphein*, to write] A device for estimating and recording the force of uterine contractions.

tocography (tō'kōg'rā-fē) Recording the intensity of uterine contractions.

tocology (tō-kōl'ō-jē) [+ *logos*, word, reason] Science of parturition and obstetrics.

tolcolysis (tō'kō-lī'sīs) [+ *lysis*, dissolution] Inhibition of uterine contractions. Drugs used for this include adrenergic agonists, magnesium sulfate, and ethanol.

tolcolytic (tō-kō-lī'tīk) [Gr. *tokos*, child-

birth, labor, + *lysis*, reduction, relief] **1.** Capable of relieving uterine contraction by reducing the excitability of myometrial muscle. **2.** Any agent that diminishes uterine contractions by reducing myometrial excitability.

tocopherol (tō-kōf'ēr-ōl) [+ *pherein*, to carry, + L. *oleum*, oil] Generic term for vitamin E (alpha-tocopherol) and a number of chemically related compounds, most of which have the biological activity of vitamin E.

tocophobia (tō'kō-fō'bē-ā) [+ *phobos*, fear] An abnormal fear of childbirth.

toddler (tōd'lēr) **1.** A colloquial term for a child who has begun to walk but whose gait remains clumsy or unsteady. **2.** A child between the ages of 2 and 4 years.

Todd's paralysis (tōdz) Transient, focal neurological deficits, occurring after a seizure, that resemble a stroke but resolve spontaneously.

Todd unit (tōd) In a test of inhibition hemolysis by enzymes such as antistreptolysin O, the reciprocal of the highest dilution that inhibits hemolysis.

toe (tō) [AS. *ta*] A digit of the foot. SYN: *digit*. SEE: *foot* for illus.

claw t. Hammertoe.

dislocation of the t. Traumatic displacement of bones of a toe. This condition is treated essentially the same as dislocation of the finger. SEE: *finger*, *dislocation of*.

fanning of t. Spreading of toes, esp. when the sole is stroked.

Morton's t. SEE: *Morton's toe*.

pigeon t. Walking with the toes turned inward.

turf t. A hyperextension injury of the first metatarsophalangeal (MTP) joint. Severe hyperextension also injures the plantar sesamoids and flexor tendons. The injury commonly occurs on artificial surfaces such as Astro Turf®, where the competitors wear light, flexible-soled shoes that allow MTP hyperextension on the firm surface.

webbed t. Toes joined by webs of skin.

toe clonus Contraction of the big toe caused by sudden extension of the first phalanx.

toe drop Inability to lift the toes.

toenail (tō'nāl) Unguis. SEE: *nail*.

toe reflex A reflex in which strong flexion of the great toe flexes all the muscles below the knee.

tofu (tō-foo') Soybean curd. It is a dietary source of proteins, isoflavones, and phytoestrogens.

Togaviridae (tō'gā-vīr'ī-dē) [L. *toga*, coat, + *virus*, poison] A family of RNA viruses that include the genus *Alphavirus*. They cause Western and Eastern equine encephalitis. Other *Togaviridae* include the rubiviruses (e.g., rubella virus).

toilet (toy'lēt) [Fr. *toilette*, a little cloth]

1. Cleansing of a wound after operation or of an obstetrical patient. 2. An apparatus for use during defecation and urination to collect and dispose of these waste products.

toilet training Teaching a child to control urination and defecation until placed on a toilet. The bowel movements of an infant may habitually occur at the same time each day very early in life, but because the child does not have adequate neuromuscular control of bowel and bladder function until the end of the second year, it is not advisable to begin this training until then. Close to that time, placing the child on a small potty chair for a short period several times a day may allow him or her to stay dry. First the diapers are removed while the child is awake, later removed during naps and the child told he or she should be able to stay dry. This schedule may need to be interrupted for several days to a week if the child does not remain dry.

To protect the bed, a rubber sheet should be used during the training period. Training pants or "pull-ups" may help in the transition from passive to active control of toilet habits. There is no difference in ease of training between boys and girls, each taking about 3 to 6 months.

Children who are unsuccessful in remaining dry or controlling their bowels should not be punished. To do so may promote the later development of enuresis or constipation. In any event, it is neither abnormal nor harmful for training to be delayed until well into the third year of life. If not achieved by then, professional evaluation should be undertaken to detect the rare case of genitourinary or gastrointestinal abnormalities contributing to such a delay.

-toin (tō-īn") [Fm. (*hydan*)toin] A suffix used in pharmacology to designate an anticonvulsant medication derived from hydantoin.

token economy system Any program using positive reinforcement (operant conditioning) to teach or train desired skills or behaviors.

toko- SEE: *toco-*.

tolerable daily intake (tōl'ēr-ū-bīl) [L. *tolerabilis*] ABBR: TDI. That quantity of a chemical contaminant that accidentally enters the food supply and may be consumed on a daily basis without known adverse effects on health. SEE: *acceptable daily intake*.

tolerable upper limit ABBR: TUL. The maximum amount of a mineral or vitamin supplement that a person may consume in a day without incurring health risk.

tolerance (tōl'ēr-āns) [L. *tolerantia*, tolerance] Capacity for enduring a large amount of a substance (e.g., food, drug, or poison) without an adverse effect and

showing a decreased sensitivity to subsequent doses of the same substance.

drug t. The progressive decrease in the effectiveness of a drug.

exercise t. The amount of physical activity that can be done under supervision before exhaustion.

glucose t. The ability of the body to absorb and use glucose. SEE: *oral glucose tolerance test*.

immunological t. The state in which the immune system does not react to the body's own antigens. It is caused by the destruction of lymphocytes that express receptors to self-antigens as they develop. Failure of these mechanisms may result in autoimmune disease.

impaired glucose t. ABBR: IGT. Altered glucose metabolism in which fasting blood sugars are less than 126 mg/dl, and blood sugar levels are over 140 mg/dl but less than 200 mg/dl 2 hr after drinking 75 g of glucose.



Having either impaired glucose tolerance or impaired fasting glucose predisposes patients to diabetes mellitus, heart attack, stroke, and early death. Patients with abnormal glucose metabolism ought to receive professional dietary counseling. They should also begin a program of regular physical exercise.

oral t. The suppression of autoimmune or allergic responses as a result of eating antigenic material.

pain t. The degree of pain an individual can withstand.

radiation t. The level below which tissue radiation exposure will be least harmful. Some organs are less tolerant to radiation than others.

tissue t. The ability of specific tissues to withstand the effects of ionizing radiation.

tolerance test A test of the ability of the patient or subject to endure the medicine given or exercise taken.

tolerant Capable of enduring or withstanding drugs without experiencing ill effects.

tolerogen (tōl'ēr-ā-jěn) Any substance that causes immunological tolerance; any substance that blocks or prevents an immune response to an antigen. **tolerogenic** (tōl'ēr-ā-jěn'īk), *adj.*

tolerogenic (tōl'ēr-ō-jěn'īk) Producing immunological tolerance.

toluene (tōl'yā-wēn") A toxic hydrocarbon derived from coal tar.

toluidine (tōl-ū'y-dīn) C₇H₉N; aminotoluene, a derivative of toluene.

tomatine (tō'mā-tēn) A substance derived from tomato plants affected by wilt. It has antifungal action.

-tome Combining form meaning *cutting, cutting instrument*.

Tomlin, Evelyn Malcolm (tōm'līn) A

U.S. nursing theorist who, with Helen Erickson and Mary Ann Swain, developed and published the grand nursing theory of Modeling and Role Modeling. SEE: *Nursing Theory Appendix*.

tomo- Combining form indicating *section, layer*.

tomodensitometry (tō"mō-dēn-sī-tōm'ī-trē) A rarely used synonym for CT scanning.

tomogram (tō'mō-grām) [Gr. *tome*, incision, + *gramma*, something written] The radiograph obtained during tomography.

tomograph (tō'mō-grāf) [+ *graphein*, to write] An x-ray tube attached to a Bucky diaphragm by a rigid rod allowing rotation around a fixed point (fulcrum) during the radiographical exposure for tomography.

tomography (tō-mōg'rā-fē) A radiographic technique that selects a level in the body and blurs out structures above and below that plane, leaving a clear image of the selected anatomy. This is accomplished by moving the x-ray tube in the opposite direction from the imaging device around a stationary fulcrum defining the plane of interest. Tube movements can be linear, curvilinear, circular, elliptical, figure eight, hypocycloidal, or trispiral. SYN: *radiography, body section*.

computed axial t. ABBR: CAT. SEE: *computed t.*

computed t. A computerized x-ray scanning system that produces a sectional anatomic image. It is achieved by digital processing of x-ray attenuation coefficients from a 360° wedge scan of ionizing radiation. There is considerable use of data from the attenuation coefficients in diagnosis.

electrical impedance t. Cross-sectional body imaging that reconstructs pictures of internal organs based on measurements of their electrical activity as detected by electrodes placed on the surface of the body.

electron-beam t. Ultrafast computed t.

helical computed t. Computed tomographic (CT) images that are obtained as the CT table moves continuously during a single, held breath. Detailed evaluation of dynamic internal features is feasible with this technique. SYN: *spiral computed tomography*.

optical coherence t. ABBR: OCT. A radiographical method used to obtain high-resolution cross-sectional images of tissues and their defects, e.g., of the structures of the eye.

panoramic t. Zonography.

positron emission t. ABBR: PET. Reconstruction of brain sections by using positron-emitting radionuclides. By using several different radionuclides, researchers can measure regional cere-

bral blood flow, blood volume, oxygen uptake, and glucose transport and metabolism, and can locate neurotransmitter receptors. PET has been used with fludeoxyglucose F 18 to identify and localize regional lymph node metastases and to help assess response to therapy.

The images produced by PET are in colors that indicate the degree of metabolism or blood flow. The highest rates appear red, those lower appear yellow, then green, and the lowest rates appear blue. The images in various disease states may then be compared to those of normal subjects. SEE: *illus.*

quantitative computed t. ABBR: QCT. A method for determining the bone mineral density of a three-dimensional bony specimen, e.g., in the vertebral bodies or the forearms. It is used in the diagnosis of osteopenia and osteoporosis.

single photon emission computed t. ABBR: SPET, SPECT. A medical imaging method for reconstructing sectional images of radiotracer distributions. SEE: *nuclear medicine scanning test; positron emission t.*

spiral computed t. Helical computed tomography.

ultrafast computed t. Computed tomographic (CT) scanning that produces images by rotating the x-ray (electron) beam at targets placed around a patient, instead of moving a patient on a gantry through the scanner. The technique minimizes patient movement artifacts and decreases scanning times to about 50 to 100 msec. It is capable of providing good resolution of vascular structures, such as the aorta and the coronary arteries. SYN: *electron-beam tomography*.

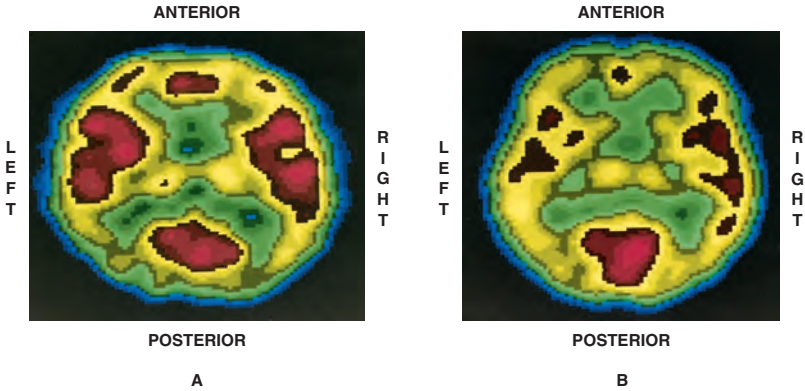
xenon-enhanced computed t. Computed tomographic (CT) scanning that uses the inert gas xenon to improve the visual distinction between healthy and abnormal tissues, esp. to visualize blood flow to different regions of the brain in stroke.

-tomy Combining form meaning *cutting, incision*.

tonaphasia (tō'nā-fā'sē-ā) [L. *tonus*, a stretching, + *a-*, not, + *phasia*, speech] Inability to remember a tune owing to cerebral lesion.

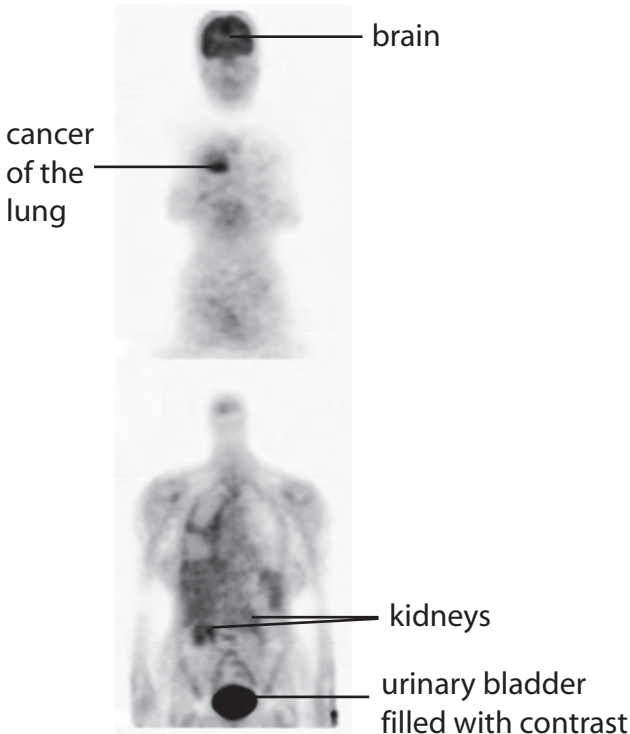
tone (tōn) [L. *tonus*, a stretching]
1. That state of a body or any of its organs or parts in which the functions are healthy and normal. In a more restricted sense, the resistance of muscles to passive elongation or stretch. **2.** Normal tension or responsiveness to stimuli, as of arteries or muscles, seen particularly in involuntary muscle (such as the sphincter of the urinary bladder). SYN: *tonicity*. (2). A musical or vocal sound.

muscular t. The state of slight con-



PET SCAN OF BRAIN

Transverse section in (A) normal young patient, (B) normal aging patient



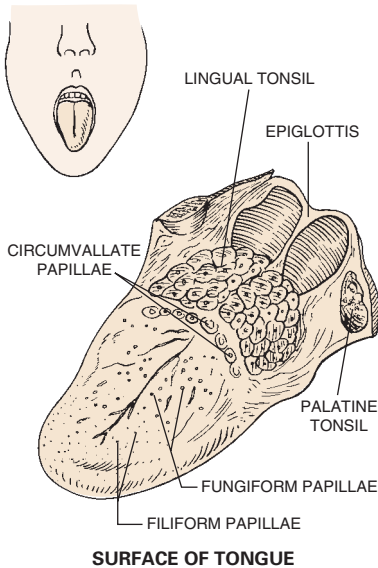
POSITRON EMISSION TOMOGRAPHY

PET SCAN revealing lung cancer

traction usually present in muscles that contributes to posture and coordination; the ability of a muscle to resist a force for a considerable period without change in length.

tone deafness SEE: under *deafness*.

tongue (tŭng) [AS. *tunge*] A freely movable muscular organ that lies partly in the floor of the mouth and partly in the pharynx. It is the organ of taste and contributes also to chewing, swallowing, and speech. SYN: *lingua*. SEE: *illus.*



ANATOMY: The tongue consists of a body and root and is attached by muscles to the hyoid bone below, the mandible in front, the styloid process behind, and the palate above, and by mucous membrane to the floor of the mouth, the lateral walls of the pharynx, and the epiglottis. A median fold (frenulum linguae) connects the tongue to the floor of the mouth. The surface of the tongue bears numerous papillae of three types: filiform, fungiform, and circumvallate (or vallate). Taste buds are present on the surfaces of many of the papillae, esp. the vallate papillae. Mucous and serous glands (lingual glands) are present; their ducts open on the surface. The lingual tonsils are lymphatic tissue on the base of the tongue. A median fibrous septum extends the entire length of the tongue.

Arteries: The lingual, exterior maxillary, and ascending pharyngeal arteries supply blood to the tongue. **Muscles:** Extrinsic muscles include genioglossus, hypoglossus, and styloglossus; intrinsic muscles consist of four groups: superior, inferior, transverse, and vertical lingualis muscles. The hypoglossal nerves are motor to the tongue; the facial and glossopharyngeal nerves are sensory for taste. **Nerves:** Lingual nerve (containing fibers from trigeminal and facial nerves), glossopharyngeal, vagus, and hypoglossal.

bifid t. A tongue with a cleft at its anterior end. SYN: *cleft tongue*; *forked tongue*.

burning t. Burning mouth syndrome.

cleft t. Bifid t.

coated t. A tongue covered with a layer of whitish or yellowish material

consisting of desquamated epithelium, bacteria, or food debris. The significance of this is difficult to interpret. It may mean only that the patient slept with the mouth open or has not eaten because of loss of appetite. If darkly coated, it may indicate a fungus infection.

deviation of t. Marked turning of the tongue from the midline when protruded, indicative of lesions of the hypoglossal nerve.

t. diagnosis In traditional Chinese medicine, the methodical evaluation of the appearance of the patient's tongue to determine the cause of a complaint or syndrome.

dry t. A tongue that is dry and shriveled, usually indicative of dehydration. It may also be the result of mouth breathing.

fern-leaf t. A tongue possessing a prominent central furrow and lateral branches.

filmy t. A tongue possessing symmetrical whitish patches.

fissured t. Scrotal tongue.

forked t. Bifid t.

furred t. A coated tongue on which the surface epithelium appears as a coat of white fur. It is seen in nearly all fevers. Unilateral furring may result from disturbed innervation, as in conditions affecting the second and third branches of the fifth nerve. It has been noted in neuralgia of those branches and in fractures of the skull involving the foramen rotundum. Yellow fur indicates jaundice.

geographic t. A tongue with white raised areas, normal epithelium, and atrophic regions. This condition is also known as benign migratory glossitis. SEE: *illus.*



GEOGRAPHIC TONGUE

hairy t. A tongue covered with hair-like papillae entangled with threads produced by the fungi *Aspergillus niger* or *Candida albicans*. This condition is usually seen as the result of antibiotic therapy that inhibits growth of bacteria normally present in the mouth, permitting overgrowth of fungi. SYN: *glossotrichia*; *lingua nigra*.

magenta t. A magenta-colored

tongue seen in cases of riboflavin deficiency.

parrot t. A dry shriveled tongue seen in typhus.

raspberry t. Strawberry t.

scrotal t. A furrowed and rugated tongue, resembling the skin of the scrotum. SYN: *fissured tongue*.

smoker's t. Leukoplakia.

smooth t. A tongue with atrophic papillae. It is characteristic of many conditions, such as anemia and malnutrition.

strawberry t. A tongue that first has a white coat except at the tip and along the edges, with enlarged papillae standing out distinctly against the white surface. Later the white coat disappears, leaving a bright red surface. This is characteristic of scarlet fever. SYN: *raspberry tongue*.

trifid t. A tongue in which the anterior end is divided into three parts.

trombone t. The rapid involuntary movement of the tongue in and out.

tongue-swallowing A condition in which the tongue tends to fall backward and obstruct the openings to the larynx and esophagus. The tongue is not swallowed and the term is inaccurate; nevertheless, it is occasionally used. The condition is due to excessive flaccidity of the tongue during unconsciousness. Airway control is achieved through one of the following maneuvers: forceful elevation of the chin and extension of the head during artificial respiration, in order to open the airway; or insertion of a mechanical airway device, such as an oropharyngeal airway, to push the tongue out of the airway.



The rescuer should never place his or her hand inside the victim's mouth to move the tongue.

tongue thrust The infantile habit of pushing the tongue between the alveolar ridges or incisor teeth during the initial stages of suckling and swallowing. If this habit persists beyond infancy, it may cause anterior open occlusion, jaw deformation, or abnormal tongue function.

tongue-tie Lay term for ankyloglossia, congenital shortness of the frenulum of the tongue. The condition has been shown to have no functional significance, even for speech.

tonic (tôn'ik) [Gr. *tonikos*, from *tonos*, tone] 1. Pert. to or characterized by tension or contraction, esp. muscular tension. 2. Restoring tone. 3. A medicine that increases strength and tone. Tonics are subdivided according to action, such as cardiac or general.

tonic immobility response Muscular paralysis that occurs during significant

stress or injury (e.g., as an animal is fleeing or trying to fight off a predator). It is a common reaction experienced by animals and humans faced with overwhelming force (e.g., in battle or during sexual assault).

tonicity (tō-nis'î-tē) [Gr. *tonos*, act of stretching] 1. Property of possessing tone, esp. muscular tone. 2. Tone (2).

tonic labyrinthine reflex Labyrinthine righting reflex.

tonofibril (tôn'ô-fî'brîl) Tenofibril.

tonogram (tô'nô-grām) [n + *gramma*, something written] The record produced by a tonograph.

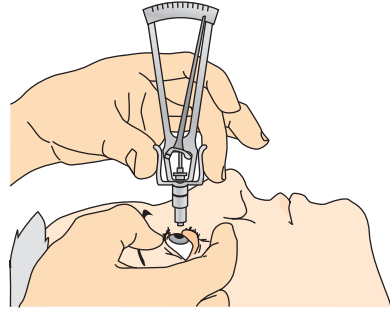
tonograph (tô'nô-gráf) [n + *graphein*, to write] A recording tonometer.

tonography (tô-nôg'rā-fē) The recording of changes in intraocular pressure.

tonometer (tôn-ôm'ê-tēr) [n + *metron*, measure] An instrument for measuring tension or pressure, esp. intraocular pressure.

Schiötz t. SEE: *Schiötz tonometer*.

tonometry (tôn-ôm'ê-trē) The measurement of tension of a part, as intraocular tension, used to detect glaucoma. SEE: *illus.*



TONOMETRY

Measuring intraocular eye pressure

analytical t. A technique formerly used in blood gas analysis in which the liquid blood sample and its gas are held at equilibrium and the partial pressures of oxygen and carbon dioxide are measured.

digital t. Determining intraocular pressure by use of the fingers.

gastric t. Measurement of the partial pressure of carbon dioxide (PCO₂) in the stomach of critically ill patients to determine how well the stomach and other internal organs are perfused with blood and oxygen. Poor gastric perfusion is found in more severe conditions, i.e., those that carry an increased risk of death.

noncontact t. Determining intraocular pressure by measuring the degree of indentation of the cornea produced by a puff of air.

tonoplast (tôn'ô-plást) [n + *plassein*, to

form] The membrane surrounding an intracellular vacuole.

tonsil (tŏn'sil) [L. *tonsilla*, almond] **1.** A mass of lymphoid tissue in the mucous membranes of the pharynx and base of the tongue. The free surface of each tonsil is covered with stratified squamous epithelium that forms deep indentations, or crypts, extending into the substance of the tonsil. The palatine tonsils, pharyngeal tonsils (adenoids), and lingual tonsils form a ring of immunologically active tissue. **2.** A rounded mass on the inferior surface of the cerebellum lying lateral to the uvula.

INFECTION OF THE TONSILS: Tonsils detect and respond to pathogens entering the body through the mouth and nose. Inflammation of the tonsils (tonsillitis) occurs during upper respiratory infections caused by common viruses. Beta-hemolytic streptococci or, occasionally, *Staphylococcus aureus* infections may occur as primary infections or follow viral infections, most commonly in children and immunocompromised adults. Clinically, the patient will have enlarged, reddened, tender glands, often coated with inflammatory exudate, which may form a pseudomembrane. The tonsils may stay enlarged after multiple infections and are sometimes surgically removed (tonsillectomy). **SEE: illus.**



INFLAMED TONSILS

Rheumatic fever, an autoimmune inflammatory disease, develops 2 to 3 weeks after streptococcal infections in about 3% of patients; it is believed that antibodies against streptococcal pharyngitis cross-react with antigens in the heart and joints.

cerebellar t. One of a pair of cerebellar lobules on either side of the uvula, projecting from the inferior surface of the cerebellum.

faucial t. Palatine t.

lingual t. A mass of lymphoid tissue located in the root of the tongue.

nasal t. Lymphoid tissue on the nasal septum.

palatine t. Two oval masses of lym-

phoid tissue that lie in the tonsillar fossa on each side of the oral pharynx between the glossopalatine and pharyngopalatine arches. They are commonly known as the tonsils. **SYN:** *faucial tonsil*.

pharyngeal t. Lymphoid tissue on the roof of the posterior superior wall of the nasopharynx. It is commonly called adenoids. **SEE:** *adenoid*.

tonsillar (tŏn'sī-lār) Pert. to a tonsil, esp. the faucial or palatine tonsil.

tonsillar area An area composed of the palatine arch, tonsillar fossa, glossopalatine sulcus, and posterior faucial pillar.

tonsillar crypt A deep indentation, lined with stratified squamous epithelium, into the lymphatic tissue of a lingual or palatine tonsil.

tonsillar fossa **SEE:** under *fossa*.

tonsillar ring The almost complete ring of tonsillar tissue encircling the pharynx. It includes the palatine, lingual, and pharyngeal tonsils. **SEE:** *tonsillar ring of the pharynx*.

tonsillectomy (tŏn-sil'ĕk'tō-mĕ) [L. *tonsilla*, almond + Gr. *ektome*, excision] Surgical removal of the tonsils. This procedure is typically performed for children with recurrent infections of the throat, or peritonsillar abscess, although it may also be used when enlarged tonsils cause obstructive sleep apnea. Whether the procedure is advisable in children with recurrent pharyngeal infections is a matter of debate. Complications of the procedure may include local bleeding, throat pain, injury to the upper airway, and aspiration pneumonia, among others. **SEE:** *Nursing Diagnoses Appendix*.

PATIENT CARE: *Preoperative:* The anesthetic methods (usually locally injected anesthesia) and expected sensations are explained to the adult patient. For children, the anesthetic methods and hospital routines are explained in simple, nonthreatening language; the child is allowed to try on hospital garb; and the child is shown the operating and recovery rooms, as appropriate to age. Parents are encouraged to remain with the child.

Postoperative: A patent airway is maintained, and the patient is placed in a semiprone or sidelying position until he or she has fully recovered from anesthesia. Vital signs are monitored, and the patient is assessed for bleeding (excessive swallowing in a semiconscious child), restlessness, tachycardia, and pallor. After the patient's gag reflex has returned, water and nonirritating fluids are permitted by mouth. Deep breathing and turning help to prevent pulmonary complications. Ice packs are applied and analgesics administered as prescribed. Vocal rest is encouraged and

the patient is instructed not to clear the throat or cough, because this may precipitate bleeding. Written discharge instructions covering use of fluids and soft diet and avoidance of overactivity are provided to the patient and family. Within 5 to 10 days postoperatively, a white scab will form in the patient's throat. The patient or family should report any bleeding, ear discomfort, or persistent fever.

tonsillitis (tôn-sil-ī'tis) [ʹ + Gr. *itis*, inflammation] Inflammation of a tonsil, esp. the faucial tonsil. SEE: *Nursing Diagnoses Appendix*.

acute parenchymatous t. Tonsillitis in which the entire tonsil is affected.

acute t. Inflammation of the lymphatic tissue of the pharynx, esp. the palatine or faucial tonsils. It may occur sporadically or in epidemic form, and usually is self-limiting.

SYMPTOMS: Throat pain, esp. while swallowing, is the cardinal symptom of tonsillitis; fever and malaise are common. Abrupt-onset headache, nausea and vomiting, and cervical lymphadenopathy are more commonly seen with streptococcal infections. Rhinorrhea, cough, and diarrhea are usually associated with viral infection. The tonsils are usually enlarged and red, but the degree of erythema does not reflect the severity of the pain. An exudate is often, but not always, present on the tonsils. Adolescents should be assessed for infectious mononucleosis, as it is quite common among teenagers and young adults.

ETIOLOGY: Viruses are the most common cause of tonsillitis. Beta-hemolytic streptococci infections may follow viral infections or occur as primary infections, esp. in school-aged children and immunocompromised adults (5% to 20% of cases).

TREATMENT: Viral tonsillitis is treated symptomatically. If group A beta-hemolytic streptococci infection is suspected, a throat culture is taken. Streptococcal tonsillitis must be treated with a 10-day course of oral penicillin or one intramuscular dose of long-acting benzathine penicillin to decrease the risk of rheumatic fever or glomerulonephritis. Rheumatic fever develops 2 to 3 weeks after streptococcal infections in about 3% of patients. If chronic tonsillitis occurs, the tonsils may be removed, but this operation is not as common as it was years ago. SEE: *rheumatic fever*.

follicular t. Inflammation of the follicles on the surface of the tonsil, which become filled with pus.

ulceromembranous t. Tonsillitis that ulcerates and develops a membranous film.

tonsilloolith (tôn'sil-ō-lith) [ʹ + Gr.

lithos, stone] A stone within a tonsil. SYN: *amygdalolith*.

tonsillopathy (tôn'sī-lōp'ā-thē) Any disease of the tonsil.

tonsilloscopy (tôn'sīl-lōs'kō-pē) [ʹ + Gr. *skopein*, to examine] Inspection of the tonsils.

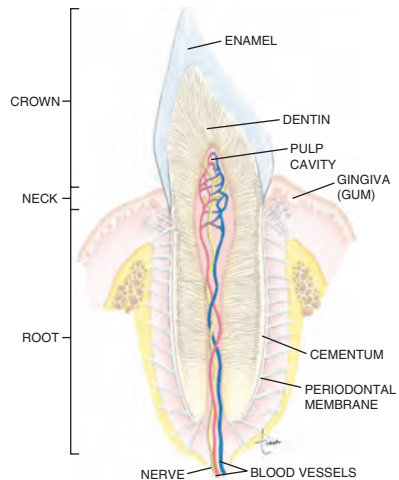
tonsillotome (tôn-sil'ō-tōm) A surgical instrument used in tonsillectomy.

tonsillotomy (tôn'sil-ōt'ō-mē) [ʹ + Gr. *tome*, incision] Incision of the tonsils.

tonus (tō'nūs) [L., tension] The partial steady contraction of muscle that determines tonicity or firmness; the opposite of clonus. SYN: *tone*; *tonicity*.

tooth (tooth) *pl.* **teeth** [AS. *toth*] One of the hard, bony conical structures of the upper and lower jaws used for chewing. A tooth consists of a crown portion above the gum, a root portion embedded in a socket (alveolus) of the jaw bone, and a neck or cervical constricted region between the crown and root. The soft-tissue gingiva covers the neck and root to a variable extent, depending on age and oral hygiene. The major portion of a tooth consists of dentin, which is harder than bone; enamel; and cementum, which is similar to bone. The pulp cavity contains the dental pulp. Each tooth has five surfaces: occlusal, mesial, distal, lingual, and facial or buccal. SEE: *illus.*; *dentition*.

Everyone has two complete sets of teeth during his life. The 20 primary teeth are the first set of teeth a person develops. They exfoliate by age 14 and are replaced by the 32 permanent teeth. The permanent teeth include the following: incisors, canines (cuspids), premolars (bicuspid), and molars. On average, a child should have 6 teeth at 1



TOOTH STRUCTURE

(longitudinal section)

year, 12 teeth at 18 months, 16 teeth at 2 years, and 20 teeth at 12 years. Some children are born with a few erupted teeth; in other children the teeth may not appear until 16 months.

PATIENT CARE: Health care professionals should assess patients' teeth and gums during physical examinations, educate patients about routine dental hygiene (brushing, flossing, gum stimulation, use of oral rinses), and refer them to a dental professional for dental caries, eruption anomalies, or periodontal problems. SEE: *dental plaque; periodontal disease.*

accessional t. A permanent molar tooth that arises without deciduous predecessors in the dental arch.

anterior t. Any of teeth located close to the midline of the dental arch on either side of the jaw, including the incisors and canines.

baby t. Deciduous t.

deciduous t. Any of the 20 teeth that make up the first dentition, which are shed and replaced by the permanent teeth. SYN: *baby tooth; milk tooth.* SEE: *illus.*

hypersensitive t. A tooth sensitive to temperature changes, sweets, or percussion. It may exhibit gingival recession, exposed root dentin, caries, or periodontal disease.

TREATMENT: Popular treatments for hypersensitivity include topical varnishes, sealants, and topical fluoride applications. Other treatments include application of silver nitrate, formalin, glycerin, strontium chloride, potassium

nitrate, calcium compounds, sodium citrate, and potassium oxalate.

PATIENT CARE: The patient can reduce sensitivity by a regimen of plaque control, dentifrice with fluoride, self-applied fluoride, and control of diet.

impacted t. A tooth unable to erupt due to crowding by adjacent teeth, malposition of the tooth, or developmental disturbances.

malacotic t. A tooth soft in structure, white in color, and esp. prone to decay.

milk t. Deciduous tooth.

permanent t. Any of the 32 teeth that develop as the second dentition and replace the deciduous teeth. SYN: *secondary tooth.* SEE: *deciduous teeth* for illus.

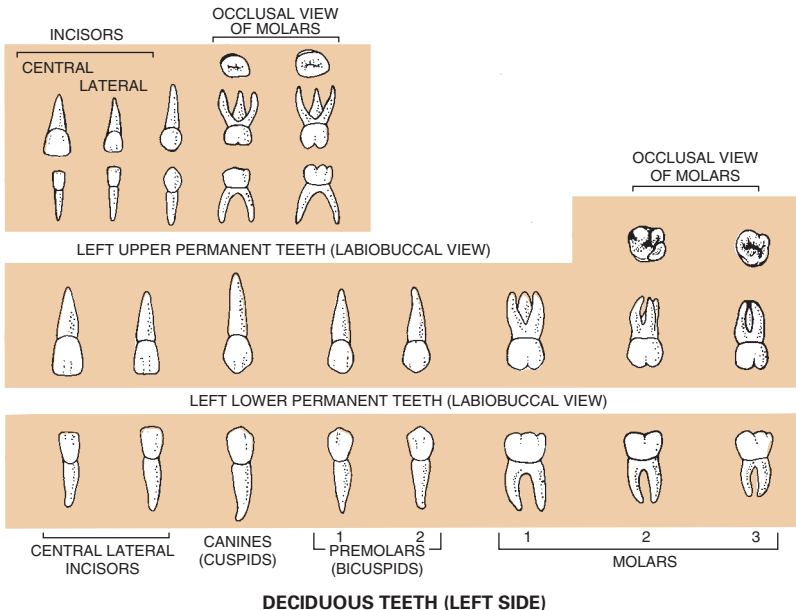
sclerotic t. A yellowish tooth that is naturally hard and highly resistant to caries.

secondary t. Permanent t.

wisdom t. The third most distal molar on each side of both jaws. These four molars may appear as late as the 25th year or may never erupt.

toothache Pain in a tooth or the region about a tooth. The origin of pain in a tooth is physical, chemical, thermal, and bacteriological trauma. Treatment may include restorations, extractions, or topical application of medications, among others. SYN: *dentalgia; odontalgia; odontodynia.*

tooth and nail syndrome A rare autosomal dominantly inherited syndrome characterized by malformed or absent teeth and defects in nail plate development. This syndrome is one of the ecto-



dermal dysplasias. SYN: *Witkop syndrome*.

tooth bleaching Use of an oxidizing chemical to remove stain or discoloration from a tooth. Bleaching techniques vary according to the vitality of the pulp.

at-home t.b. The lightening or whitening of discolored teeth, using a bleaching gel. Carbamide peroxide and hydrogen peroxide are common bleaching agents used for this purpose in concentrations ranging from 3% to 25%. Treatment must be carefully monitored to avoid overbleaching and damage to surrounding soft tissue.



Bleaching agents must not be placed on exposed root surfaces or soft tissue.

toothbrushing The act of cleaning the teeth and gums by using a soft brush specifically designed for this purpose. The toothbrush consists of tufts of soft, synthetic fibers or natural bristles mounted in a handle that may be straight or angled for better access or brushing action. It is usually used with fluoride toothpaste (a mildly abrasive, flavored dentifrice) in a manner suggested by dentists and dental hygienists as being a suitable method for cleaning. The proper use of a toothbrush stimulates periodontal tissue. SEE: *hygiene, oral; periodontal disease; plaque, dental*.

Good oral hygiene, consisting of proper brushing of the teeth with a soft-bristle brush, use of a fluoride-containing toothpaste, and daily use of dental floss, will help to prevent dental plaque. If brushing or flossing causes bleeding, pain, or irritation, a dentist should be seen without delay.

Some people with conditions that limit motion of their hands may have difficulty holding and using a toothbrush. This may be overcome by attaching the brush handle to the hand with a wide elastic band, or the handle may be enlarged by attaching a rubber or foam ball to it. Those with limited shoulder or elbow movement may find that lengthening the handle by attaching it to a long piece of wood or plastic is beneficial. In addition, an electric toothbrush may be of benefit.



If the toothbrush used has hard bristles or if any toothbrush is used too forcibly, gingival tissue may be eroded and damaged.

tooth migration, pathological Drifting or movement of teeth due to the pathological changes in areas adjacent to the

moving teeth. SEE: *drift, mesial; tooth movement*.

tooth migration, physiological The natural and expected movement of teeth as growth and development occur; normal tooth mobility. SEE: *drift, mesial; tooth migration, pathological; tooth movement*.

tooth numbering system A system used to identify teeth. The American Dental Association recognizes two systems: one used in the U.S. (the "universal/national system"), and another used in other countries (the "international standards organization system").

t. n. s. international standards organization An internationally recognized system of tooth numbering in which teeth in each quadrant are identified by numbers 1 through 8. A second number indicates the quadrant. Quadrant 1 is the maxillary right quadrant, quadrant 2 is the maxillary left quadrant, quadrant 3 is the mandibular left quadrant, and quadrant 4 is the mandibular right quadrant. Tooth number 13, e.g., indicates the maxillary right quadrant and the canine tooth.

t. n. s. universal/national A system of tooth numbering that uses numbers 1 through 32 to identify the permanent teeth. Tooth number 1 is the maxillary right third molar. Tooth number 17 is the mandibular left third molar. Primary teeth are identified in a similar manner, using the letters A through T.

toothpaste A dentifrice used with a toothbrush to clean the exposed surfaces of teeth. It may contain mild abrasives, whiteners, deodorants, sodium bicarbonates, peroxide, or caries-preventing agents. SEE: *toothbrushing*.

tartar control t. Toothpaste containing pyrophosphates that act as abrasives to remove plaque from teeth. Some evidence links these toothpastes to irritation of oral tissues.

toothpick Any small tapering sliver of wood or other material used to remove food debris from between the teeth. Early examples were made of gold, carved bone, or ivory.

top-, topo- Combining forms meaning *place, locale*.

topagnosis (tōp'āg-nō'sis) [Gr. *topos*, place, + *a*, not, + *gnosis*, knowledge] Loss of the ability to localize the site of tactile sensations.

topalgia (tō-pāl'jē-ā) ["/ + *algos*, pain] Pain in a localized site.

topectomy (tō-pēk'tō-mē) ["/ + *ektome*, excision] A form of neurosurgery in which small incisions are made through the thalamofrontal tracts.

topesthesia (tōp'ēs-thē'zē-ā) ["/ + *ais-thesis*, sensation] The ability through tactile sense to determine that skin is touched. SYN: *topognosia*.

tophaceous (tō-fā'shūs) [L. *tophaceus*,

sandy] 1. Relating to a tophus. 2. Sandy or gritty.

tophus (tō'fūs) *pl.* **tophi** [L., porous stone] A deposit of sodium biurate in tissues near a joint, in the ear, or elsewhere in individuals with gout. SYN: *gouty pearl*. SEE: *illius*.



TOPHI

Left and right hands of a patient with multiple deforming gouty tophi

topical (tōp'ī-kāl) [Gr. " + "] Pert. to a definite surface area; local.

topalgia (tō'pō-āl'jē-ā) [" + *algos*, pain] Localized pain, common in neuroasthenia following emotional upsets.

topoanesthesia (tō'pō-ān'ēs-thē'zē-ā) [" + *an-*, not, + *aisthesis*, sensation] Loss of the ability to recognize the location of a tactile sensation.

topognosia, topognosis (tō'pōg-nō'sē-ā, -sīs) [" + *gnosis*, knowledge] Recognition of the location of a tactile sensation. SYN: *topesthesia*.

topographical (tōp'ō-grāf'ī-kāl) [" + "] Pert. to description of special regions.

topographical anatomy A study of all the

structures and their relationships in a given region (e.g., the axilla).

topographical disorientation (tōp'ō-grāf'ī-kil dis-ōr'ē-ēn-tā'shūn) ABBR: TD. Difficulty finding one's way from one location to another or navigating from a starting point to a destination. This disorder of visuospatial skills is sometimes present in patients who have had a stroke affecting the posterior portions of the brain; it is also common in some dementias (e.g., Alzheimer's disease).

topographic memory The ability to recall the contours, design, shape, or structure of a previously experienced environment. The ability to hold in the mind a map of a person, place, or thing.

topography (tō-pōg'rā-fē) The physical features of a surface, e.g., of the contours or slope of a body structure.

topoisomerase (tōp'ō-ī-sōm'er-ās") [" + "] One of several enzymes that cleave and rejoin the coiled sugar-phosphate backbone of DNA or RNA.

topology (tō-pōl'ō-jē) 1. In obstetrics, the relationship of the presenting fetal part to the pelvic outlet. 2. In mathematics, the study of the relationships between objects that share a surface or a common border.

toponarcosis (tō'pō-nār-kō'sīs) [" + *narkosis*, a numbing] Local anesthesia.

toponym (tōp'ō-nīm) The name of a region.

toponymy (tō-pōn'ī-mē) [" + *onoma*, name] Nomenclature of the regions of the body.

topothermesthiometer (tōp'ō-thēr'mēs-thē-zē-ōm'ē-ter) [" + *therme*, heat, + *aisthesis*, sensation, + *metron*, measure] A device for measuring local temperature sense.

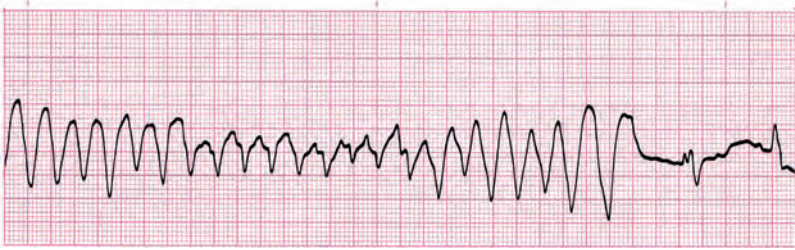
Toprol-XL SEE: *metoprolol tartrate*.

TOPV *trivalent oral polio vaccine*. SEE: *poliovirus vaccine, live oral*.

TORCH (tōrch) An acronym originally coined from the first letters of *Toxoplasmosis, Rubella, Cytomegalovirus, and Herpes simplex*. Contemporary revisions describe the O as standing for *Other transplacental infections* (by human immunodeficiency virus, hepatitis B, human parvovirus, and syphilis). TORCH infections can attack a growing embryo or fetus and cause abortion, abnormal fetal development, severe congenital anomalies, mental retardation, and fetal or neonatal death.

torcular herophili (tor'kū-lār) The confluence of cranial venous sinuses at the internal occipital protuberance of the skull.

Torg ratio (tawrg) [Joseph S. Torg, U.S. orthopedist, b. 1934] The relationship between the diameter of the spinal canal and the corresponding vertebral body. The Torg ratio is calculated



TORSADE DE POINTES

Ventricular tachycardia converting spontaneously to sinus rhythm

through radiographical or MRI measurement by dividing the sagittal diameter of the canal by the diameter of the vertebral body. Studies have indicated that lower ratios correspond to higher risk of spinal cord injury in American football.

toric (tō'rik) Concerning a torus.

toric contact lens (tōr'ik) A contact lens with two separate curvatures. It can be used, for example, to correct astigmatism and distance vision simultaneously.

torose, torous (tō'rōs, -rūs) [L. *torosus*, full of muscle] Knobby or bulging; tubercular.

torpent (tor'pēnt) [L. *torpens*, numbing]
 1. Medicine that modifies irritation.
 2. Not capable of functioning; dormant, apathetic, torpid.

torpid (tor'pīd) [L. *torpidus*, numb] Not acting vigorously; sluggish.

torpidity (tor-pīd'i-tē) Sluggishness; inactivity.

torpor (tor'por) [L. *torpor*, numbness] Abnormal inactivity; dormancy; numbness; apathy.

t. retinae Reduced sensitivity of retina to light stimuli.

torque (tork) [L. *torquere*, to twist] 1. A force producing rotary motion. 2. In dentistry, the rotating movement of a handpiece, or the application of force to rotate a tooth around its long axis.

torr (tor) A pressure quantity equivalent to 1/760 of standard atmospheric pressure; for most practical purposes, this equals 1 mm Hg.

torrefaction (tor'ē-fāk'shūn) [L. *torrefactio*] Roasting or parching something, esp. a drug, to dry it.

Torre-Muir syndrome Muir-Torre syndrome.

torsade de pointes (tor-sād'dē pwōnt') A rapid, unstable form of ventricular tachycardia in which the QRS complexes appear to twist, or shift, electrical orientation around the isoelectric line of the electrocardiogram. It often occurs as a life-threatening effect of a medication (e.g., quinidine, amiodarone, or a tricyclic antidepressant) that

prolongs the Q-T interval but may also complicate congenital long Q-T syndromes. Intravenous magnesium sulfate may be used to treat this arrhythmia. SYN: *polymorphic ventricular tachycardia*. SEE: *illus.*

torsiometer (tor'sē-ōm'ē-tēr) A device for measuring the rotation of the eyeball around the visual axis (i.e., its anterior-posterior axis).

torsion (tor'shūn) [L. *torsio*, a twisting]
 1. The act of twisting or the condition of being twisted. 2. In dentistry, the state of a tooth when rotated around its long axis. 3. Rotation of the vertical meridians of the eye.

lung t. A rare injury in which the lung rotates around its pedicle, typically after violent trauma to the chest. The injured lung can usually only be repaired with immediate surgery.

torsionometer (tor'shūn-ōm'ē-tēr) [T + Gr. *metron*, measure] 1. A device for measuring the rotation of the vertebral column around the long axis using radiographs of the spine. 2. A subjective test used in ophthalmology for measuring the rotation of vertical meridians of the eyes.

torsive (tor'siv) Twisted, as in a spiral.

torsiversion (tor'sī-vēr'zhūn) Rotation of a tooth around its long axis.

torso (tor'sō) [It.] The trunk of the body.

torsocclusion (tor'sō-kloo'zhūn) [T + L. *occlusio*, to occlude] Malocclusion characterized by rotation of a tooth on its long axis.

tort A wrongful act or injury, committed by an entity or person against another person or another person's property, that may be pursued in civil court by the injured party. The purpose of tort law is to make amends to the injured party, primarily through monetary compensation or damages.

intentional t. An intentional wrongful act by a person or entity who means to cause harm, or who knows or is reasonably certain that harm will result from the act.

quasi-intentional t. A wrongful act

based on speech committed by a person or entity against another person or entity that causes economic harm or damage to reputation, e.g., a defamation of character or an invasion of privacy.

torticollar (tor"tī-kōl'ār) Concerning torticollis.

torticollis (tor"tī-kōl'īs) [L. *tortus*, twisted, + *collum*, neck] Stiff neck associated with muscle spasm, classically causing lateral flexion contracture of the cervical spine musculature. It may be congenital or acquired. The muscles affected are principally those supplied by the spinal accessory nerve. SYN: *wryneck*.

ETIOLOGY: The condition may be caused by scars, disease of cervical vertebrae, adenitis, tonsillitis, rheumatism, enlarged cervical glands, retropharyngeal abscess, or cerebellar tumors. It may be spasmodic (clonic) or permanent (tonic). The latter type may be due to Pott's disease (tuberculosis of the spine).

congenital muscular t. Congenital fibrosis of the sternocleidomastoid muscle in the newborn, causing rotation of the infant's head to the opposite side. The condition usually becomes evident in the first 2 weeks of life. Treatments include physical therapy or, in refractory cases, surgical division of the muscle. SYN: *fibromatosis colli*.

fixed t. An abnormal position of the head owing to organic shortening of the muscles.

intermittent t. Spasmodic t.

ocular t. Torticollis from inequality in sight of the two eyes.

spasmodic t. Torticollis with recurrent but transient contractions of the muscles of the neck and esp. of the sternocleidomastoid. SYN: *intermittent torticollis*. SYN: *cervical dystonia*.

TREATMENT: Botulinus toxin has been used to inhibit the spastic contractions of the affected muscles. SEE: *toxin, botulinus*.

tortipelvis (tor"tī-pēl'vīs) [" + *pelvis*, basin] Muscular spasms that distort the spine and hip. SYN: *dystonia musculum deformans*.

tortuous (tor'choo-ūs) [L. *tortuosus*, fr. *torqueo*, to twist] Having many twists or turns.

torture (tor'chūr) [LL. *tortura*, a twisting] Infliction of severe mental or physical pain by various methods, usually for the purpose of coercion.

Torula (tor'ū-lā) Former name of a genus of yeastlike organisms, now called *Cryptococcus*.

toruloid (tor'ū-loyd) [L. *torulus*, a little bulge, + Gr. *eidos*, form, shape] Beaded; noting an aggregate of colonies like those seen in the budding of yeast.

toruloma (tor-ū-lō'mā) [*Torula*, old name for *Cryptococcus*, + *oma*, tumor]

The nodular lesion of cryptococcosis (torulosis).

Torulopsis glabrata (tor"ū-lōp'sis glā-brāt'ā) The former name for the fungus now known as *Candida glabrata*.

torulosis (tor-ū-lō'sīs) Cryptococcosis.

torulus (tor'ū-lūs) [L. *torulus*, a little elevation] Papilla.

t. tactiles A tactile cutaneous elevation on the palms and soles.

torus (tō'rūs) pl. **tori** [L., swelling] A rounded elevation or swelling.

t. mandibularis An exostosis that develops on the lingual aspect of the body of the mandible.

t. palatinus A benign exostosis located in the midline of the hard palate. Also called *palatine protuberance*.

total body potassium The sum of all the potassium in the human body, used as one indicator of muscle mass. More than half of the potassium in the human body is within skeletal muscle.

total joint replacement Surgical removal of a diseased or injured joint and its replacement with an orthosis. SEE: *knee, replacement of; hip replacement, total; Nursing Diagnoses Appendix*.

total nutrient admixture A comprehensive combination of nutrients given parenterally, including amino acids, carbohydrates, fats, fluids, electrolytes, vitamins, and minerals.

totipotent (tō-tīp'ō-tēnt) [L. *totus*, all, + *potentia*, power] In embryology, the ability of a cell or group of cells to produce all of the tissues required for development (i.e., the embryonic membranes, the embryo, and finally the fetus).

touch (tūch) [O.Fr. *tochier*] **1.** To perceive by the tactile sense; to feel with the hands, to palpate. **2.** The sense by which pressure on the skin or mucosa is perceived; the tactile sense. SYN: *tactile perception*. **3.** Examination with the hand. SYN: *palpation*.

Various disorders may disturb or impair the tactile sense or the ability to feel normally. There are a number of words and suffixes pert. to sensation and its modifications. A few of the more important ones are as follows: algesia, -algia, anesthesia, dysesthesia, -dynia, esthesia, esthesioneurosis, hyperesthesia, paresthesia, and synesthesia.

after-t. Persistence of the sensation of touch after contact with the stimulus has ceased.

healing t. A form of biofield medicine, often compared to therapeutic touch, in which hands-on contact with the patient is combined with other spiritual links made between patient and practitioner. SEE: *therapeutic t.*

therapeutic t. The practice of running the hands on or above a patient's body to restore health. It is based on the premise that the human body is a com-

plex system of energy fields, which must be channeled and balanced for optimum health.

vaginal t. Digital examination of the vagina.

vesical t. Digital examination of the bladder.

touch preparation, touch prep 1. The dabbing of a clinical specimen, e.g., the cut surface of an organ or tissue, onto a microscope slide to distribute a thin layer of cells for microscopic examination. **2.** Any slide so obtained and prepared for pathological analysis.


Toupet's procedure A surgical treatment for gastroesophageal reflux in which the stomach is partially wrapped around the lower esophagus. The surgery may be performed with a traditional incision or laparoscopically.

Tourette's syndrome, Tourette's disorder (tūr-êts') [Georges Gilles de la Tourette, Fr. neurologist, 1857–1904] A neurological disorder marked by repetitive motor and verbal tics. Affected persons may blink, jerk, grunt, clear their throats, swing their arms, grasp or clasp others, have obsessive-compulsive behaviors, or use verbal expletives uncontrollably. In some instances, people with this condition can control the urge to use these mannerisms while in public, but they may express them vigorously when alone. The condition often appears in multiple family members. It may be caused by a disorder of dopamine uptake in the basal ganglia. Dopamine-blocking drugs such as haloperidol can be used to treat this disorder. SYN: *Gilles de la Tourette's syndrome*. SEE: *tic*.

Tournay's sign (tūr-nāz') [Auguste Tournay, Fr. ophthalmologist, 1878–1969] Dilatation of the pupil of the eye on unusually strong lateral fixation.

tourniquet (toor-ni-kět) [Fr., a turning instrument] Any constrictor used on an extremity to apply pressure over an artery and thereby control bleeding; also used to distend veins to facilitate venipuncture or intravenous injections.

Arterial hemorrhage: In emergent circumstances, the tourniquet is applied between the wound and the heart, close to the wound, placing a hard pad over the point of pressure. This should be discontinued as soon as possible and a tight bandage substituted under the loosened tourniquet. SEE: *bleeding, arterial* for table.

 A tourniquet should never be left in place too long. Ordinarily, it should be released from 12 to 18 min after application to determine whether bleeding has ceased. If it has, the tourniquet is left loosely in place so that it may be retightened if necessary. If bleeding has not ceased, it should be retightened at once.

In general, a tourniquet should not be used if steady firm pressure over the bleeding site will stop the flow. As an adjunct to surgery on extremities, a pneumatic tourniquet is applied after exsanguinating the limb with an Esmarch or similar bandage. The tourniquet is released at appropriate intervals to prevent tissue damage due to ischemia. An additional application utilizes two tourniquets or a double cuff tourniquet for retrograde intravenous nerve block (e.g., Bier block).

rotating t. The application of blood pressure cuffs to three extremities; used in certain types of medical emergencies, such as acute pulmonary edema, to reduce the return of blood to the heart. The patient is placed in a head-high position (Fowler's). The pressure is kept midway between systolic and diastolic. Every 10 min, the cuffs are deflated and when inflated, the previously free extremity is now used. This allows each extremity to be free of a tourniquet for 10 min out of each 40-min cycle.

NOTE: A cuff would not be applied to an extremity into which an intravenous infusion is running.

tourniquet test A test used to determine pain thresholds or, alternately, capillary fragility. A blood pressure cuff is inflated sufficiently to occlude venous return. It is kept in place for a set time. The anesthetic effect, or the impact on skin integrity, is subsequently assessed. SEE: *illus*.



TOURNIQUET TEST

Positive test for idiopathic thrombocytopenic purpura

Touton cell (toot'ön) [Karl Touton, Ger. dermatologist, 1858–1934] A giant multinucleated cell found in lesions of xanthomatosis.

towelette (tow'el-ët') [ME. *towelle*, towel] A small towel.

tox- SEE: *toxi-*.

toxemia (tök-sé'mē-ä) [L + Gr. *haima*, blood] Distribution throughout the body of poisonous products of bacteria growing in a focal or local site, thus producing generalized symptoms.

SYMPTOMS: The condition is marked by fever, diarrhea, vomiting, and symp-

toms of shock. In tetanus, the nervous system is esp. affected; in diphtheria, nerves and muscles are affected.

t. of pregnancy Previously used term for pregnancy-induced hypertension. SEE: *eclampsia*; *pre-eclampsia*; *Nursing Diagnoses Appendix*. **toxemic** (-mĭk), *adj.*

toxi-, tox-, toxo- Combining forms meaning *poison*.

toxic (töks'ĭk) [Gr. *toxikon*, poison] Pert. to, resembling, or caused by poison. SYN: *poisonous*.

toxic- SEE: *toxico-*.

toxicant (töks'ĭ-kánt) [L. *toxicans*, poisoning] **1.** Poisonous; toxic. **2.** Any poison.

toxemic (töks'ĭ-sĕ'mĭk) Toxemic.

toxicity (töks-is'ĭ-tĕ) The extent, quality, or degree of being poisonous.

neurobehavioral t. Alterations in attention, concentration, coordination, mood, muscle activity, neurological development, or sensation resulting from exposure to a poisonous chemical, drug, or physical agent.

toxico-, toxic- [Gr. *toxikon*, poison] Combining form meaning *poisonous*.

Toxicodendron (tök'sĭ-kō-dĕn'drŏn") [" + "] A genus of trees and shrubs, formerly called *Rhus*, some species of which, such as poison ivy and poison oak, contain oily resins that produce an allergic contact dermatitis in susceptible people. SEE: *poison ivy*, *poison sumac*.

toxicoderma (töks'ĭ-kō-dĕr'mă) [" + *derma*, skin] Any skin disease resulting from a poison. SYN: *toxicodermatitis*.

toxicogenic (töks'ĭ-kō-jĕn'ĭk) [" + *genan*, to produce] Caused by, or producing, a poison.

toxicoid (töks'ĭ-koyd) [" + *eidos*, form, shape] Of the nature of a poison.

toxicologist (töks'ĭ-kŏl'ŏ-jĭst) [" + *logos*, word, reason] A specialist in the field of poisons or toxins.

toxicology (töks'ĭ-kŏl'ŏ-jĕ) Division of medical and biological science concerned with toxic substances, their detection, their avoidance, their chemistry and pharmacological actions, and their antidotes and treatment.

toxicopathy (töks'ĭ-kŏp'ă-thĕ) [" + *pathos*, disease, suffering] Toxicosis.

toxicosis (töks'ĭ-kŏ'sĭs) [" + *osis*, condition] A disease resulting from poisoning. SYN: *toxicopathy*; *toxinosis*; *toxicopathy*; *toxosis*.

endogenous t. A disease due to poisons generated within the body. SYN: *auto-intoxication*; *autotoxemia*.

exogenous t. Any toxic condition resulting from a poison not generated in the body.

retention t. Toxicosis from retained products that normally are excreted shortly after formation.

toxic shock-like syndrome ABBR: TSLs.

An infection in which the initial site is skin or soft tissue. This may occur in adults or children and it is readily transmitted from person to person. Typically there is a history of a minor, usually nonpenetrating, local trauma that within the next 1 to 3 days develops into the usual toxic shock syndrome (TSS) caused by a toxin elaborated by certain strains of *Staphylococcus aureus*. SEE: *toxic shock syndrome*.

toxic shock syndrome ABBR: TSS. A rare disorder similar to septic shock caused by an exotoxin produced by certain strains of *Staphylococcus aureus* and group A streptococci. It was originally described in young women using vaginal tampons but has also been reported in users of contraceptive sponges and diaphragms and after surgical wound packing. A similar syndrome is caused by streptococcal infections. SEE: *Staphylococcus*; *Nursing Diagnoses Appendix*.

SYMPTOMS: The diagnosis is made when the following criteria are met: fever of 102°F (38.9°C) or greater; diffuse, macular (flat), erythematous rash, followed in 1 or 2 weeks by peeling of the skin, particularly of the palms and soles; hypotension or orthostatic syncope; and involvement of three or more of the following organ systems: gastrointestinal (vomiting or diarrhea at the onset of illness), muscular (severe myalgia), mucous membrane (vaginal, oropharyngeal, or conjunctival) hyperemia, renal, hepatic, hematological (platelets less than 100,000/mm³), and central nervous system (disorientation or alteration in consciousness without focal neurological signs when fever and hypotension are absent). Results of blood, throat, and cerebrospinal fluid cultures are usually negative. The possibility of Rocky Mountain spotted fever, leptospirosis, or rubeola should be eliminated by blood tests. The disease is fatal in approx. 5% to 15% of cases.



Anyone who develops these symptoms and signs should seek medical attention immediately. If a tampon is being used, it should be removed at once.

TREATMENT: Penicillinase-resistant antibiotics such as nafcillin or oxacillin do not affect the initial syndrome but may prevent its recurrence. Supportive care (intravenous fluids, pressor drugs, intensive care) is provided.

toxicodermatitis (töks'ĭ-dĕr-mĭ'tĭs) [" + *derma*, skin, + *itis*, inflammation] Toxicoderma.

toxidrome (tök'sĭ-drŏm) A specific cluster of symptoms that occurs after patients are exposed to a poisonous agent; a toxic syndrome.

toxigenic (tòks'î-jèn'ik) [*l'* + *gennan*, to produce] Producing toxins or poisons.

toxigenicity (tòks'î-jèn-ís'î-tē) The virulence of a toxin-producing pathogenic organism.

toxin (tòks'în) [Gr. *toxikon*, poison] A poisonous substance. SEE: *antitoxin*; *hazardous material*; *health hazard*; *permissible exposure limits*; *phytotoxin*; *right-to-know law*; *toxoid*.

anthrax t. The three proteins made by the infectious bacterium *Bacillus anthracis* responsible for the deadly effects of anthrax. Anthrax toxin includes protective antigen, which helps the bacterium enter cells, and lethal and edema factors, which kill cells by disrupting the cell membrane's normal biochemical functions.

bacterial t. Poisons produced by bacteria that cause cell damage. They include exotoxins (e.g. those secreted by *Staphylococcus aureus* and *Corynebacterium diphtheriae*), and endotoxins. Endotoxins continue to cause damage even after the bacteria are killed. SEE: *bacteria*.

botulinum t. type A A neuromuscular blocking drug used to paralyze muscles, esp. muscles in spasm. It is also used for cosmetic purposes (e.g., by those desirous of maintaining a fixed facial appearance).

botulinus t. A neurotoxin that blocks acetylcholine release, produced by *Clostridium botulinum*, the causative organism for botulism. Seven types of the toxin have been identified.

dermonecrotic t. Any one of a group of different toxins that can cause necrosis of the skin. Coagulase-positive *Staphylococcus aureus* produces several such toxins. SYN: *exfoliative toxin*. SEE: *Kawasaki disease*; *staphylococcal scaled skin syndrome*; *toxic shock syndrome*.

diphtheria t. The specific toxin produced by *Corynebacterium diphtheriae*.

dysentery t. The exotoxin of various species of *Shigella*.

erythrogenic t. The former name for Streptococcal pyrogenic exotoxins.

exfoliative t. Dermonecrotic toxin.

plant t. Any toxin produced by a plant; a phytotoxin.

Shiga t. SEE: *Shiga toxin*.

toxin-antitoxin (tòk'sîn an'tē-tòk'sîn) ABBR: T.A.T. An infrequently used mixture of a toxin and an antibody that blocks its effects. It was formerly used in some vaccine formulations.

toxicicide (tòks-în'is-íd) [*l'* + *cidus*, kill] That which is destructive to toxins.

toxinosis (tòk'sî-nô'sis) [*l'* + Gr. *osis*, condition] Toxicosis.

toxipathy (tòks-îp'â-thē) [*l'* + Gr. *pathos*, disease, suffering] Toxicosis.

toxoid SEE: *toxi-*.

toxocariasis (tòks'ô-kâr-î'â-sis) [*l'* +

kara, head, + *-iasis*, condition] Infestation with the nematode worms *Toxocara canis* or *T. cati*, which migrate but cannot complete their life cycle in a human host and die after causing tissue damage that ranges from mild to severe. Larvae may be carried to any part of the body where the blood vessel is large enough to accommodate them. They may end up in the brain, retinal vessels, liver, lung, or heart and produce myocarditis, endophthalmitis, epilepsy, or encephalitis. Diagnosis is made by immunological tests and by the presence of larvae in tissue obtained by liver biopsy. It is important that toxocariasis be considered in cases diagnosed as retinoblastoma. SYN: *visceral larva migrans*.

toxoid (tòks'oyd') [*l'* + *o-*] A toxin that has been chemically modified to retain its antigenicity but is no longer poisonous.

alum-precipitated t. Toxoid of diphtheria or tetanus precipitated with alum.

diphtheria t. Diphtheria toxin that has been altered so that it cannot cause disease but is still able to stimulate the production of antibodies for active immunization; it is used in diphtheria-pertussis-tetanus vaccine (DTaP). SYN: *anatoxin*. SEE: *toxin*.

toxolecithin (tòks'ô-lēs'î-thîn) [*l'* + *lekithos*, egg yolk] A compound of lecithin with a toxin such as certain snake venoms.

toxopeptone (tòks'ô-pēp'tōn) [*l'* + *pepton*, digesting] A protein derivative produced by action of a toxin on peptones.

Toxoplasma (tòks'ô-plās'mă) Genus of protozoa in the sporozoa group.

T. gondii The causative agent of toxoplasmosis.

toxoplasmin (tòk'sô-plās'mîn) An antigen obtained from mouse peritoneal fluid infected with *Toxoplasma gondii*.

toxoplasmosis (tòks-ô-plās-mô'sis) Infection with the protozoan *Toxoplasma gondii*. It usually is a recurrence of a mild subclinical infection in people with normal immune systems; approx. 30% of the U.S. population have antibodies indicating they have been infected. In those with acquired immunodeficiency syndrome (AIDS) or receiving immunosuppressive therapy after an organ transplant, reactivation of dormant organisms may be fatal. Approx. 25% of women infected for the first time during pregnancy pass the infection on to the developing fetus.

ETIOLOGY/TRANSMISSION: *T. gondii* is carried by many mammals and birds and is commonly transmitted to humans by inadequate handwashing after handling cat feces or by eating incompletely cooked pork or lamb. Once inside the intestines, the organism may

spread via the blood to other organs. It is destroyed by T lymphocytes; people with immune-suppressing illnesses (e.g., AIDS) or patients receiving immunosuppressive therapy are especially susceptible, as is the developing fetus.

In 25% of fetuses, toxoplasmosis damages the heart, brain, and lungs. It also causes eye infection (chorioretinitis), which may produce blindness. In AIDS patients, toxoplasmosis is the most common cause of encephalitis; systemic disease also may occur. In immunosuppressed patients, the infection causes reactivation of latent infection in the transplanted organ. Toxoplasmosis is diagnosed by clinical presentation, brain biopsy, brain scans, and response to treatment.

SYMPTOMS: In healthy people, primary infection may be indicated only by mild lymphadenopathy. AIDS patients with neurological involvement usually show confusion, weakness, focal neurological deficits, seizures, and decreased levels of consciousness; fever may be present.

TREATMENT: A combination of pyrimethamine, sulfadiazine, and leucovorin (folinic acid) is administered until 2 weeks after symptoms disappear; the latter helps prevent bone marrow depression. Prednisone is added to the regimen for patients with toxoplasma meningitis or chorioretinitis. In AIDS patients, trimethoprim/sulfamethoxazole is used for prophylaxis and sulfadiazine for suppressive therapy after acute infection. Infected pregnant women are treated with spiramycin to prevent placental infections.

TPA *total parenteral alimentation; tissue plasminogen activator.*

T.P.I. test *Treponema pallidum immobilizing test* (for syphilis).

TPN *triphosphopyridine nucleotide; total parenteral nutrition.*

TPR *temperature, pulse, respiration.*

tr *L. tinctura, tincture.*

trabecula (tră-běk'ū-lă, -lê) *pl. trabeculae* [L., a little beam] **1.** A cord of tissue that serves as a supporting structure by forming a septum that extends into an organ from its wall or capsule. **2.** The network of osseous tissue that makes up the cancellous structure of a bone.

t. carnea Any of the thick muscular tissue bands attached to the inner walls of the ventricles of the heart.

trabecular (tră-běk'ū-lăr) The network of osseous tissue that makes up spongy (cancellous) bone.

trabecular meshwork A woven structure at the junction between the iris and the sclera of the eye that filters aqueous fluid before it enters the canal of Schlemm.

trabeculate (tră-běk'ū-lăt) Having trabeculae.

trabeculectomy A surgical treatment for glaucoma in which part of the trabecular meshwork is removed to relieve pressure in the anterior chamber of the eye. The opening is made in the sclera (the "white of the eye") under the eyelid. Fluid from the anterior chamber drains in front of the eye instead of being drained through the canal of Schlemm and is absorbed by the conjunctiva.

trabeculectomy (tră-běk'ū-lō-plăs'tê) Surgical laser procedure done on the trabecular meshwork of the eye to increase the outflow of aqueous in the treatment of glaucoma. SEE: *glaucoma.*

trace (trăs) [O.Fr. *tracer*] **1.** A very small quantity. **2.** A visible mark or sign.

trace amine Any of several chemicals synthesized in the body and similar in structure and function to the biogenic amines. Examples include phenylethylamine and tryptamine. Trace amines alter impulse propagation in the brain and influence mood and behavior.

traceback Identification of the source of an outbreak of disease or of a public health emergency.

trace element An element needed by the body in very small amounts; many are essential for enzyme functioning. Trace elements include chromium, copper, fluoride, iodine, iron, manganese, molybdenum, selenium, and zinc.

traceforward The anticipation, identification, and planning for the likely effects of a local outbreak of disease or public health emergency.

tracer (tră'sêr) A radioactive isotope, capable of being incorporated into compounds, that when introduced into the body "tags" a specific portion of the molecule so that its course may be traced. This is used in absorption and excretion studies, in identification of intermediary products of metabolism, and in determination of distribution of various substances in the body. Radioactive carbon (¹⁴C), calcium (⁴²Ca), and iodine (¹³¹I) are examples of tracers commonly used. SEE: *label.*

trachea (tră'kê-ă) *pl. tracheae* [Gr. *tracheia*, rough] The portion of the respiratory tract that carries air through the neck and upper chest. The trachea runs in the midline of the neck along the front of the esophagus. It is a fibrocartilaginous tube, 9 to 15 cm long, extending from the larynx (at the level of vertebra C6) into the thorax, where, at the level of the sternal angle, it divides into the right and left main (primary) bronchi. The 15 to 20 stacked rings of cartilage composing the skeleton of the trachea are incomplete circles: they are C-shaped with the opening along the back wall of the trachea. The mem-

branes that connect the tracheal rings are elastic, and the whole trachea can bend and stretch. The trachea is lined with a mucosa made of ciliated epithelium that sweeps mucus, trapped dust, and pathogens upward. SYN: *windpipe*. SEE: *bronchi*.

tracheal (trā'kē-äl) Pert. to the trachea.

tracheal gas insufflation A ventilatory technique to reduce accumulated carbon dioxide in the central airways and improve alveolar ventilation while decreasing ventilatory pressures and tidal volumes. Gas may be injected either continuously or through a catheter into the airways during a specific phase of the respiratory cycle.

trachealgia (trā'kē-äl'jē-ä) [" + *algos*, pain] Pain in the trachea.

trachealis (trā'kē-ä'lis) [L.] A muscle composed of smooth muscle fibers that extends between the ends of the tracheal rings. Its contraction reduces the size of the lumen.

tracheal tickle A maneuver designed to elicit a reflex cough.

tracheal tube Endotracheal tube.

tracheal tugging A slight downward movement of the trachea with each inspiratory effort, resulting from descent of the diaphragm in a person with a low, flat diaphragm. This sign may also be present as a result of the proximity of an aortic aneurysm to the trachea. It should not be confused with the pulsations from a normal vessel beneath the trachea.

tracheitis (trā'kē-ī'tis) [Gr. *tracheia*, rough, + *itis*, inflammation] Inflammation of the trachea most often caused by infection. It may be acute or chronic and may be associated with bronchitis and laryngitis. SYN: *trachitis*.

TREATMENT: Patients must be monitored for signs of airway obstruction. Antibiotics are given when bacterial infection is the cause. In children the most common bacterial cause of infection is *Staphylococcus aureus*.

PATIENT CARE: Vital signs are monitored, and the patient is assessed for fever and acute airway obstruction (croupy cough, stridor) due to the presence of inflammation and thick secretions. Humidified oxygen is administered as prescribed, and suctioning is performed as necessary to remove secretions. If airway obstruction results in respiratory failure, emergency endotracheal intubation or tracheostomy is performed. The patient is comforted to reduce anxiety.

trachelectomy (trā'kēl-ēk'tō-mē) [" + *ektome*, excision] Amputation of the cervix uteri.

trachelematoma (trā'kēl-ēm'ä-tō'mä) [" + *haima*, blood, + *oma*, tumor] A hematoma situated on the neck.

trachelism, trachelismus (trā'kē-lizm,

trā-kē-liz'müs) [" + *-ismos*, condition] Backward spasm of the neck, sometimes preceding an epileptic attack.

trachelitis (trā-kē-lī'tis) [" + *itis*, inflammation] Inflammation of the mucous membrane of the cervix uteri. SYN: *cervicitis*.

trachelo- Combining form meaning *neck*.
trachelocele (trāk'ē-lō-sēl) [" + *kele*, tumor, swelling] Tracheocele.

trachelocystosis (trā'kē-lō-sīr-tō'sis) [" + *kyrtos*, curved, + *osis*, condition] Trachelokyphosis.

trachelodynia (trā'kē-lō-dīn'ē-ä) [" + *odyne*, pain] Pain in the neck.

trachelokyphosis (trā'kēl-ō-kī-fō'sis) [" + *kyphosis*, humpback] Excessive anterior curvature of the cervical portion of the spine. SYN: *trachelocystosis*.

trachelology (trā'kē-lōl'ō-jē) [" + *logos*, word, reason] Scientific study of the neck, its diseases, and its injuries.

trachelopexy (trā'kēl-ō-pēks'ē) [" + *pexis*, fixation] Surgical fixation of the cervix uteri to an adjacent part.

trachelorrhaphy (trā'kēl-or'ä-fē) [" + *rhaphe*, seam, ridge] Suturing of a torn cervix uteri.

tracheloschisis (trā'kē-lōs'kī-sis) [" + *schisis*, a splitting] Congenital opening or fissure in the neck.

trachelotomy (trā'kēl-ōt'ō-mē) [" + *tome*, incision] Incision of the cervix of the uterus.

tracheo- Combining form meaning *trachea, windpipe*.

tracheoaocele (trā'kē-ō-ēr'ō-sēl) [Gr. *tracheia*, rough, + *aer*, air, + *kele*, tumor, swelling] Hernia or cyst of the trachea containing air.

tracheobronchial (trā'kē-ō-brōng'kē-äl) Concerning the trachea and bronchus.

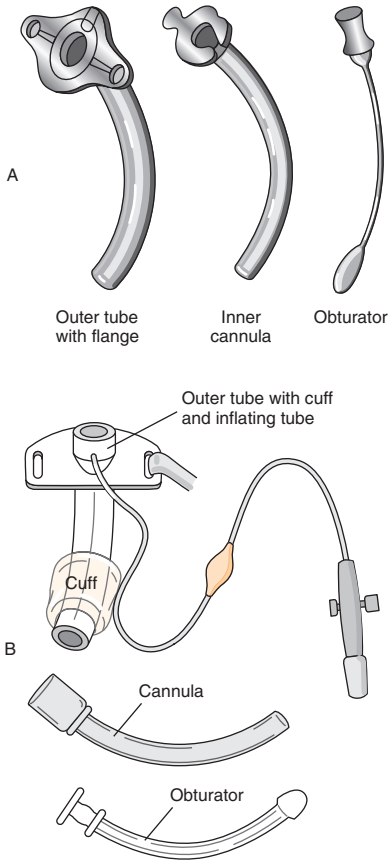
tracheobronchomegaly (trā'kē-ō-brōng'kō-mēg'ä-lē) Congenitally enlarged size of the trachea and bronchi.

tracheobronchoscopy (trā'kē-ō-brōng-kōs'kō-pē) [" + *bronchos*, windpipe, + *skopein*, to examine] Inspection of the trachea and bronchi through a bronchoscope.

tracheocele (trā'kē-ō-sēl) [" + *kele*, hernia] Protrusion of mucous membrane through the wall of the trachea. SYN: *trachelocele*.

tracheoesophageal (trā'kē-ō-ē-sōf'ä-jē-äl) [" + *oisophagos*, esophagus] Pert. to the trachea and esophagus.

tracheoesophageal puncture ABBR: TEP. A surgically created connection between the trachea and the esophagus made for a patient who has had his voicebox (larynx) removed; it permits the patient to force air from the lungs through the windpipe into the esophagus, and from there out of the mouth in order to speak. A one-way valve, or "shunt," is placed into the tracheoesophageal opening. The patient learns to



TRACHEOSTOMY TUBE

(A) Metal tube, (B) Cuffed plastic tube

speak using the TEP with the help of a speech therapist.

tracheolaryngotomy (trā'kē-ō-lār'in-gōt'ō-mē) [n + larynx, larynx, + tome, incision] Incision into the larynx and trachea.

tracheomalacia (trā'kē-ō-mā-lā'shē-ä) Softening of the tracheal cartilage. It may be caused by pressure of the left pulmonary artery on the trachea or by long-term tracheal intubation.

tracheopathia, tracheopathy (trā'kē-ō-pāth'ē-ä, -ōp'ä-thē) [n + pathos, disease, suffering] A disease of the trachea.

tracheophony (trā'kē-ōf'ō-nē) [n + phone, a sound] The sound heard over the trachea in auscultation.

tracheoplasty (trā'kē-ō-plās'tē) [n + plassein, to form] Plastic operation on the trachea.

tracheorrhagia (trā'kē-ō-rā'jē-ä) [Gr. tracheia, rough, + rhēgnynai, to burst forth] Tracheal hemorrhage.

tracheoschisis (trā'kē-ōs'kīs-īs) [n + schisis, a splitting] A fissure of the trachea.

tracheoscopy (trā'kē-ōs'kō-pē) [n + skopein, to examine] Inspection of the interior of the trachea by means of reflected light.

tracheostenosis (trā'kē-ō-stēn-ō'sīs) [n + stenosis, act of narrowing] Contraction or narrowing of the lumen of the trachea.

tracheostoma (trā'kē-ōs'tō-mä) Opening into the trachea, via the neck.

tracheostomy (trā'kē-ōs'tō-mē) [n + stoma, mouth] The surgical opening of the trachea to provide and secure an open airway. This procedure may be performed in emergency situations (e.g., when there is an acute upper airway obstruction) or electively to replace a temporary airway provided by an endotracheal tube that has been in place or is anticipated to remain in place for more than 10 to 12 days. SEE: *illus.; endotracheal tube.*



To avoid injury to the structures of the neck, tracheostomy should be performed only by skilled or well-trained health care professionals.

PATIENT CARE: Vital signs are monitored frequently after surgery. Warm, humidified oxygen is administered. The patient is placed in the semi-Fowler position to promote ease of breathing. A restful environment is provided. Communication is established by questions with simple yes and no answers, hand signals, and simple sign language and



PATIENT WITH TRACHEOSTOMY

with use of a slate or an alphabet board for writing. (Written communication requires vision, hand strength, and dexterity and is often difficult or impossible for acutely ill patients.) Later, the patient is taught how to cover the tracheostomy with the cuff deflated to facilitate speech, or is provided with a speaking valve and taught how to use it. Before the patient is able to speak, the nurse should be alert to the patient's unmet needs and assist to prevent increased anxiety. Chest physiotherapy promotes aeration of the lung. Suctioning of secretions with prehyperoxygenation and posthyperoxygenation and tracheostomy care are provided as necessary, using aseptic technique throughout. Dressing is changed frequently during the first 24 hr postoperatively, and the surgical site is observed for excessive bleeding. Coughing and deep breathing are encouraged at regular intervals. A teaching plan should cover stoma care, which includes cleansing, removing crusts, and filtering air with a suitable filter. The patient and his or her health care team should watch for signs of infection, such as reddening of the skin or drainage of pus from the surgical site. Aspiration is a risk for all tracheostomized patients, but may be reduced when a speaking valve is used. The patient is assessed for signs and symptoms of aspiration, including changes in secretion production, fever, and mental status changes. The patient should not smoke and should avoid secondhand smoke. Activities may be gradually increased to include noncontact sports but should not include swimming. Showering may be permitted if the patient wears a protective plastic bib or uses a hand to cover the stoma. The patient should be reassured that secretions will decrease and that taste and smell will gradually return. If a speaking valve is used, the patient is taught to clean it daily with water and mild, fragrance-free soap, to rinse it thoroughly and allow it to air dry, and to place it in its storage container when not in use. The importance of follow-up care with an ear, nose, and throat specialist is stressed.

mini-t. Placement of a 4 mm (about 1/6th of an inch) cannula through an incision made through the cricothyroid membrane into the trachea. This is done using local anesthesia. This type of tracheostomy is esp. useful in removing sputum retained in the tracheobronchial tree.

tracheostomy button A short tube or cannula placed inside a tracheostomy stoma to keep the tissue open.

tracheostomy care Management of the tracheostomy wound and the airway device. The patient should be suctioned as often as necessary to remove secretions.

Sterile technique is maintained throughout the procedure. Before suctioning, the patient should be aerated well, which can be accomplished by using an Ambu bag attached to a source of oxygen. The patency of the suction catheter is tested by aspirating sterile normal saline through it. The catheter is inserted without applying suction, until the patient coughs. Suction is then applied intermittently and the catheter withdrawn in a rotating motion. The lungs are auscultated by assessing the airway, and the suctioning procedure is repeated until the airway is clear. Each suctioning episode should take no longer than 15 sec, and the patient should be allowed to rest and breathe between suctioning episodes. The suction catheter is cleansed with sterile normal saline solution, as is the oral cavity if necessary. The inner cannula should be cleaned or replaced after each aspiration. Metal cannulas should be cleansed with sterile water.

An emergency tracheotomy kit is kept at the bedside at all times. A Kelly clamp is also kept at the bedside to hold open the tracheostomy site in an emergency. Unless ordered otherwise, cuffed tracheostomy tubes must be inflated if the patient is receiving positive-pressure ventilation. In other cases, the cuff is kept deflated if the patient has problems with aspiration. The dressing and tape are changed every 8 hr, using aseptic technique. Skin breakdown is prevented by covering tracheostomies with an oval dressing between the airway device and the skin. To apply neck tapes, two lengths of twill tape approx. 10 in (25 cm) long are obtained; the end of each is folded and a slit is made 0.5 in (1.3 cm) long about 1 in (2.5 cm) from the fold. The slit end is slipped under the neck plate and the other end of the tape pulled through the slit. This is repeated for the other side. The tape is wrapped around the neck and secured with a square knot on the side. Neck tapes should be left in place until new tapes are attached. Tracheal secretions are cultured as ordered; their color, viscosity, amount, and abnormal odor, if any, are observed. The site is inspected daily for bleeding, hematoma formation, subcutaneous emphysema, and signs of infection. Appropriate skin care is provided. The medical care team should help alleviate the patient's anxiety and apprehension and communicate openly with the patient. The patient's response is documented.

tracheostomy tube Tracheotomy tube.

tracheotome (trā'kē-ō-tōm) [*t* + *tome*, incision] An instrument used to open the trachea.

tracheotomy (trā'kē-ōt'ō-mē) Incision into the trachea through the skin and

soft tissues of the neck. SEE: *tracheostomy*.

tracheotomy tube Any tube inserted into the trachea to gain control of the airway. SYN: *tracheostomy tube*.

trachitis (trā-kī'tis) [" + *itis*, inflammation] Tracheitis.

trachoma (trā-kō'mā) [Gr., roughness] A chronic, contagious form of conjunctivitis that is the leading cause of blindness in the world. It is caused by *Chlamydia trachomatis*, which is endemic in Africa, India, and the Middle East and is seen also in the southwestern U.S. The disease is transmitted by flies, clothing, bedding, and hands contaminated by exudate. Over time, the inflammation is followed by scarring, which causes the cornea to become opaque. SYN: *Egyptian ophthalmia*; *granular conjunctivitis*. SEE: *Standard Precautions Appendix*.

Azithromycin is the drug of choice for treating trachoma, but its expense limits its use in some impoverished nations. Tetracyclines are an alternative.

brawny t. Trachoma with general lymphoid infiltration without granulation of the conjunctiva.

t. deformans Trachoma with scarring.

diffuse t. Trachoma with large granulations.

trachoma body A mass of cells present as an inclusion body in the conjunctival epithelial cells of individuals with trachoma.

trachomatous (trā-kō'mā-tūs) Concerning trachoma.

trachychromatic (trā'kī-krō-māt'ik) [Gr. *trachys*, rough, + *chroma*, color] Pert. to a nucleus with very deeply staining chromatin.

trachyphonia (trā'kī-fō'nē-ā) [" + *phone*, voice] Roughness or hoarseness of the voice.

tracing (trā'sing) **1.** A graphic record of some event that changes with time such as respiratory movements or electrical activity of the heart or brain. **2.** In dentistry, a graphic display of movements of the mandible.

contact t. An attempt to find the source of an infectious or toxic outbreak, typically through patient interviews and laboratory specimens.

tract (trākt) [L. *tractus*, extent] **1.** A course or pathway. **2.** A group or bundle of nerve fibers within the spinal cord or brain that constitutes an anatomical and functional unit. SEE: *fasciculus*. **3.** A group of organs or parts forming a continuous pathway.

afferent t. A primary or secondary sensory tract of axons inside the central nervous system.

alimentary t. The canal or passage

from the mouth to the anus. SYN: *digestive tract*.

ascending t. 1. Axons that carry impulses up the spinal cord or from the spinal cord to the brain. **2.** Axons that carry impulses to the cerebral cortex.

biliary t. The organs and ducts that participate in the secretion, storage, and delivery of bile into the duodenum. SEE: *illus*; *bile ducts*; *gallbladder*; *liver*.

corticospinal t. Pyramidal t.

descending t. White fibers in the spinal cord that carry nerve impulses from the brain.

digestive t. Alimentary t.

dorsolateral t. A spinal cord tract superficial to the tip of the dorsal horn. It is made up of short pain and temperature fibers that are processes of neurons having their cell bodies in the dorsal root ganglion.

extrapyramidal t. SEE: *extrapyramidal motor system*.

gastrointestinal t. The stomach and intestines.

genitourinary t. The genital and urinary pathways. SYN: *urogenital tract*.

iliotibial t. A thickened area of fascia lata extending from the lateral condyle of the tibia to the iliac crest.

intestinal t. The small and large intestines.

motor t. A descending pathway of axons that conveys motor impulses from the brain to the lower portions of the spinal cord.

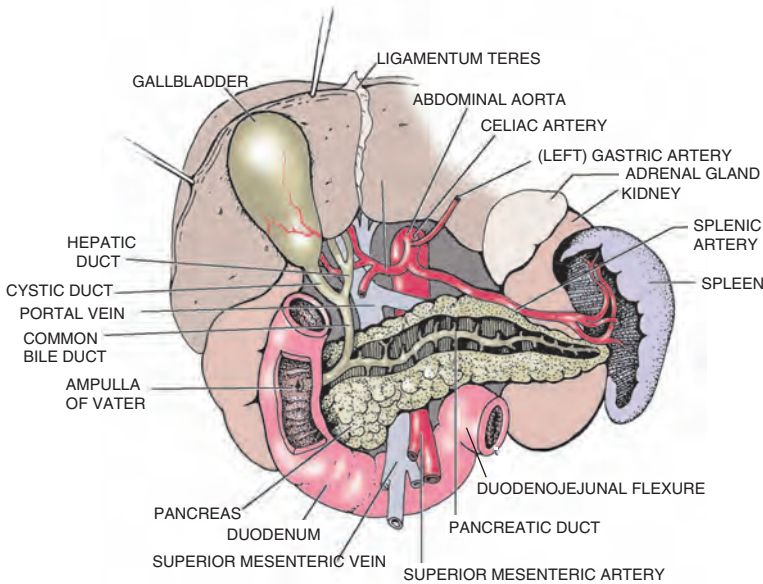
olfactory t. A narrow white band that extends from the olfactory bulb to the anterior perforated substance of the brain.

optic t. Fibers of the optic nerve that continue beyond the optic chiasma, most of which terminate in the lateral geniculate body of the thalamus. Some continue to the superior colliculus of the midbrain; others enter the hypothalamus and terminate in the supraoptic and medial nuclei.

pyramidal t. One of three descending tracts (lateral, ventral, ventrolateral) of the spinal cord. The tract consists of fibers arising from the giant pyramidal cells of Betz present in the motor area of the cerebral cortex. SYN: *corticospinal tract*.

respiratory t. The respiratory organs in continuity.

rubrospinal t. A descending tract of fibers arising from cell bodies located in the red nucleus of the midbrain. After leaving the red nucleus, axons cross to the contralateral side and descend into the spinal cord, where they terminate in the ventral horns but not directly on the motor neurons. The red nucleus is innervated from the motor cortices and the cerebellum; the rubrospinal pathway is a nonpyramidal route for cortical motor information to be sent to the spi-



BILIARY TRACT (IN RELATION TO LIVER, PANCREAS, AND DUODENUM)

nal cord. A major function of the rubro-spinal axons is to set and adjust the muscle tone in the flexor muscles. SEE: *red nucleus*.

spinothalamic t. The main sensory axon tract carrying pain and temperature information in the spinal cord.

supraopticohypophyseal t. A tract consisting of fibers arising from cell bodies located in supraoptic and paraventricular nuclei of the hypothalamus and terminating in the posterior lobe of the hypophysis.

urinary t. The urinary passageway from the kidney to the outside of the body, including the pelvis of the kidney, ureter, bladder, and urethra.

urogenital t. Genitourinary t.

uveal t. The vascular and pigmented tissues that constitute the middle coat of the eye, including the iris, ciliary body, and choroid.

tractellum (trāk-tĕl'ūm) [L.] An anterior flagellum of a protozoan. It propels the cell by traction.

traction (trāk'shŭn) [L. *tractio*] The process of drawing or pulling. SEE: *Nursing Diagnoses Appendix*.

axis t. Traction in line with the long axis of a course through which a body is to be drawn.

Bryant's t. SEE: *Bryant's traction*.

Buck's t. Buck's extension.

cervical t. Traction applied to the cervical spine by applying a force to lift the head or a mobilization technique to distract individual joints of the vertebrae. SEE: *Crutchfield tongs*.

dynamic t. Use of both tension across an injury and movement to maintain proper alignment and function of an injured body part.

elastic t. Traction exerted by elastic devices such as rubber bands.

external t. Traction applied to any fracture (e.g., compression fractures of the face using metal or plaster headgear for anchorage).

head t. Traction applied to the head as in the treatment of injuries to cervical vertebrae.

intermittent t. The force of traction alternately applied and released at specified intervals.

lumbar t. Traction applied to the lumbar spine usually by applying a force to pull on the pelvis or by using a mobilization technique to distract individual joints of the lumbar vertebrae.

manual t. The application of traction to the joints of the spine or extremities by a therapist trained to know appropriate positions and intensities for the force.

maxillomandibular t. Traction applied to the maxilla and mandible by means of elastic or wire ligatures and interdental wiring or splints.

mechanical t. The use of a device or mechanical linkage (i.e., pulleys and weights) to apply a traction force.

skeletal t. A pulling force applied directly to the bone through surgically applied pins and tongs.

PATIENT CARE: The patient in traction is placed on a firm mattress in the

prescribed position. Ropes, weights, and pulleys are assessed daily for wear, chafe, and improper position. Care must be taken to keep the skin insertion points of pins and tongs clean and free of infection. Infection at insertion sites can lead to osteomyelitis. Assessing the area for odor and other signs of infection and cleansing the area and then applying prescribed medication and sterile dressing can help to prevent osteomyelitis; aseptic technique is used to perform these procedures. Daily skin inspection for signs of pressure or friction is performed, and appropriate nursing measures are instituted to alleviate any pressure or friction. Proper traction and postural alignment should be maintained at all times and adjusted as necessary. An exercise regimen is established for the unaffected extremities. Patient complaints should be responded to without delay. Respiratory toilet with incentive spirometry is provided to prevent pulmonary complications. Pain and discomfort are assessed, and analgesics are administered as prescribed. Adequate nutrition and fluid intake promote tissue healing and repair. Dietary and medical management helps to prevent constipation and fecal impaction. The affected extremity is assessed daily or more frequently if necessary for complications such as phlebitis and nerve or circulatory impairment, and the lower extremity, for footdrop. Social and diversional activities are promoted. The patient is instructed about the use of a trapeze, exercises, and activity limitations, and discharge plans and follow-up care are provided.

sustained t. The application of a constant traction force up to ½ hr.

weight t. Traction exerted by means of weights.

tractor (trāk'tor) [L., drawer] Any device or instrument for applying traction.

tractotomy (trāk-tōt'ō-mē) Surgical section of a tract of the central nervous system. It is sometimes used to relieve intractable pain.

tractus (trāk'tūs) *pl.* **tractus** [L.] A tract or path.

tradename The name used to market a formally licensed drug or treatment.

traditional birth attendant A person, especially one in a developing country, who assists a woman during labor and delivery with skills learned by apprenticeship or personal experience rather than by formal training.

tragacanth (träg'ä-känth) [Gr. *tragacantha*, a goat thorn] The dried gummy exudation from the plant *Astragalus gummifer* and related species, grown in Asia. It is used in the form of mucilage, as a greaseless lubricant, and as an application for chapped skin.

tragal (trä'gäl) [Gr. *tragos*, goat] Relating to the tragus.

Trager work (trā-gēr) [Milton Trager, American physician] A form of massage therapy that involves rhythmic manipulations of the body, combined with mental gymnastics.

tragi (trā'jī) *Pl.* of tragus.

tragicus (träj'ik-ūs) [L.] The muscle on the outer surface of the tragus.

trigion (träj'ē-ōn) An anthropometric point at the upper margin of the tragus of the ear.

tragomaschalia (träg'ō-mäs-kāl'ē-ä) [Gr. *tragos*, goat, + *maschale*, the armpit] Odorous perspiration (bromidrosis) of the axilla.

tragoponia, tragophony (träg'ō-fō'nē-ä, -ōf'ō-nē) [' + *phone*, voice] A bleating sound heard in auscultation at the level of fluid in hydrothorax. SYN: *egophony*.

tragus (trā'gūs) *pl.* **tragi** [Gr. *tragos*, goat] A cartilaginous projection in front of the exterior meatus of the ear.

trailing zero (träl'ing) A zero that follows a decimal point, e.g., "lisinopril 5.0 grams orally twice a day." Trailing zeros appear on the Joint Commission on the Accreditation of Hospitals (JCAHO) "Do not use" list.



The use of a zero after a decimal point may result in the administration of a drug at ten times its prescribed dose if the decimal point is illegible or not seen.

train (trān) To participate in a special program of instruction to attain competence in a certain occupation.

trainable (trān'ä-bl) Having the ability to be instructed and to learn from being taught. In classifying severity of mental retardation or brain damage, it is important to know to what extent individuals may be trainable in various areas such as safety, personal care, or self-feeding.

training An organized system of instruction.

aerobic t. Exercise training for the purpose of attaining aerobic conditioning. Although no formula should be slavishly applied, a general guideline is that aerobic conditioning will be obtained by normal, healthy persons who exercise three to five times a week for 35 min or more and at an intensity that produces a heart rate of 220 minus the age of the individual.

autogenic t. A form of self-regulation developed by Johannes Schulz (early 20th century German physician) that is used to promote relaxation, aid stress management, and/or foster well-being using the autonomic nervous system. The practitioner utters or concentrates on a simple phrase (e.g., my arms feel

heavy and warm) and tries to induce physiological changes, such as increases in blood flow, to the body part on which he or she is concentrating.

aversive t. Aversion therapy.

bowel t., bowel retraining A program for assisting adult patients to re-establish regular bowel habits. Patients with chronic constipation, colostomies, fecal incontinence, or spinal cord injuries affecting the muscles involved in defecation may benefit from bowel training. Assessments include determining the etiology and duration of the bowel problem, the normal pattern, the use of enemas, suppositories, or laxatives to promote bowel evacuation, and the patient's mental status and ability to cooperate with the planned program. Interventions include dietary changes (esp. increased intake of dietary fiber), supervised training to elicit evacuation at convenient times (esp. after meals), biofeedback, kegel exercises (to strengthen anorectal and pelvic muscles), and psychotherapy.

PATIENT CARE: The patient is encouraged to increase the dietary intake of fresh fruits and vegetables and whole grains, and to drink 3000 ml of fluid each day. The need to heed normal evacuatory urges is emphasized. Use of laxatives is discouraged, and the actions of stool softeners are explained. The advantages of generating evacuation 30 min after meals to enlist normal peristaltic action are communicated to the patient. Digital anal stimulation or insertion of suppository, if indicated, is demonstrated.

t. effect The physiological response of the body to regular repetitive exercise. Beneficial effects include a slower heart rate, lower blood pressure, decreased blood cholesterol levels, increased muscle strength, better oxygen and glucose extraction from the blood, and improvement in mood.

habit t. 1. The development in young children of specific behavior patterns for performing basic activities such as eating, dressing, using the toilet, and sleeping. **2.** An educational tool in which learning of specific tasks is assigned to a structured time of the day, so that the task and the time are associated in the mind of the student. **3.** The treatment is designed to encourage behavioral routines and productive time management.

in-service t. Clinical education designed to inform and update staff about important ongoing projects, technologies, and therapeutic agents.

inspiratory muscle t. Any technique used to enhance ventilation by increasing respiratory coordination, endurance, and strength. Examples include breath-holding exercises, breathing

against resistance, and incentive spirometry.

interval t. A form of physical conditioning in which periods of high-intensity exercise alternate with periods of lesser exertion or rest and recovery.

social skills t. The components of rehabilitation programs that focus on the skills necessary for effective interaction with other people.

train-of-four ABBR: TOF. A monitoring protocol for counting the number of contractions produced by peripheral nerve stimulators in patients who have received neuromuscular blocking agents (NMBAs) such as Pavulon and vecuronium. When NMBAs are used, staff may be unable to use normal assessment techniques of neurological function.

PATIENT CARE: In TOF, electrodes are placed on the patient's wrist, and the number of thumb twitches is counted. After the NMBA infusion is begun, thumb twitches are measured every 30 min for 2 hr to ensure the appropriate level of paralysis has been reached. The absence of contractions indicates that too much NMBA is being given; 1 to 2 twitches indicate the appropriate level of drug is being administered, and 3 to 4 twitches indicate the need to increase the infusion rate. Once the desired level is reached, response to peripheral nerve stimulation is measured every 4 hr.

Patients retain sensory nerve function and awareness of their surroundings, so analgesics and sedatives are usually administered concurrently. Whether TOF augments clinical assessment of neuromuscular blockade is controversial; it may be more useful with some neuromuscular blocking agents (e.g., vecuronium) than others.

trait (trāt) A distinguishing feature; a characteristic or property of an individual.

acquired t. A trait that is not inherited; one resulting from the effects of the environment.

inherited t. A trait due to genes transmitted through germ cells.

personality t. An enduring pattern of perceiving, communicating, and thinking about oneself, others, and the environment that is exhibited in multiple contexts. SEE: *personality disorder*.

sickle cell t. The condition of being heterozygous with respect to hemoglobin S, the gene responsible for sickle cell anemia. In people with sickle cell trait each red blood cell has one copy each of hemoglobin A and hemoglobin S. These cells will not become sickled until extremely low concentrations of oxygen occur. SEE: *hemoglobin S disease*.

trajector (trā-jĕk'tor) [L. *trajectus*, thrown across] A device for determin-

ing the approximate location of a bullet in a wound.

TRAM (trām) *transverse rectus abdominis musculocutaneous reconstruction.*

tramadol (trā'mă-dōl) A cyclohexanol and centrally acting analgesic, administered orally to treat moderate or moderately severe pain.

trance (trāns) [L. *transitus*, a passing over] A sleeplike state, as in deep hypnosis, in which a person has limited awareness of his surroundings.

death t. A trance simulating death.

induced t. A trance caused by some external event such as hypnosis.

tranquilizer (trān'kwī-līz'ēr) [L. *tranquillus*, calm] A drug that reduces tension, agitation, hyperactivity, and anxiety. The minor tranquilizers include antihistamines (e.g., hydroxyzine), buspirone, and benzodiazepines (e.g., diazepam or alprazolam). The benzodiazepines decrease anxiety, provide sedation, and may cause dependence, tolerance, or addiction. The major tranquilizers include neuroleptic drugs such as haloperidol, fluphenazine, or risperidone. They are used to treat psychotic symptoms, such as delusions, hallucinations, and catatonia, and to manage psychotic disorders, such as schizophrenia. A prominent delayed side effect of many neuroleptic agents is the movement disorder known as tardive dyskinesia.



Some tranquilizers may injure the developing embryo. Therefore, before prescribing one, one should know whether it is approved for use during pregnancy, esp. early pregnancy.

trans- [L.] Prefix meaning *across, over, beyond, through.*

transabdominal (trāns'āb-dōm'ī-nāl) Through, into, or across the abdomen or abdominal wall.

transacetylation (trāns-ās'ē-tīl-ā'shūn) Transfer of an acetyl group (CH₃CO—) in a chemical reaction.

transaction The interaction of a person with others, esp. one in which items on an agenda, finances, or ideas are discussed.

transactional analysis Psychotherapy involving role playing in an attempt to understand the relationship between the patient and the therapist and eventually that between the patient and reality.

transamidination (trāns-ām'ī-dīn-ā'shūn) The transfer of an amidine group from one amino acid to another.

transaminase (trāns-ām'in-ās) The old term for aminotransferase.

glutamic-oxaloacetic t. Aspartate aminotransferase.

glutamic-pyruvic t. Alanine aminotransferase.

transamination (trāns'ām-ī-nā'shūn) The transfer of an amino group from one compound to another or the transposition of an amino group within a single compound.

transaortic (trāns'ā-or'tīk) Done through the aorta (e.g., a surgical procedure).

transatrial (trāns-ā'trē-āl) Done through the atrium (e.g., a surgical procedure).

transaudient (trāns-aw'dē-ēnt) [ʹ + *audire*, to hear] Permeable to sound waves.

transbronchial (trāns-brōng'kē-āl) Across the bronchi or the bronchial wall.

transcalent (trāns-kā'lēnt) [ʹ + *calere*, to be hot] Permeable by heat rays. SYN: *diathermal*.

transcapillary (trāns'kăp'il-lă-rē) [ʹ + *capillaris*, relating to hair] Across the endothelial wall of a capillary.

transcellular (trāns-sēl'ū-lēr) [ʹ + ʹ] Passing through cells.

transcervical (trāns-sēr'vī-kāl) Done through the cervical os of the uterus.

transcortical (trāns-kor'tī-kāl) Joining two parts of the cerebral cortex.

transcortin (trāns-kor'tīn) A corticosteroid-binding globulin.

transcriptase (trāns-krīp'tās) A polymerase enzyme that constructs a messenger RNA molecule that is a complementary copy of the base sequence on a DNA gene. SYN: *RNA polymerase*.

reverse t. An enzyme of retroviruses, including HIV, that catalyzes the construction of DNA from the RNA of the virus, the reverse of normal transcription.

transcription (trān-skrīp'shūn) The first step in protein synthesis, the synthesis of a messenger RNA (mRNA) molecule that is a complementary copy of a DNA gene. This takes place in the nucleus of the cell; the mRNA then travels to the ribosomes in the cytoplasm, the site of protein synthesis.

transcriptome (trāns-skrīp'tōm) All the messenger RNA that can be made from a genome.

transcultural (trāns-kūl'tū-rāl) Affecting or pertaining to individuals of different ethnic, racial, or socioeconomic backgrounds. SEE: table.

transcutaneous (trāns'kū-tā-nē-ūs) Percutaneous.

transcutaneous electrical nerve stimulation ABBR: TENS. The application of mild electrical stimulation to skin electrodes placed over a painful area. It alleviates pain by interfering with transmission of painful stimuli.

transcutaneous oxygen monitoring Oximetry.

transcytosis (trānz-sī-tō'sīs) The ferrying of a substance across a cell membrane in coated vesicles.

Some Culturally Specific (Folk) Illnesses

Syndrome	Culture	Meaning
Caida de mollera	Latin America	“Sunken fontanel,” i.e., dehydration. Thought to be caused by spells or hexes
Latah	S.E. Asia	Obsessive and repetitive use of vulgar language followed by obedient gesturing
Mal de ojo	Latin America	“Evil eye,” i.e., a spell put on a child. Causes vomiting, belly pain, dehydration
Piblokto	Eskimo/Inuit	Sudden manic madness, with subsequent amnesia of the event
Root; rootwork Tabanka	S.E. U.S. Trinidad	Hexing or healing through sorcery Depression and/or suicide after abandonment by a wife
Tarantism	Mediterranean	Uncontrollable stupor, melancholy, and manic dancing attributed to the bite of the tarantula
Windigo (witiko)	Native American	Cannibalism as a result of spirit possession
Yonaki	Japanese	A sleep-disorder of childhood, marked by separation anxiety and nocturnal crying
Zar	Northern African/ Middle Eastern	Spirit possession

transdermal infusion system

(tränz“dërm’äl) A method of delivering medicine by placing it in a special gel-like matrix that is applied to the skin. Each application will provide medicine for from one to several days. Nitroglycerin, fentanyl, lidocaine, estradiol, testosterone, and scopolamine may be administered through the skin. A transdermal drug patch has three key elements: a backing, the drug, and a liner that is peeled away before application. The absorption, delivery rate, and bio-distribution of the drug are not affected by the patient’s skin texture, thickness, or color. Drugs are equally well absorbed when applied to arms, thighs, back, or abdomen because various body sites have about the same rate of dermal penetration. When placed on intact skin, a transdermal drug patch creates a concentration gradient between the high concentration of drug in the patch and the low concentration in the skin. The drug then diffuses passively across the outermost skin layer (stratum corneum) into epidermal capillaries. Also called *transdermal drug-delivery system*.

PATIENT CARE: The skin acts as a reservoir for the absorbed drug; therefore simple removal of a patch does not stop release of the drug into the bloodstream. Patients may forget to tell health care providers that they are wearing a patch, or the patch may be overlooked because of its transparency or because of skin folds, and as a result the patient could receive an overdose if a similar drug is administered by another route. Thus, health care professionals should ask specifically about patch use when taking a patient’s med-

ication history. Most patches are imprinted with the drug name, dose, and release rate, providing needed information to the care provider. The patient should be taught to keep each patch in its protective wrapper until ready for use, to inspect it for leakage, and not to use it if it is damaged. If a patch leaks on the skin, the exposed skin should be thoroughly rinsed with water (soap should not be used because it can irritate the drug-exposed skin). The manufacturer’s directions for patch application should be followed. Skin that is very hairy, oily, sunburned, scarred, calloused, or damaged; areas that tend to be sweaty; areas prone to friction (e.g., under a bra strap or at the waist line); and bony areas (e.g., the shoulders and hips) should be avoided. Skin should be clean and dry before the patch is applied, and powder, lotion, or residual oil from bath products or sunscreens should be removed by washing with mild soap and water and rinsing thoroughly. The drug name, dose, and delivery rate should be checked before the patch is applied. The patient should then peel off the protective liner and apply the adhesive side of the patch to the skin at the selected site, pressing the patch on firmly so that it adheres well, esp. around the edges. The hands should be washed immediately after applying a patch. Directions for removing a patch should be followed and the patch disposed of according to the manufacturer’s instructions. Application sites should be rotated to avoid skin irritation. Depending on the particular drug and the prescribed regimen, a patch may be worn continually or removed for a portion of each day. Trans-

dermal patches are best stored in their original container at room temperature with nothing stacked on top of them so as to protect them from excessive heat or pressure. If the interval between patch changes is lengthy, the patient must develop a system to assist in correctly scheduling the change. If a patient forgets to change a patch at the prescribed interval, he or she should remove the missed patch and apply a new one as soon as the error is discovered. Drug patches are waterproof, and the patient can bathe, shower, or swim while wearing a patch as long as it is not rubbed. If a patch starts to peel because of sweating, immersion in water, or hot, humid weather, it should be replaced, never taped to the skin, or held in place or covered in any way. Patch adhesive can irritate sensitive skin, but the reaction usually subsides when the patch is removed. Localized skin reactions may require treatment with a topical corticosteroid, but they should be reported to the primary care provider to determine the appropriate action.



1. Patients should remove a patch before having a magnetic resonance imaging (MRI) scan and replace it afterward with a new patch. The foil backing on many patches can cause MRI-related burns.

2. Patches containing estrogen or nicotine should not be applied to the breasts.

transdifferentiation (trănz"dif"ë-rën"shë-ã'shün) The conversion of stem cells derived from one tissue into cells normally found in another tissue.

transducer (trăns-dü'sër) [L. *trans*, across, + *ducere*, to lead] A device that converts one form of energy to another. The telephone is an example. It is used in medical electronics to receive the energy produced by sound or pressure and relay it as an electrical impulse to another transducer, which can either convert the energy back into its original form or produce a record of it on a recording device.

pulse-echo t. An ultrasonic transducer that sends out intermittent (pulsed) signals rather than continuous sound waves and receives the echo signal. Pulsed-wave Doppler ultrasound is used to measure blood flow and the depths from which echoes originate.

continuous wave t. An ultrasonic transducer that sends a constant and continuing signal that is not pulsed.

transrectal t. A cylindrically shaped ultrasonic transducer inserted into the rectum to evaluate the prostate, rectum, and urinary bladder and to guide prostate biopsy.

ultrasonic t. A device used in ultrasound that sends and receives the sound wave signal.

transduction (trăns-dük'shün) A phenomenon causing genetic recombination in bacteria in which DNA is carried from one bacterium to another by a bacteriophage. SEE: *transformation*.

signal t. Biochemical conversion that is part of a process, such as the docking of hormone to receptor, stimulating cellular production of specific enzymes or other proteins.

transection, transection (trăns-sëk'shün, trăns-sëk'shün) [" + *sectio*, cutting] A cutting made across a long axis; a cross section.

trans fat SEE: *under fat*.

trans-fatty acid The solid fat produced by heating liquid vegetable oils in the presence of hydrogen and certain metal catalysts. This process of partial hydrogenation changes some of the unsaturated bonds to saturated ones. The more trans-fatty acids in the diet, the higher the serum cholesterol and low density lipoprotein cholesterol.

transfection (trăns-fëk'shün) The infection of bacteria by purified phage DNA.

transfer, transference (trăns-fër, trăns-fër'ëns) [" + *ferre*, to bear] **1.** The mental process whereby a person transfers patterns of feelings and behavior that had previously been experienced with important figures such as parents or siblings to another person. Quite often these feelings are shifted to the caregiver. **2.** The state in which the symptoms of one area are transmitted to a similar area.

blastocyst t. An assisted reproduction technique in which a zygote created by in vitro fertilization is incubated in the laboratory to the pre-embryonic stage of the blastocyst before being placed in the uterus.

egg t. Transfer of eggs retrieved from ovarian follicles into the fallopian tubes. SEE: *gamete intrafallopian transfer*.

embryo t. SEE: *embryo transfer*.

magnetization t. In magnetic resonance imaging (MRI), a technique that improves imaging of the white matter of the brain.

ooplasmic t. Insertion of a donor egg's cytoplasm, along with donor sperm, into the egg of another woman. Ooplasmic transfer is used to treat infertility and results in the development of embryos with two different sources of maternal mitochondrial DNA.

somatic cell nuclear t. In cloning, the transfer of genetic material from a differentiated, adult cell into an egg.

zygote intrafallopian t. ABBR: ZIFT. An in vitro fertilization technique in which a woman's ova are surgically removed and mixed with her partner's sperm. The resulting zygotes are placed

in her fallopian tube. SEE: *embryo transfer*; *fertilization, in vitro*; *GIFT*.

transferase (trāns'fēr-ās) An enzyme that catalyzes the transfer of atoms or groups of atoms from one chemical compound to another.

gamma glutamyl t. ABBR: GGT. An enzyme present in the liver and biliary tree that is used to diagnose liver, gallbladder, and pancreatic diseases. Elevated levels of GGT are often found in people who use drugs (such as alcohol) that are metabolized by the liver.

transfer board A device used to bridge the space between a wheelchair and a bed, toilet, or car seat; used to facilitate independent or assisted transfer of the patient from one of these sites to another. It is also called a *sliding board*. SEE: *illus.*



TRANSFER BOARD

Use of a transfer board to move from bed to chair.

transfer factor Low-molecular-weight chemicals extracted from immune cells activated to respond to specific antigens. These products can be taken from a sensitized person and given to another. As a result of this transfer, the recipient will react to the same antigen originally used to sensitize the lymphocytes of the donor. In humans, the factor can be transferred by injecting the recipient with either intact lymphocytes or extracts of disrupted cells. It has been studied as adjunctive therapy used to modulate the immune system in several clinical trials.

transferrin (trāns'fēr'in) A globulin that binds and transports iron.

transferring (trāns'fēr-ing") The act of moving a person with limited function from one location to another. This may be accomplished by the patient or with assistance.

transfix (trāns'fiks') [" + *figere*, to fix] To pierce through or impale with a sharp instrument.

transfixion (trāns'fik'shūn) A maneuver in performing an amputation in which a

knife is passed into the soft parts and cutting is from within outward.

transforation (trāns'for-ā'shūn) [" + *forare*, to pierce] The perforation of the fetal skull at the base in craniotomy.

transforator (trāns'for-ā'tor) An instrument for perforating the fetal skull.

transformation (trāns'for-mā'shūn) [" + *formatio*, a forming] **1.** Change of shape or form. **2.** In oncology, the change of one tissue into another. SEE: *metastasis*. **3.** In bacterial genetics, the acquisition of bacterial DNA fragments by other bacterial cells; antibiotic resistance is often acquired this way.

transformation zone Any area of the body where squamous epithelium meets columnar epithelium. SEE: *squamocolumnar junction*.

transformer (trāns-form'er) [" + *formare*, to form] A stationary induction apparatus to change electrical energy at one voltage and current to electrical energy at another voltage and current through the medium of magnetic energy, without mechanical motion.

step-down t. A transformer that changes electricity to a lower voltage.

step-up t. A transformer that changes electricity to a higher voltage.

transfuse (trāns-fūz') To infuse blood or blood products.

transfusion (trāns-fū'zhūn) [" + *fusio*, a pouring] **1.** The collection of blood or a blood component from a donor followed by its infusion into a recipient. In the U.S. more than 12 million blood products are transfused each year. SEE: *blood t.*; *intraosseous infusion*. **2.** The injection of saline or other solutions into a vein for a therapeutic purpose.



Although the risk of contracting infectious diseases from blood in Europe and North America is very small, transfusions are still associated with considerable hazards. These include the risk of allergic reactions, transfusion reactions, fluid overload, iron overload, hemolysis, alloimmunization, lung injury, and the increased likelihood of dying from a critical illness.

autologous blood t. A procedure for collecting and storing a patient's own blood several weeks before its anticipated need by the patient. Alternatively, blood lost during a noncontaminated surgical procedure can be recovered from the operation site and processed for transfusion. This method of providing blood for a patient is used to prevent the possible transmission of disease from the use of donor blood. SEE: *blood doping*; *blood transfusion*.

blood t. The replacement of blood or one of its components. Effective and safe transfusion therapy requires a thorough

understanding of the clinical condition being treated. Most patients require blood components rather than whole blood. SEE: *blood component therapy* for table; *autologous blood transfusion*; *exchange transfusion*; *transfusion reaction*; *Standard Precautions Appendix*.

The following measures should be taken during transfusion therapy:

1. Screen donors for transmissible diseases;
2. Test blood for pathogens;
3. Ensure that cross-matched blood products are given to correctly identified patients;
4. Intervene promptly in transfusion reactions;
5. Avoid unnecessary transfusions;
6. Avoid volume overload during transfusions;
7. Avoid hypothermia, electrolyte, and clotting disorders.

Administration of a single unit may be indicated in young or old surgical patients, in those with coronary disease, and in patients who have an acute blood loss of several units but whose blood pressure, pulse, and oxygen are stabilized by use of one unit.

The risk of HIV, HBV, or HCV on blood collected and distributed in the U.S. is very low.

PATIENT CARE: The patient is identified from both the hospital identification band and blood bank band. Two health care professionals (one the administering nurse) verify the patient's ABO and Rh blood type and its compatibility with the unit of blood or packed cells to be administered, as well as the unit's expiration date and time. Outdated blood is not used; it is returned to the blood bank for disposal. The blood or blood product is retrieved from the blood bank refrigerator immediately before administration because blood should not be stored in other than approved refrigerators. Blood cannot be returned to blood bank storage if the unit's temperature exceeds 50°F (10°C), a change that will occur within about 30 min of removal from storage.

Before the transfusion is started, the patient's vital signs (including temperature) are checked and documented. The blood is inspected visually for clots or discoloration, and then the transfusion is administered through an approved line containing a blood filter, preferably piggybacked through physiological saline solution on a Y-type blood administration set. No other intravenous (IV) solutions or drugs should be infused with blood (unless specifically prescribed) because of potential incompatibility. In the first 15 min, the blood flow rate is slowed to limit intake to no more than 50 ml. A health care professional remains with the patient during this time and in-

structs the patient to report any adverse reactions (e.g., back or chest pain, hypotension, fever, increase in temperature of more than 1.8°F (1°C), chills, pain at the infusion site, tachycardia, tachypnea, wheezing, cyanosis, urticaria, or rashes). If any of these occurs, the transfusion is stopped immediately; the vein is kept open with physiological saline solution, and the patient's physician and the blood bank are notified. If incompatibility is suspected, the blood and set are returned to the blood bank; samples of the patient's blood and urine are obtained for laboratory analysis of: hemoglobin in the urine; protime/INR; blood culture; complete blood count; chemistries; and identifying data are recorded from the unit. If no symptoms occur in the first 15 min and vital signs remain stable, the transfusion rate is increased to complete the transfusion within the prescribed time, or (if necessary) the transfusion is administered as fast as the patient's overall condition permits. Once the transfusion begins, the blood is administered within a maximum of 4 hr to maintain biological effectiveness and limit the risk of bacterial growth. (If the patient's condition does not permit transfusing the prescribed amount within this time frame, arrangements are made to have the blood bank split the unit and properly store the second portion.) The patient's vital signs and response are monitored every 30 min throughout the transfusion and 30 min afterward; stated precautions are observed, and caregivers monitor for indications of volume overload (distended neck veins, bounding pulse, hypertension, dyspnea). Blood should not be administered through a central line unless an approved in-line warming device is used. A warmer should also be used whenever multiple transfusions place the patient at risk for hypothermia, which can lead to dysrhythmias and cardiac arrest. Patients planning elective surgery (e.g., hip, knee replacement, hysterectomy) may bank one or two units of their own blood in the weeks prior to surgery for use if needed. Blood-saving devices also are used in such surgeries, and this blood is returned to the patient before he or she leaves the operating theater.

cadaveric blood t. A transfusion using blood obtained from a cadaver a short time after death.

direct t. The transfer of blood directly from one person to another.

exchange t. The removal of a patient's entire blood volume (e.g., in sickle cell disease, thrombotic thrombocytopenic purpura, hemolytic disease of the newborn) and its replacement with blood donated by others. SYN: *replacement transfusion*.

feto-fetal t. Twin-twin t.

indirect t. A transfusion of blood from a donor to a suitable storage container and then to the patient.

intrauterine t. The infusion of blood cells into a fetus, to treat prenatal diseases such as erythroblastosis fetalis.

replacement t. Exchange t.

single unit t. The infusion of one unit of packed red blood cells (PRBCs). On average, one unit of PRBCs will increase the hemoglobin level by 1 g/dL.

t. trigger Colloquial term for the point at which the risks associated with low hematocrit or hemoglobin levels outweigh the risk of an adverse reaction associated with a blood transfusion.

PATIENT CARE: The concept of a transfusion trigger is controversial. Some medical authorities recommend transfusions only for patients who are actively compromised by bleeding rather than for specific levels of hemoglobin or hematocrit.

twin-twin t. A complication of monochorionic multiple pregnancies in which one fetus receives more blood flow than the other from the placenta. It is diagnosed by fetal ultrasonography: one twin's amniotic sac has polyhydramnios (excessive amniotic fluid), while the other twin's sac has oligohydramnios (insufficient amniotic fluid). Death of one or both twins will occur without intervention. Treatments include repeated amniocenteses, laser therapy to prevent the exchange of blood between twins, or intrauterine surgery. SYN: *feto-fetal transfusion*.

transfusion reaction An adverse response to a transfusion caused by the presence of foreign antigens, antibodies, or cytokines. There are three basic types of true transfusion reactions and several other complications of transfusion therapy.

Hemolytic reactions (type II hypersensitivity reactions) occur when ABO-incompatible blood is given; antibodies or complement (or both), coat blood cells, stimulating hemolysis by macrophages and neutrophils. These reactions occur in less than 1% of all blood transfusions. In acute hemolytic reactions, patients develop fever, chills, nausea, flank pain, hypotension, flushing, and hematuria within 20 min after the transfusion has begun. Delayed reactions develop 3 to 14 days later; the patient presents with fever, jaundice, and a decreased hemoglobin level. In rare cases, disseminated intravascular coagulopathy, respiratory distress syndrome, acute renal tubular necrosis, and/or death may occur.

Allergic reactions occur when patients have been sensitized to foreign antigens on proteins in the blood or plasma. A history of allergies is usually present, indicating the patient has developed immunoglobulin E antibodies to allergens.

Patients develop itching and hives. Mild allergic reactions can be prevented or treated with antihistamines; the use of washed red blood cells (RBCs), which have fewer antigens, also reduces the risk of allergic reactions. Very rarely, systemic anaphylaxis occurs, as indicated by severe hypotension, and wheezing.

Febrile reactions are the result of cytokine release by leukocytes while the blood was being stored. Antipyretics are used to treat the transient fever that appears; the use of fresh blood and leukocyte-poor RBC transfusion also reduces the risk of a febrile response.

Other problems associated with blood transfusions include circulatory overload (the most common transfusion reaction). Bacterial, viral, and protozoal infections may occasionally be transmitted by transfusions, and some patients may suffer a graft-versus-host reaction after receiving blood products. The ability to screen blood for antibodies to hepatitis and human immunodeficiency virus has decreased the risk of acquiring these diseases through blood transfusion; however, malaria and bacterial infections can still occasionally be transmitted if the donor is asymptomatic. The acute pulmonary edema that develops from circulatory overload can be diagnosed through the presence of crackles, gurgles, and wheezes on auscultation of the chest, severe difficulty in breathing, frothy sputum, decreased oxygen saturation, and abnormal findings on chest x-ray examination. Immunosuppressed patients may receive irradiated blood to prevent activation of donor leukocytes and graft-versus-host disease.

PATIENT CARE: Hemolytic blood transfusion reactions are prevented by meticulous accuracy in labeling the patient's blood sample for typing and cross-matching; double-checking the patient's name and identification number at the time of transfusion is essential. Antihistamines and antipyretics may be given to patients with a history of multiple blood transfusions, allergies, or a previous febrile transfusion reaction. Patients at risk for circulatory overload are placed in an upright position before the transfusion is started, and the blood is administered very slowly; packed RBCs create less risk than whole blood, but also must be transfused over several hours.

All patients receiving blood transfusions should be monitored closely for signs of an adverse response. Transfusions should be initiated by infusing 50 ml during the first 15 min to detect and prevent severe reactions. The patient is advised to report any symptoms experienced during this initial period. Vital

signs including temperature are checked. The flow rate is only increased if the initial infusion is completed without complications. Vital signs and clinical responses continue to be monitored at least every 30 min throughout the transfusion. If a reaction occurs, the infusion is stopped immediately, but an intravenous line is kept patent with saline. A description of the patient's signs or symptoms, and the blood container and tubing, are sent to the blood bank; blood and urine samples are sent to the laboratory for analysis. In many hospitals, a specialty transfusion nurse is assigned to supervise transfusions and educate staff about policies, procedures, and guidelines to optimize transfusion safety.

transfusion syndrome, multiple Bleeding that results from the transfusion of multiple units of blood. SEE: *posttransfusion syndrome*.

transgendered (trāns-jĕn'dĕrd) Having a gender identity or gender perception different from one's phenotypic gender.

transgenerational (trānz'jĕn-ĕ-rā'shŭn-ĭl) [" + "] Having an effect on several generations of a family.

transgenic (trāns-jĕn'ĭk) An organism into which hereditary material from another organism has been introduced.

transient (trān'zĕ-ĕnt) [L. *transi*, to go by] Not lasting; of brief duration.

transient hypoglobulinemia (trān'zĕ-ĭnt hĭ'pō-glōb'ū-lĭn-ĕm'ĕ-ā) Low levels of the immunoglobulin G (IgG) class antibody that occur when an infant is between 5 and 6 months of age. The maternal IgG that has crossed the placenta begins to drop after birth and reaches its lowest level (about 350 mg/dl) at this point. If IgG production is decreased, transient hypogammaglobulinemia develops. Normal blood levels of B cells, IgA, and IgM usually are present, which differentiates this transient disorder from hereditary, X-linked hypogammaglobulinemia. Some infants develop recurrent infections and must be treated with intravenous gamma globulin (IVIG) until IgG production increases.

transient ischemic attack ABBR: TIA. A neurologic deficit, having a reversible vascular cause, that produces stroke symptoms that resolve within 24 hr. (In practice, most TIAs resolve within an hour of onset). Patients who have suffered a TIA have an increased risk of peripheral and coronary artery atherosclerosis, and an increased risk of subsequent heart attack and stroke. SEE: *stroke*.

SYMPTOMS: TIAs and strokes have similar symptoms. These vary depending on the blood vessel affected, but may include weakness of one half of the face or half of the body, confusion, dizziness, aphasia (difficulty speaking or under-

standing), monocular visual loss, hemibody sensory loss, sudden trouble walking, loss of balance, or severe headache with no known cause. A person who develops any of these symptoms should seek emergency medical assistance immediately. He or she should not attempt to drive or be driven to the emergency center, but should call or have a family member call 911 for help.

ETIOLOGY: TIAs usually occur in patients with underlying atherosclerosis, esp. of the carotid arteries, intracranial arteries, or the aorta. Emboli to the brain caused by atrial fibrillation, cerebrovascular vasospasm, transient episodes of hypotension, cerebral vasculitis, polycythemia vera, and other illnesses may occasionally produce TIAs.

TREATMENT: Studies involving large numbers of patients have shown that the risk of subsequent stroke in those who have suffered TIAs can be substantially reduced with antiplatelet or anticoagulant drugs (e.g., aspirin, clopidogrel, or warfarin) and with drugs that control blood pressure and lipids. Carotid endarterectomy or balloon angioplasty and stenting are better options than medical therapy for stroke prevention in TIA patients with extensive carotid artery blockages, provided their surgeons have an operative mortality rate of less than 5%.

PATIENT CARE: Because symptoms of TIA may resolve by the time the patient reaches the emergency care center, an accurate history of the event should be obtained, questioning not only the patient but also family, first-responders, and any other witnesses. Carotid arteries are assessed for bruits, the heart for evidence of atrial fibrillation, and the cranial nerves, speech and motor strength for signs of functional loss. The patient may have brain imaging studies (e.g., CT or MRI) to exclude other intracerebral disorders. Baseline laboratory studies including serum chemistries, glucose level and coagulation factors are obtained. The health care professional supports the patient and family during diagnostic procedures by explaining the procedures and expected sensations and by encouraging verbalization of feelings and concerns. Therapeutic interventions are provided, and the patient is instructed about desired effects and adverse reactions of prescribed drugs.

The patient also is encouraged to follow preventive measures: stopping smoking and avoiding second-hand smoke, exercising regularly (walking at a moderate pace for 30 min daily), losing weight if obesity is a concern, eating a heart-healthy diet, drinking no more than one (women) or two (men) alcoholic

drinks daily, seeking medical management for elevated cholesterol or blood pressure, and more tightly controlling glucose levels if diabetes mellitus is present.

transilic (trāns-īl'ē-āk) [L. *trans*, across, + *iliacus*, pert. to ilium] Extending between the two ilia.

transilient (trāns-sīl'ē-ēnt) Jumping across or passing over as occurs when nerve fibers in the brain link nonadjacent convolutions.

transillumination (trāns'īl-lū'mī-nā'shūn) [" + *illuminare*, to light up] Inspection of a cavity or organ by passing a light through its walls. When pus or a lesion is present, the transmission of light is diminished or absent. SYN: *diaphanography*.

transischic (trāns-īs'kē-āk) Across or between the ischia of the pelvis.

transition (trān-zī'shūn) [L. *transitio*, a going across] **1.** Passage from one state or position to another, or from one part to another part; a change in health status, roles, family, abilities, and other important areas. Transitions often require adaptations within the person, the group, or the environment and define the need for and context of nursing care. **2.** In obstetrics, the final phase of the first stage of labor. Cervical dilation is 8 to 10 cm and strong uterine contractions occur every 1.5 to 2 min and persist for 60 to 90 sec. Accompanying behavioral changes include increasing irritability and anxiety, declining coping abilities, and expressions of a strong desire for the labor to be ended immediately.

transitional (trān-zīsh'ūn-āl) Marked by or relating to change.

transition zone of the prostate The central area of the prostate gland. Glandular overgrowth here is responsible for symptoms of bladder obstruction, urinary frequency, and nighttime urination—symptoms of benign prostatic hypertrophy. Relatively fewer cancers start here than at the outer borders of the gland.

transitive movement Any movement in which physical objects, such as tools or utensils, are employed. Using a bottle-opener, carving a turkey, brushing the teeth, and drinking from a glass are all examples of transitive movement.

transjugular (trānz-jūg'ū-lēr) Through the jugular vein.

transkaryotic (trānz'kār-ē-ōt'ik) Binding or attachment (e.g., of white blood cells as they migrate through tissues).

translabial (trānz'lā'bē-īl) Through or across the labia majora; a term used for radiological examinations that penetrate the labial and vaginal tissues to examine the uterus, fallopian tubes, and ovaries.

translation (trāns-lā'shūn) [L. *trans*,

across, + *latus*, borne] **1.** The synthesis of proteins under the direction of ribonucleic acid. **2.** To change to another place or to convert into another form.

translocation (trāns'lō-kā'shūn) [" + *locus*, place] **1.** The alteration of a chromosome by transfer of a portion of it either to another chromosome or to another portion of the same chromosome. The latter is called shift or intrachange. When two chromosomes interchange material, it is called reciprocal translocation. **2.** Movement of bacteria across the intestinal wall to invade the body. **3.** The linear motion of one structure across the parallel surface of another.

translucent (trāns-lū'sēnt) [" + *lucens*, shining] Not transparent but permitting passage of light.

transluminal (trānz-lū'mī-nāl) Within or through the internal bore or cylindrical channel within a blood vessel.

transmethylase (trāns-mēth'ī-lās) Methyltransferase.

transmethylation (trāns'mēth-ī-lā'shūn) The process in the metabolism of amino acids in which a methyl group is transferred from one compound to another; for example, the conversion in the body of homocysteine to methionine. In this case, the methyl group is furnished by choline or betaine.

transmigration (trānz'mī-grā'shūn) [" + *migrare*, to move from place to place] Wandering across or through, esp. the passage of white blood cells through capillary membranes into the tissues.

external t. Transfer of an ovum from an ovary to an opposite tube through the pelvic cavity.

internal t. Transfer of an ovum through the uterus to the opposite oviduct.

transmissible (trāns-mīs'ā-bl) [L. *transmissio*, a sending across] Capable of being carried from a source, such as an individual, or an animal to a person, for example, an infectious disease.

transmission (trāns-mīsh'ūn) Transfer of anything, as a disease or hereditary characteristics.

airborne t. The spread of infectious organisms by aerosol or dust particles. Diseases spread by airborne transmission include varicella-zoster virus and tuberculosis.

biological t. A condition in which the organism that transmits the causative agent of a disease plays an essential role in the life history of a parasite or germ.

common vehicle t. The transfer of infectious germs on contaminated objects, substances, or surfaces touched by two or more people.

droplet t. The spread of infectious germs in airborne fluids, e.g., the liquid particles released during coughing or sneezing.

duplex t. The passage of impulses through a nerve trunk in both directions by sensory and motor neurons.

horizontal t. 1. The transfer of a disease between sexual partners. **2.** The acquisition of an infection by individuals of the same generation. SEE: *vertical t.*

mechanical t. The passive transfer of causative agents of disease, esp. by arthropods. This may be indirect, as when flies pick up organisms from excreta of humans or animals and deposit them on food, or direct, as when they pick up organisms from the body of a diseased individual and directly inoculate them into the body of another individual by bites or through open sores. SEE: *vector.*

perinatal t. The transmission of an infectious illness from mother to infant during childbirth.

placental t. The transmission of substances in the mother's blood to the blood of the fetus by way of the placenta.

synaptic t. The release of a neurotransmitter by a neuron that initiates or inhibits an electrical impulse in the next neuron in the pathway.

transovarial t. The transmission of causative agents of disease to offspring following invasion of the ovary and infection of eggs; occurs in ticks and mites.

vertical t. 1. In certain insects, transovarial passage of infection from one generation to the next. **2.** In mammals, passage of infection from the mother's body fluids to the infant either in utero, during delivery, or during the neonatal period (via breast milk).

transmission-based precautions Measures suggested by the Centers for Disease Control and Prevention to reduce the risk of airborne, droplet, and direct-contact transmission of infection in hospitals. SEE: *Standard Precautions Appendix.*

transmission control protocol/internet protocol ABBR: TCP/IP. The standard communication algorithm that governs and facilitates data transmission on the Internet and on many private computing networks.

transmural (trāns-mū'rāl) [L. *trans*, across, + *murus*, a wall] Across the wall of an organ or structure, as in transmural myocardial infarction, in which the tissue in the entire thickness of a portion of the cardiac wall dies.

transmutation (trāns'mū-tā'shūn) [L. *transmutatio*, a changing across] **1.** A mutation. **2.** In physics, the alteration of an element's nucleus, usually by bombarding it with subatomic particles.

transnasal tube (trānz'nā'zīl) A tube passed through the nose into the gastrointestinal tract for feeding.

transocular (trāns-ōk'ū-lār) [' + *oculus*, eye] Across the eye.

transonance (trāns'ō-nāns) [L. *trans*,

across + *sonans*, sounding] The transmission of sounds through an organ, as heart sounds through the lungs and chest wall.

transorbital (trāns-or'bī-tāl) [' + *orbita*, track] Passing through the orbit of the eye.

transovarial passage (trāns-ō-vā'rē-āl) The passage of infectious or toxic agents into the ovary, a process that might invade and infect the oocytes.

transparent (trāns-pār'ēt) [' + *parere*, to appear] **1.** Transmitting light rays so that objects are visible through the substance. **2.** Pervious to radiant energy. **3.** In medical ethics, openly and publicly discussed. Available for review by disinterested parties.

transpeptidase (trāns-pēp'tī-dās) An enzyme that catalyzes the transfer of a peptide from one compound to another.

transperitoneal (trāns'pēr-ī-tō-nē-āl) Across or through the peritoneum.

transphosphorylase (trāns-fōs-for'ī-lās) An enzyme that catalyzes the transfer of a phosphate group from one compound to another.

transphosphorylation (trāns-fōs'for-ī-lā'shūn) The exchange of phosphate groups from one compound to another.

transpiration (trāns'pī-rā'shūn) [' + *spirare*, to breathe] The passage of water or a vapor through a membrane. SEE: *perspiration.*

cutaneous t. The insensible evaporation of water vapor through the skin.

pulmonary t. The evaporation of water from the alveolar cells into the air in the lungs.

transpire (trān-spīr') To emit vapor through the skin or other tissues. SEE: *perspire.*

transplacental (trāns'plā-sēn'tāl) Through the placenta, esp. penetration of the placenta by a toxin, chemical, or organism that would affect the fetus.

transplant [' + *plantare*, to plant] To transfer tissue or an organ from one part to another (or one body to another) as in grafting or plastic surgery.

transplant (trāns'plānt) [' + *plantare*, to plant] A piece of tissue or organ used in transplantation.

transplantar (trāns-plān'tār) [' + *planta*, sole] Across the sole of the foot.

transplantation (trāns'plān-tā'shūn)

1. The grafting of living tissue from its normal position to another site or the transplantation of an organ or tissue from one person to another. Organs and tissues that have been successfully transplanted include the heart, lung, kidney, liver, pancreas, cornea, large blood vessels, tendon, cartilage, skin, bone, and bone marrow. Brain tissue has been implanted experimentally to treat patients with Parkinson's disease. The matching of histocompatibility antigens that differentiate one person's

cells from another's helps prevent rejection of donated tissues. Cyclosporine, tacrolimus, corticosteroids, monoclonal antibodies, and other immunosuppressive agents have been approx. 80% effective in preventing rejection of transplanted organs for 2 or more years. SEE: *autotransplantation*; *graft*; *heart t.*; *organ donation*; *renal t.*; *replantation*.



Patients who have received organ transplants and who are maintained on immunosuppressant drugs should generally avoid vaccination with live, attenuated organisms unless these vaccinations are specifically approved by their health care providers. Inactive vaccines are usually preferable for these patients.

2. In dentistry, the transfer of a tooth from one alveolus to another.

allogeneic t. Transplantation of material from a donor to another person.

autologous t. Transplantation of material from one location in the body to another site.

autologous bone marrow t. ABBR: ABMT. The harvesting and preservation of a patient's own blood-forming cells, followed by their eventual reintroduction into a patient. The procedure may be used to treat a variety of cancers and blood disorders. Contemporary practice is to mobilize stem cells into the blood stream with growth factors, and then to collect and filter the blood by a process called leukapheresis. In leukapheresis stem cells are identified by a cell surface antigen called CD34. After desirable blood-forming cells with this antigen are removed from the patient's blood, high-dose chemotherapy, monoclonal antibody therapy, or radiation may be used to purge the marrow of diseased cells. Healthy CD34+ cells capable of rebuilding the bone marrow are then returned to the patient and stimulated to reproduce.

autoplastic t. Transplantation of tissue from one part to another part of the same body. SYN: *homoplastic transplantation*.

bone marrow t. ABBR: BMT. Transplantation of bone marrow from one individual to another. It is used in treating aplastic anemia, thalassemia and sickle cell anemia, immunodeficiency disorders, acute leukemia, chronic myelogenous leukemia, non-Hodgkin's lymphoma, Hodgkin's disease, and testicular cancer, among others.

double t. Tandem transplantation.

fat t. In cosmetic surgery, the movement of adipose tissue from one body site to another to augment structure,

change body contours, or reduce skin wrinkling.

hair t. A surgical procedure for placing plugs of skin containing hair follicles from one body site to another. This time-consuming technique is used to treat baldness.

heart t. Surgical transplantation of the heart from a patient who died of trauma or a disease that left the heart intact and capable of functioning in the recipient. The only absolute contraindications are uncontrollable cancer or infection, irreversible pulmonary vascular disease, or a separate life-threatening disease; in general, however, patients over 65 years, those with severe renal or liver disease, and those with a history of noncompliance with medical regimens do not receive heart transplants. The major barrier to heart transplantation is the lack of donors; the number of potential recipients is approx. 10 times the number of donors each year.

After receiving a heart transplant, continuous immunosuppression with cyclosporine, corticosteroids, or related drugs is required to prevent rejection of the donated organ. Acute episodes of rejection are treated with monoclonal antibodies (OKT3) or antilymphocyte immune globulin. Clinical signs of rejection—fatigue, dyspnea, hypotension, and extra heart sounds—are non-specific, so biopsies are performed frequently during the first 2 years after surgery. Average patient survival is greater than 75% 1 year after the surgery, and greater than 50% after 10 years. SEE: *rejection* (2).

heteroplastic t. Transplantation of a part from one individual to another individual of the same or a closely related species.

heterotopic t. Transplantation in which the transplant is placed in a different location in the host than it had in the donor.

homoplastic t. Autoplastic t.

homotopic t. Transplantation in which the transplant occupies the same location in the host as it had in the donor.

kidney t. Renal transplantation.

renal t. The grafting of a kidney from a living donor or from a cadaver to an individual with renal failure. It is used as the definitive form of renal replacement for patients with kidney failure. Tissue typing for HLA antigens as well as ABO blood groups is used to decrease the likelihood of acute or chronic rejection. Family members are often the best-matched donors. In patients with diabetes mellitus, combined renal and pancreatic transplants are sometimes performed, with a very high likelihood of success. The high success rate of kid-

ney transplants (85% to 95% at 2 years) is primarily due to immunosuppressive drugs such as corticosteroids, cyclosporine, mycophenolate, and tacrolimus. Because cyclosporine is nephrotoxic, careful monitoring of serum drug levels after transplantation is required. SYN: *kidney transplantation*. SEE: *major histocompatibility complex*; *suppressive immunotherapy*; *Nursing Diagnoses Appendix*.

small intestine t. A semi-experimental procedure in which the small intestine is replaced with a donor organ.

syngeneic t. A specific type of allogeneic transplantation of material between identical twins.

tandem t. The use of sequential bone marrow transplants to treat cancer. An initial autologous transplant is followed by a second, e.g., if remission is not achieved after the first transplant. SYN: *double transplantation*.

transpleural (trāns-plōor'ral) Through the pleura.

transport Movement or transfer of substances. Transport may occur actively, passively, or with the assistance of a carrier.

active t. The process by which a cell membrane moves molecules against a concentration or electrochemical gradient. This requires metabolic work. Potassium, for example, is maintained at high concentrations within cells and low concentrations in extracellular fluid by active transport. Other ions actively transported are sodium, calcium, hydrogen, iron, chloride, iodide, and urate. Several sugars and the amino acids are also actively transported in the small intestine.

axonal t. The active movement of intracellular molecules and structures within the axon. Anterograde axonal transport supplies the axon and its terminal with proteins and membranous elements fabricated in the cell body. Retrograde axonal transport moves molecules (including some picked up from outside the terminal) from the end of the axon back to the cell body.

transportation of the injured The process of moving an injured person to a hospital or other treatment center. In serious injuries such as cranial and spinal trauma, airway compromise, and hemorrhage, the patient should be moved by properly trained support personnel with equipment to stabilize vital structures and prevent further injury. In particular, the airway should be secured, ventilation provided, circulation supported, and the spine protected from injury with specially designed appliances. It is crucial that critically injured persons receive definitive care within the first hour of their injury to optimize their chances of survival. Patients with lesser

injuries whose vital signs are relatively stable may be transported by ambulance litter, private vehicle, or wheelchair, or by means listed here.

Carrying in arms: The patient is picked up in both arms, as the carrying of a child.

One-arm assist: The patient's arm is placed about the neck of the bearer, and the bearer's arm is placed about the patient's waist, thus assisting the patient to walk.

Chair carry, chair stretcher: Any ordinary firm chair may be used. The patient is seated on the tilted-back chair. One bearer grasps the back of the chair and the other the legs of the chair (either the front or rear, depending on the construction of the chair). Both bearers face in the same direction.

Fireman's drag: The patient's wrists are crossed and tied with a belt or rope. The bearer kneels alongside the patient, with his or her head under the patient's wrists, and walks on all fours, dragging the patient underneath.

Fireman's lift: The bearer grasps the patient's left wrist with the right hand. The bearer's head is placed under the patient's left armpit, drawing the patient's body over the bearer's left shoulder. The bearer's left arm should encircle both thighs, then lift the patient. The patient's wrist is transferred to the bearer's left hand, thus leaving one hand free to remove obstacles or to open doors.

Four-handed basket seat: Each of two bearers grasps own wrist and then grasps the partner's free wrist. The patient sits on this support.

Pack-strap carry: The patient is supported along the bearer's back. The patient's right arm is brought over the bearer's right shoulder and held by the bearer's left hand. The patient's left arm is brought over the left shoulder and held by the bearer's right hand. The patient is thus carried on the back, with the arms resembling pack straps.

Piggyback carry: The patient is supported along the bearer's back with the knees raised to the sides of the bearer's torso. This leaves the patient practically in a sitting position astride the bearer's back, with arms around the bearer's neck or trunk.

Six- or eight-person carry: This is done as the three-person carry, except three or four bearers are on each side of the patient, thus dividing the patient's weight more uniformly.

Three-handed basket seat: The bearer grasps his or her own wrist; the partner grasps the bearer's wrist and leaves one arm free for supporting the patient.

Three- or four-person carry: This is the litter-type carry used by emergency squads. Three persons kneel on one side

of the patient, place their hands under the patient, and lift up. The head bearer supports the patient's head and shoulders, the center bearer lifts the waist and hips, and the third bearer lifts both the lower extremities. A fourth person, if available, should help steady the patient while he or she is being lifted.

Two-handed seat: The bearers kneel on either side of the patient. Each passes one arm around the patient's back (under the armpits) and the other arm under the knees and lifts the patient carefully in a sitting position.

Wheelchair, improvised: To make this, the legs of a chair, preferably one with arms, are fastened to parallel boards and skates or casters are attached to the bottom of the boards. A footrest can be made by attaching a broom handle or stick across the parallel boards in front of the chair.

Vehicles: If an ambulance is not available, stretchers can be improvised with ropes and chairs, ladders, or poles. The patient should always be tied to the stretcher during transportation. Several bearers will be necessary to assist entering and leaving the vehicle.

transporter associated with antigen processing ABBR: TAP. An intracellular protein that carries antigens to the endoplasmic reticulum of cells, where the antigens may be transformed for presentation.

transport protein One of the proteins important in transporting materials such as hormones from their site of origin to the site of cellular action and metabolism.

transpose (trāns-pōz') To change places (e.g., moving the insertion of a muscle or ligament to another site).

transposition (trānz'pō-zī'shūn) [L. *trans*, across, + *positio*, a placing] **1.** A transfer of position from one spot to another. SYN: *metathesis*. **2.** Displacement of an organ, esp. a viscus, to the opposite side. **3.** Transplantation of a flap of tissue without severing it entirely from its original position until it has united in the new position.

transposition of the great vessels A fetal deformity of the heart in which the aorta arises from the right ventricle and the pulmonary artery arises from the left ventricle. SEE: *dextroposition of the great vessels*.

transposon (trānz-pō'zōn) A genetic unit such as a DNA sequence that is transferred from one cell's genetic material to another.

transrectal (trānz-rēk'tīl) Into or through the rectum.

trans-retinal (trāns-rēt'ī-nāl) The form of retinal created when light strikes the retina. It separates from the opsin of the photopigment (rhodopsin in rods), which is then said to be bleached.

The enzyme retinal isomerase converts it back to *cis*-retinal, and the photopigment is again able to respond to light.

transseptal (trāns-sēp'tāl) [ʹ + *saep-tum*, partition] Across a septum.

transsexual (trāns-sēks'ū-āl) [ʹ + *sexus*, sex] **1.** An individual who has an overwhelming desire to be of the opposite sex. **2.** An individual who has had his or her external sex changed by transsexual surgery.

transsexualism (trāns-sēks'ū-ā-līzm) The condition of being of a certain definite sex (i.e., male or female) but feeling and acting as if a member of the opposite sex. In some instances, the desire to alter this situation leads individuals to seek medical and surgical assistance to alter anatomical characteristics so that their anatomy would more nearly match their feelings about their true sexuality.

transsexual surgery Surgical therapy for alteration of the anatomical sex of an individual whose psychological gender is not consistent with the anatomical sexual characteristics.

transsphenoidal (trāns'sfē-noy'dāl) Through or across the sphenoid bone.

transsphenoidal surgery (trāns-sfē-noy'dl) Operations on the pituitary gland performed with an incision made through the base of the sphenoid sinus. These procedures are typically performed through the nasal passages or the oral cavity and are used to remove a macroadenoma of the pituitary, such as may be found in patients with acromegaly, prolactinomas, or other pituitary tumors.

transstadial (trān-stā'dē-āl) Pert. to the passage of an infection from one developmental stage of an organism to another, e.g., from the larval to the nymph stage or from the nymph to the adult. Some important infections transmitted to humans from parasitized arthropods are acquired by the arthropod when it is immature and then are passed transstadially to more mature forms, which subsequently feed on humans.

transthoracic (trāns'thō-rās'īk) [ʹ + Gr. *thorax*, chest] Across the thorax.

transthoracotomy (trāns'thō-rā-kōt'ō-mē) [ʹ + Gr. *thorax*, chest, + *tome*, incision] The operation of incising across the thorax.

tranthyretin (trānz-thī'rēt-īn) ABBR: TTR. A normal serum prealbumin protein that binds and transports thyroxine (T₄). Mutations in TTR can result in the protein's being deposited as amyloid in various organs.

transtracheal (trāns-trā'kē-āl) Across or through the trachea.

transtracheal jet insufflation The life-saving technique of ventilating a patient with a complete airway obstruc-

tion. A small catheter is placed via a cricothyroid puncture and attached to a pressure-controlled oxygen outlet via a one-way valve.

transtympanic neurectomy (trānz-tīm-pān'ik) Surgical interruption of the parasympathetic nerve supply to the parotid and submandibular glands by bilateral sectioning of the tympanic and chorda tympani nerves. The technique was developed in the 1980s to treat excessive drooling, esp. in mentally retarded children.

transubstantiation (trānz'süb-stān'shē-ā'shūn) [" + *substantia*, substance] The process of replacing one tissue for another.

transudate (trānz'ū-dāt) [" + *sudare*, to sweat] The fluid that passes through a membrane, esp. that which passes through capillary walls. Compared with an exudate, a transudate has fewer cellular elements and is of a lower specific gravity.

transudation (trānz-ū-dā'shūn) Oozing of a fluid through pores or interstices, as of a membrane.

transuranic (trānz'ū-rān'ik) [" + *uran(ium)* + "] Having an atomic number that is greater than 92 (i.e., one greater than the atomic number of uranium). Examples of transuranic elements are neptunium and plutonium.

transureteroureterostomy (trānz'ū-rē'tēr-ō-ū-rē'tēr-ōs'tō-mē) Section of one ureter and joining both ends to the opposite ureter.

transurethral (trānz'ū-rē'thrāl) [" + Gr. *ourethra*, urethra] Pert. to an operation performed through the urethra.

transurethral laser incision of the prostate ABBR: TULIP. The treatment of prostatic hyperplasia with a laser used as a cutting instrument. The laser is inserted into the penile urethra and directed at the diseased portion of the gland.

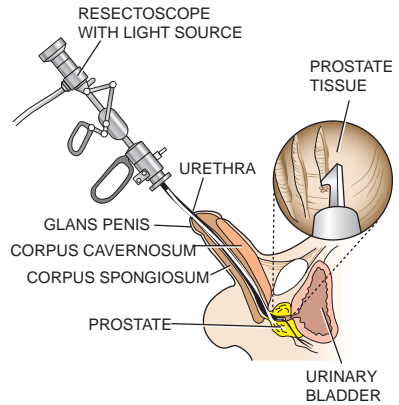
transurethral needle ablation ABBR: TUNA. The treatment of prostatic hyperplasia with a needle inserted into the penile urethra and directed toward the diseased portion of the gland. The needle is used to destroy prostatic tissue with electromagnetic energy.

transurethral resection of the prostate ABBR: TUR, TURP. The removal of prostatic tissue using a device inserted through the urethra. SEE: *prostatectomy*; *illus.*

transurethral vaporization of the prostate ABBR: TUVP. A treatment for prostatic hyperplasia in which a laser is used to vaporize hypertrophic prostatic tissue.

transvaginal (trānz-vāj'in-āl) [" + *vagina*, sheath] Through the vagina. The term is used to describe surgical and ultrasonic imaging procedures.

transvaginal tape sling ABBR: TVT



TRANSURETHRAL RESECTION OF THE PROSTATE

sling. A surgical procedure used to treat urinary stress incontinence in women, in which an adjustable pubourethral mesh is inserted through the vagina to hold the urethra and neck of the bladder. It is used to manage conditions such as excessive mobility of the urethrovesical junction, intrinsic sphincter deficiency, or pelvic organ prolapse. It is also called "tension-free transvaginal tape sling."

transvector (trānz-vēk'tor) An animal that transmits a toxin that it does not produce and by which it is itself unaffected, as when a bivalve mollusc, such as the oyster, filters viruses out of the water and transmits them to those who ingest the mollusc.

transvenous (trānz-vē'nūs) Through a vein.

transversalis (trānz'ver-sā'lis) [" + *vertere*, to turn] A structure occurring at right angles to the long axis of the body.

transversalis fascia A thin membrane forming the peritoneal surface of the transversus muscle and its aponeurosis.

transverse (trānz-vērs') [L. *transversus*] Lying at right angles to the long axis of the body; crosswise.

transversectomy (trānz'ver-sēk'tō-mē) [" + Gr. *ektome*, excision] Excision of a transverse vertebral process.

transverse foramen SEE: under *foramen*.

transverse rectus abdominis musculocutaneous flap reconstruction ABBR: TRAM. A procedure for reconstructing the contours of the breast after mastectomy, in which tissue from the abdomen is mobilized and grafted to the anterior chest wall. Potential complications include infection and necrosis of the graft.

transversion (trānz'ver'zhūn) The eruption of a tooth at an abnormal site.

transversocostal (trāns-vēr'sō-kōs'tāl)

Costotransverse.

transversospinalis (trāns-vēr'sō-spī-nā'lis) [L. *transversus*, turned across, + *spina*, thorn] Semispinalis capitis, semispinalis cervicis.

transversourethralis (trāns-vēr'sō-ū'rē-thrā'lis) The transverse fibers of the sphincter urethrae muscle.

transversus (trāns-vēr'sūs) [L.] **1.** Any of several small muscles. **2.** Lying across the long axis of a part or organ.

transvestism, transvestitism (trāns-vēst'izm, -ī-tizm) [L. *trans*, across, + *vestitus*, clothed, + Gr. *-ismos*, condition] The desire to dress in the clothes of and be accepted as a member of the opposite sex.

transvestite (trāns-vēs'tīt) An individual who practices transvestism.

Trantas' dots (trān'tās) [Alexios Trantas, Gr. ophthalmologist, 1867–1960] Chalky concretions of the conjunctiva around the limbus. These are associated with vernal conjunctivitis.

trapeze bar Triangular device suspended above a bed to facilitate transferring and positioning the patient; also called a *suivel* *trapeze bar*.

trapeziform (trā-pē'zī-form) Shaped like a trapezoid.

trapezium (trā-pē'zē-ūm) [Gr. *trapezion*, a little table] **1.** A four-sided, single-plane geometric figure in which none of the sides are parallel. **2.** The os trapezium, the first bone on the radial side of the distal row of the bones of the wrist. It articulates with the base of the metacarpal bone of the thumb.

trapezius (trā-pē'zē-ūs) A flat, triangular muscle covering the posterior surface of the neck and shoulder. It raises, retracts, or lowers the scapula, extends the head, and is controlled by the accessory nerves.

trapezoid (trāp'ē-zoyd) [Gr. *trapezoides*, table-shaped] A four-sided figure having two parallel sides and two divergent sides.

trapezoid body A bundle of transverse fibers in the ventral portion of the tegmentum of pons. SYN: *corpus trapezoidium*.

trapezoid ligament SEE: under *ligament*.

trauma (traw'mă) *pl.* **traumata, traumas** [Gr. *trauma*, wound] **1.** A physical injury or wound caused by external force or violence. It may be self-inflicted. In the U.S., trauma is the principal cause of death between the ages of 1 and 44 years. In addition to each death from trauma, there are at least two cases of permanent disability caused by trauma. The principal types of trauma include motor vehicle accidents, military service, falls, burns, gunshot wounds, and drowning. Most deaths occur in the first several hours after the event. **2.** An

emotional or psychological shock that may produce disordered feelings or behavior.

a severity characterization of t. ABBR: ASCOT. An assessment tool used to predict the likelihood that an injured patient will survive after serious trauma. It includes the patient's age; whether the trauma was blunt or penetrating; the Glasgow Coma Score; and the initial blood pressure and respiratory rate.

acoustic t. Injury to hearing by noise, esp. loud noise.

birth t. **1.** Injury to the fetus during the birthing process. **2.** Otto Rank's term to describe what he considered the basic source of anxiety in human beings, the birth process. The importance of this concept is controversial.

head t. Injury to the head, esp. to the scalp and cranium, that may be limited to soft tissue damage or may include the cranial bones and the brain.

occlusal t. Any injury to part of the masticatory system as a result of malocclusion or occlusal dysfunction. It may be abrupt in its development in response to a restoration or ill-fitting prosthetic device, or result from years of tooth wear, drift, or faulty oral habits. It may produce adverse periodontal changes, tooth mobility or excessive wear, pain in the temporomandibular joints, or spasms and pain in the muscles of mastication.

psychic t. A painful emotional experience that may cause anxiety, depression, insomnia, flashbacks, or other psychological symptoms.

risk for t. Accentuated risk of accidental tissue injury (e.g., wound, burn, fracture). SEE: *Nursing Diagnoses Appendix*.

toothbrush t. Abrasion or grooving of teeth and gingival injury or recession as a result of improper brushing with a stiff-textured brush.

trauma, revised scale ABBR: RTS. An assessment tool used to gauge the severity of patient injuries, e.g., after a fall, gunshot wound, or auto accident. It consists of measurements of blood pressure and respiratory rate and the Glasgow Coma Scale. A lower score indicates more severe injuries and a greater likelihood of death.

trauma center A regional hospital capable of providing care for critically injured patients. Available on a 24-hr basis are a surgical team, operating suite, surgical subspecialties, intensive care unit, and specialized nursing team.

trauma injury severity score ABBR: TRISS. A calculation of the probability that an injured person will survive after serious trauma. It is made on the basis of the patient's age; the type of trauma (blunt versus penetrating); and the in-

- jury severity score and revised trauma score.
- Trauma Score** Numerical grading system that combines the Glasgow Coma Scale and measurements of cardiopulmonary function as a gauge of severity of injury and as a predictor of survival after blunt trauma to the head. Each parameter is given a number (high for normal and low for impaired or absent function). Severity of injury is estimated by summing the numbers. The lowest score is 1, the highest 16. It was developed by Howard Champion, MD. SEE: table.
- traumatic** (traw-măt'ik) [Gr. *traumatikos*] Caused by or relating to an injury.
- traumatism** (traw'mă-tizm) [Gr. *traumatismos*] Morbid condition of a system owing to an injury or a wound.
- traumato-** Combining form meaning *trauma*.
- traumatology** (traw-mă-tôl'ô-jē) [Gr. *trauma*, wound, + *logos*, word, reason] The branch of surgery dealing with wounds and their care.
- traumatopathy** (traw'mă-tôp'ă-thē) [" + *pathos*, disease, suffering] Pathological state caused by trauma.
- traumatopnea** (traw'mă-tôp-nē'ă) [" + *pnoia*, breath] The passage of air in and out of a wound in the chest wall.
- travel** [ME. *travailen*, to travail, to journey] **1.** To move from place to place, e.g., from one country to another. **2.** The act of moving among different places or countries. Travel to some locations presents health risks, such as deep venous thrombosis, diarrhea, geographically specific infections (e.g., malaria), injury, insomnia, rashes, colds, and influenza.
- tray** (trā) A flat surface with raised edges.
- impression t.** In dentistry, a receptacle with raised edges for carrying impression material and supporting it in contact with the surfaces to be recorded until the impression material sets or hardens.
- trazodone** (trăz'ô-dôn) An triazolopyridine and antidepressant. It is administered orally to treat major depression and may be used as an adjunct to psychotherapy. SYN: *Desyrel*.
- Treacher Collins syndrome** (trē'chēr-

kôl'inz) [Edward Treacher Collins, Brit. ophthalmologist, 1862–1919] Mandibulofacial dysostosis.

- treadmill** (trēd'mil) A conveyor belt for walking or running in place; the speed of movement and angle of inclination can be varied during tests of cardiopulmonary health and conditioning. SEE: *exercise tolerance test*.
- treatment** (trēt'mēt) [ME. *treten*, to handle] **1.** Medical, surgical, dental, or psychiatric management of a patient. **2.** Any specific procedure used for the cure or the amelioration of a disease or pathological condition. SEE: *therapy*. Particular treatments are listed under the first word. SEE: e.g., *conservative treatment*; *legally mandated treatment*; *radiation treatment*.
- treatment card** In dentistry a specially formatted card or file summarizing a patient's dental care. SEE: *dental chart*.
- treatment plan** A therapeutic strategy that may incorporate patient education, dietary adjustment, an exercise program, drug therapy, and the participation of nursing and allied health professionals. Treatment plans are esp. important in the optimal management of complex or chronic illnesses.
- tree** A structure that resembles a tree.
- bronchial t.** The right or left primary bronchus with its branches and their terminal arborizations.
- tracheobronchial t.** The trachea, bronchi, and their branches.
- tree nut** Any of several nuts, e.g., almonds, cashews, pecans, or walnuts, or the peanut (a legume). They are among the most common sources of food allergy.
- Treg** (trēg) A commonly used abbreviation for a regulatory T cell (i.e., a T lymphocyte that alters or controls the activity of other T cells).
- trehalase** (trē-hā'lās) The enzyme that cleaves the bond between glucose molecules in the disaccharide, trehalose.
- trehalose** (trē-hā'lōs) A disaccharide containing two linked glucose molecules. It is less sweet than sucrose, but can be used as a source of glucose. SYN: *mycose*.
- Trematoda** (trēm'ă-tō'dă) [Gr. *trematodes*, pierced] A class of flatworms

Revised Trauma Score (RTS)

Glasgow Coma Scale (GCS)	Systolic Blood Pressure (SBP)	Respiratory Rate (RR)	Coded Value
13–15	>89	10–29	4
9–12	76–89	>29	3
6–8	50–75	6–9	2
4–5	1–49	1–5	1
3	0	0	0

RTS = 0.9368 GCS_c + 0.7326 SBP_c + 0.2908 RR_c coded values × revised score coefficient

SOURCE: From Champion, HR, et al: J Trauma 29:623–629, 1989.

commonly called flukes belonging to the phylum Platyhelminthes. It includes two orders: Monogenea, which are external or semiexternal parasites having direct development with no asexual multiplication, and Digenea, internal parasites with asexual generation in their life cycle. The Digenea usually require two or more hosts, the hosts alternating. SEE: *fluke*.

trematode (trém'ă-tōd) A parasitic flatworm belonging to the class Trematoda. SEE: *cercaria*; *fluke*.

trematodiasis (trém'ă-tō-dī'ă-sīs) Infestation with a trematode.

tremble (trém'bl) [O.Fr. *trembler*] **1.** An involuntary quivering or shaking. **2.** To shiver, quiver, or shake.

trembles (trém'blz) A condition resulting from ingestion of plants such as snakeroot (*Eupatorium urticaefolium*) or jimmyweed (*Haplopappus heterophyllus*). The condition is common in domestic animals and may occur in humans as a result of ingesting the plants or more commonly from drinking milk or eating the meat of poisoned animals. Symptoms are weakness, anorexia, nausea and vomiting, and prostration, possibly resulting in death. In humans, the illness is called milk sickness. SYN: *tires*.

tremelloid, tremellose (trém'ě-loyd, -lōs) Jelly-like.

tremolabile (trém'mō-lā'bl) [*l'* + *labi*, to slip] Easily destroyed or inactivated by shaking; said of an enzyme.

tremor (trém'or, trē'mor) [L. *tremor*, a shaking] **1.** A quivering, esp. a continuous quivering of a convulsive nature. **2.** An involuntary movement of a part or parts of the body resulting from alternate contractions of opposing muscles. SEE: *subsultus*.

Tremors may be classified as involuntary, static, dynamic, kinetic, or hereditary. Pathological tremors are independent of the will. The trembling may be fine or coarse, rapid or slow, and may appear on movement (intention tremor) or improve when the part is voluntarily exercised. It is often caused by organic disease; trembling may also express an emotion (e.g., fear). All abnormal tremors except palatal and ocular myoclonus disappear during sleep.

action t. Intention t.

alcoholic t. The visible tremor exhibited by alcoholics.

cerebellar t. An intention tremor of 3 to 5 Hz frequency, associated with cerebellar disease.

coarse t. A tremor in which oscillations are relatively slow.

continuous t. A tremor that resembles tremors of paralysis agitans.

enhanced physiological t. An action tremor associated with catecholamine excess (e.g., in association with anxiety,

thyrotoxicosis, hypoglycemia, or alcohol withdrawal). It may occur as a side effect of drugs (e.g., epinephrine, caffeine, theophylline, amphetamines, levodopa, tricyclic antidepressants, lithium, and corticosteroids).

essential t. A benign tremor, usually of the head, chin, outstretched hands, and occasionally the voice, that is to be differentiated from the tremor of Parkinson's disease. Unlike Parkinson's disease, essential tremor does not cause or presage other neurological complications. Essential tremor, which is made worse by anxiety or action, is usually 8 to 10 cycles per second and that of parkinsonism 4 to 5. Postural tremors occur when the patient tries to hold his hands in a particular position (e.g., when the hands are outstretched). Kinetic tremors occur during purposeful movement (e.g., during finger-to-nose testing). Essential tremor affects 5 to 10 million adults and some children in the U.S. and is probably the most common movement disorder. Its incidence increases with age. In essential tremor, there is usually a family history. The medicines effective in treating parkinsonism have no effect on essential tremor.

PATIENT CARE: Patients with essential tremor often require no treatment other than reassurance. They should avoid stimulants, like caffeine or pseudoephedrine, which make trembling worse, and they should rest when tremors are especially prominent. Medications commonly used to treat essential tremor include beta blockers, anticonvulsants, benzodiazepines, and botulinum toxin injections. Tremors that are exceptionally troubling to patients can also be suppressed by thalamic stimulation or surgical excision of the thalamus.

familial t. A tremor indistinguishable from essential tremor in its clinical manifestation. Unlike essential tremor, it is inherited as an autosomal dominant trait.

fibrillary t. A tremor caused by consecutive contractions of separate muscular fibrillae rather than of a muscle or muscles.

fine t. A rapid tremor.

flapping t. Asterixis.

forced t. A tremor continuing after voluntary motion has ceased.

Hunt's t. SEE: *Hunt's tremor*.

hysterical t. A fine tremor occurring in hysteria. It may be limited to one extremity or generalized.

intention t. A tremor exhibited or intensified when attempting coordinated movements. SYN: *action tremor*.

intermittent t. A tremor common to paralyzed muscles in hemiplegia when attempting voluntary movement.

muscular t. Slight oscillating muscular contractions in rhythmic order.

parkinsonian t. A resting tremor of the fingers and hands, often called a pill-rolling tremor, that is suppressed briefly during voluntary activity. The tremor disappears during all but the lightest phases of sleep.

physiological t. A tremor occurring in normal individuals. It may be transient and occur in association with excessive physical exertion, excitement, hunger, fatigue, or other causes. SEE: *enhanced physiological t.*

rest t. A tremor present when the involved part is at rest but absent or diminished when active movements are attempted. SYN: *static tremor.*

senile t. A form of benign essential tremor found in individuals older than 60, marked by rapid, alternating movements of the upper extremities that occur at a frequency of about 6 cycles/sec.

static t. Rest t.

volitional t. Trembling of the limbs or of the body when making a voluntary effort. It is seen in many cerebellar diseases.

tremulor (trēm'ū-lor) A device for administering vibratory massage.

tremulous (trēm'ū-lūs) [L. *tremulus*] Trembling or shaking.

tranch fever A febrile disease whose characteristics include headache, malaise, pain, tenderness (esp. in the shins), splenomegaly, and often a transient macular rash. The causative agent is *Bartonella quintana*, a rickettsial organism that can reproduce only within cells; it is transmitted to people by body lice. The disease is rarely encountered in industrialized nations, except among the homeless; it is prevalent in many developing nations. The disease is treated with doxycycline 100 mg orally, twice a day.

trend [ME. *trenden*, to revolve] The inclination to proceed in a certain direction or at a certain rate; used to describe the prognosis or course of a symptom or disease.

Trendelenburg gait A side lurching of the trunk over the stance leg due to weakness in the gluteus medius muscle.

Trendelenburg position (trēn-dēl'ēn-bürg) [Friedrich Trendelenburg, Ger. surgeon, 1844–1924] A position in which the patient's head is low and the body and legs are on an elevated and inclined plane. This may be accomplished by having the patient flat on a bed and elevating the foot of the bed. In this position, the abdominal organs are pushed up toward the chest by gravity. The foot of the bed may be elevated by resting it on blocks. This position is used in abdominal surgery. In treating shock, this position is usually used, but if there is an associated head injury, the head

should not be kept lower than the trunk. SEE: *position for illus.*

reverse T. p. A body position in which the trunk and head are elevated above the pelvis and lower extremities.

Trendelenburg sign A pelvic drop on the side of the elevated leg when the patient stands on one leg and lifts the other. It indicates weakness or instability of the gluteus medius muscle on the stance side.

Trendelenburg test A test to evaluate the strength of the gluteus medius muscle. The examiner stands behind the patient and observes the pelvis as the patient stands on one leg and then the other. A positive result determines muscle weakness on the standing leg side when the pelvis tilts down on the opposite side.

trepan (trē-pān') [Gr. *trypanon*, a borer] **1.** To perforate the skull. **2.** An instrument resembling a carpenter's bit for incision of the skull. SYN: *trephine.*

trepanation (trēp'ā-nā'shūn) [L. *trepanatio*] Surgery using a trepan.

corneal t. Keratoplasty.

trephination (trēf'in-ā'shūn) [Fr. *trephine*, a bore] The process of cutting out a piece of bone with the trephine.

trephine (trē-fin') **1.** To perforate with a trephine. **2.** A cylindrical saw for cutting a circular piece of bone out of the skull. SYN: *trepan.*

trephining (trē-fin'ing) The process of cutting bone with a trephine.

trephocyte (trēf'ō-sit) [Gr. *trephein*, to feed, + *kytos*, cell] Trophocyte.

trepidant (trēp'i-dānt) [L. *trepidans*, trembling] Marked by tremor.

trepidation (trēp'i-dā'shūn) [L. *trepidatio*, a trembling] **1.** Fear, anxiety. **2.** Trembling movement, esp. when involuntary.

Treponema (trēp'ō-nē'mā) [Gr. *trepein*, to turn, + *nema*, thread] A genus of spirochetes, parasitic in humans, which belongs to the family Treponemataceae. They move by flexing, snapping, and bending. SEE: *bacteria* for illus.

T. carateum The causative agent of pinta, an infectious disease of the skin.

T. endemicum The causative agent of bejel, a nonvenereal, endemic form of syphilis. It often affects the skin, bones, and oral mucous membranes.

T. pallidum The causative organism of syphilis. SYN: *Spirochaeta pallida.*

T. pertenu The causative organism of yaws (frambesia).

Treponema denticola (dēn-tīk'ā-lā) A species of anaerobic, gram-negative spirochete that causes periodontal disease. Its presence in the oral cavity has been linked to an increased incidence of coronary artery disease.

Treponemataceae (trēp'ō-nē'mā-tā'sē-ē) A family of spiral organisms belonging to the order Spirochaetales; that in-

cludes the genera *Borrelia*, *Leptospira*, and *Treponema*.

treponematosis (trĕp'ō-nĕ-mă-tō'sīs) Infection with *Treponema*.

treponeme (trĕp'ō-nĕm) Any organism of the genus *Treponema*.

treponemiasis (trĕp'ō-nĕ-mī'ă-sīs) [n + *nema*, thread, + *-iasis*, condition] Infestation with *Treponema*.

treponemicidal (trĕp'ō-nĕ'mī-sī'dăl) [n + " + *L. cidus*, to kill] Destructive to *Treponema*.

trepopnea (trĕp-ŏp'nĕ-ă) [n + *pnoia*, breath] The condition of being able to breathe with less difficulty when in a certain position.

treppe (trĕp'ĕ) Staircase phenomenon.

tretinoin (trĕt'ī-noyn) All-*trans*-retinoic acid. It is a keratolytic agent used topically in treating acne.

TRH *thyrotropin-releasing hormone*. SEE: under *hormone*.

tri- [Gr.] Prefix meaning *three*.

triacetate (trī-ăs'ĕ-tăt) Any acetate that contains three acetic acid groups.

triacidic (trī'ă-sīd'ĭk) Containing three acidic hydrogen ions.

triacylglycerol (trī-ăs'ĭl-glīs'ă-rŏl') Tri-glyceride.

triad (trī'ăd) [Gr. *trias*, group of three]

1. Any three things having something in common. 2. A trivalent element. 3. Trivalent.

Beck's t. SEE: *Beck's triad*.

Charcot's t. SEE: *Charcot's triad*.

female athlete t. Abnormal eating habits (eating disorders or disordered eating), amenorrhea, and osteoporosis among young female athletes. It is most common in sports in which low body weight has a beneficial effect on performance or appearance (e.g., gymnastics, running, swimming, and figure skating). Males participating in similar sports, or in wrestling, may also suffer the health-related effects of excessive training or abnormally restrictive eating. Disordered eating is often the first condition in the triad to appear.

SYMPTOMS: Signs of the disorder include excessive training, food restriction, ritualized eating habits, and other obsessive behavior, bingeing and purging, fatigue, anemia, depression, and electrolyte imbalances. Fractures occur because of bone loss, which may not be reversible.

PATIENT CARE: Screening female high school athletes for disordered eating and menstrual irregularities is recommended as a first step in preventing development of the disorder. During physical exams required for participation in sports, athletes should be asked about food intake within the past 24 hr, perceived ideal weight, forbidden foods, and use of diet aids. Some women and coaches believe that amenorrhea is a normal consequence of athletic training

rather than a sign of injury to the hypothalamic-pituitary axis. A dual-energy x-ray absorptiometry (DEXA) scan or similar study should be considered in athletes with amenorrhea lasting at least 6 months. The patient, dietician, and primary care provider should agree on a goal weight, after considering the weight requirements for the sport.

Hutchinson's t. SEE: under *Hutchinson, Sir Jonathan*.

triad syndrome Prune belly defect.

triage (trĕ-ăzh') [Fr., sorting] 1. The screening and classification of casualties to make optimal use of treatment resources and to maximize the survival and welfare of patients. 2. Sorting patients and setting priorities for their treatment in urgent care settings, emergency rooms, clinics, hospitals, health maintenance organizations, or in the field.

PATIENT CARE: To triage a patient the health care professional assesses mental status, airway, breathing, and circulation and makes decisions about treatment priorities. The process is dynamic, e.g., the patient's condition may change and upon reassessment, so may the priority. Common triage categories used in the field during multiple casualty incidents would include: P-1 or red, P-2 or yellow, P-3 or green, and P-0 or deceased.

Most emergency department triage systems rely on patient surveys, with victims assigned to the following categories based on assessment: emergent (requires stabilization or treatment within minutes to prevent death or further injury), urgent (serious but not life-threatening, should be treated within 2 hr), and nonurgent (minor or stable injury or illness, does not require treatment within 2 hr). In the primary survey of the patient, the Airway, Breathing, Circulation, need for Defibrillation (or neurological Disability) are assessed and the patient is undressed or Exposed. The survey order is remembered with the mnemonic ABCDE. Resuscitation of the patient begins immediately, based on the findings. In the secondary survey, the same elements of care are reviewed, but the emphasis is on assessing the effectiveness of interventions to maintain the airway, support ventilation, control hemorrhage and blood pressure, and restore normal physiology. After stabilization the patient may be admitted to a hospital, or transported to a facility better equipped to manage his or her illness or injuries.



Warning measures should be employed to avoid hypothermia caused by "E" (exposure).

telephone t. Use of the telephone or other means of communication to assess a patient's health status and to recommend treatment or provide appropriate referrals. It is used, e.g., in emergency departments and the offices of primary care providers to facilitate the outpatient management of common, simple health-related problems.

trial, phase 1 A clinical trial to determine the toxicity of a new drug.

trial, phase 2 A clinical trial to determine the potential effectiveness of a new drug.

trial, phase 3 A clinical trial to explore the clinical use of a new drug, esp. relative to other known effective agents.

triangle (trī'āng-gl) [L. *triangulum*] A figure or area formed by three angles and three sides.

anal t. The dorsal triangular region of the perineum from the point at the tip of the coccyx to a line between the two ischial tuberosities. The anal triangle contains the anus.

anterior t. of neck The space bounded by the middle line of the neck, the anterior border of the sternocleidomastoid muscle, and a line running along the lower border of the mandible and continued to the mastoid process of the temporal bone.

cephalic t. The triangle on the anteroposterior plane of the skull formed by lines joining the occiput and forehead and chin, and a line uniting the occiput and the chin.

digastric t. The triangular region of the neck. Its borders are the mandible, stylohyoid muscle, and the anterior belly of the digastric muscle.

facial t. The triangle bounded by the lines uniting the basion and the alveolar and nasal points, and one uniting the nasal and basion.

frontal t. The triangle bounded by the maximum frontal diameter and the lines joining its extremities and the glabella.

Hesselbach's t. SEE: *Hesselbach's triangle*.

inferior carotid t. The triangular space bounded by the middle line of the neck, the sternomastoid muscle, and the anterior belly of the omohyoid muscle. SYN: *muscular triangle*.

lumbocostoadominal t. The triangle bounded in front by the obliquus abdominis externus, above by the lower border of the serratus posterior inferior and the point of the 12th rib, behind by the outer edge of the erector spinae, and below by the obliquus abdominis internus.

muscular t. Inferior carotid t.

mylohyoid t. The triangular space formed by the mylohyoid muscle and the two bellies of the digastric muscle.

occipital t. of the neck The triangle

bounded by the sternocleidomastoid, the trapezius, and the omohyoid muscles.

t. of Petit The space above the hip bone between the exterior oblique muscle, the latissimus dorsi, and the interior oblique muscle.

posterior cervical t. The triangular region wrapping around the side of the neck bounded by the upper border of the clavicle, the posterior border of the sternocleidomastoid muscle, and the anterior border of the trapezius muscle.

pubourethral t. A triangular space in the perineum bounded laterally by the ischiocavernosus muscle, medially by the bulbocavernosus muscle, and posteriorly by the superficial transverse perineus muscle.

submandibular t. The triangular region of the neck, bounded by the inferior border of the mandible, the stylohyoid muscle and the posterior belly of the digastric muscle, and the anterior belly of the digastric muscle; it is one of three triangles included in the anterior triangle of the neck. This was formerly called the submaxillary triangle.

submental t. A superficial region under the chin with its base being the hyoid bone and its right and left walls being the right and left anterior bellies of the digastric muscle. The front wall of the triangle is skin; the back wall is the outer surface of the mylohyoid muscle.

suboccipital t. The triangle bounded by the obliquus inferior and superior muscles on two sides and the rectus capitis posterior major muscle on the third side. The floor contains the posterior arch of the atlas bone and the vertebral artery. It is covered by the semispinalis capitis muscle.

superior carotid t. The space bounded by the anterior belly of the omohyoid muscle, the posterior belly of the digastric muscle, and the sternomastoid muscle.

suprameatal t. The triangle slightly above and behind the exterior auditory meatus. It is bounded above by the root of the zygoma and anteriorly by the posterior wall of the exterior auditory meatus.

urogenital t. The triangle with its base formed by a line between the two ischial tuberosities and its apex just below the symphysis pubis.

triangulation (trī-ān'gū-lā'shūn) In qualitative research, a technique for enhancing the validity of the data gained from investigative research by comparing or synthesizing information gathered from more than one study.

Triatoma (trī-āt'ō-mā) A genus of blood-sucking insects belonging to the order Hemiptera, family Reduviidae; commonly called cone-nosed bugs or assassin bugs. It includes the species *T. bra-*

ziliensis, *T. dimidiata*, *T. infestans*, *T. protracta*, *T. recuva*, and *T. rubida*. They are house-infesting pests and some species, esp. *T. infestans*, transmit *Trypanosoma cruzi*, the causative agent of Chagas' disease.

tribade (trīb'ād) A lesbian.

tribasic (trī-bā'sīk) [Gr. *treis*, three, + *L. basis*, base] Capable of neutralizing or accepting three hydrogen ions.

tribasilar (trī-bās'īl-ār) ["] + *L. basilaris*, base] Having three bases.

tribasilar synostosis A condition resulting from the premature fusion of three skull bones—the occipital, sphenoid, and temporal. This results in arrested cerebral development and mental deficiency.

tribe (trīb) [L. *tribus*, division of the Roman people] In taxonomy, an occasional subdivision of a family; often equal to or below subfamily and above genus.

tribology (trī-bōl'ō-jē) The study of the effect of friction on the body, esp. the articulating joints.

triboluminescence (trī'bō-lū'mī-nēs'ēns) [Gr. *tribein*, to rub, + *L. lumen*, light, + *O.Fr. escence*, continuing] Luminescence or sparks produced by friction or mechanical force applied to certain chemical crystals.

tribromide (trī-brō'mīd) [Gr. *treis*, three, + *bromos*, stench] A compound having three atoms of bromine in the molecule.

TRIC Acronym for trachoma and inclusion conjunctivitis. SEE: *Chlamydia trachomatis*.

tricarboxylic acid cycle (trī-kār'bōk-sīl'īk) Krebs cycle.

triceps (trī'sēps) ["] + *L. caput*, head] A muscle arising by three heads with a single insertion.

t. brachii The muscle of the posterior arm with three points of origin (one on the scapula, two on the humerus) and one insertion on the ulna. It extends the forearm and is controlled by the radial nerve. SEE: *arm* for illus.

t. skin fold The thickness of the skin including subcutaneous fat as measured on the skin over the triceps muscle of the arm. Comparison of the value obtained from a patient to standard values helps to provide an estimate of body fat. It is used in assessing and documenting both malnutrition and obesity.

t. sura(e) The muscles of the calf formed by the gastrocnemius, soleus, and plantaris muscles.

trich- SEE: *trichi-*.

trichalgia (trīk-āl'jē-ā) Pain caused by touching or moving the hair.

trichi-, trich-, tricho- Combining forms meaning *hair*.

trichiasis (trīk-ī'ā-sīs) [Gr. *thrix*, hair, + *-iasis*, condition] Inversion of eyelashes so that they rub against the cornea, causing a continual irritation of the

eyeball. Symptoms are photophobia, lacrimation, and feeling of a foreign body in the eye. The condition is treated by cryotherapy, epilation, electrolysis, and operation, such as correcting the underlying entropion with which this condition is usually associated.

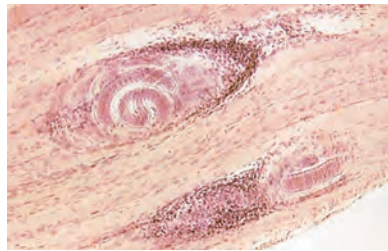
trichilemmoma (trīk'ī-lēm-ō'mā) A benign tumor of the outer root sheath epithelium of a hair follicle.

Trichina (trīk-ī'nā) [Gr. *trichinos*, of hair] Trichinella.

trichina (trī-kī'nā) *pl.* **trichinae** A larval worm of the genus *Trichinella*.

Trichinella (trīk'ī-nēl'lā) A genus of nematode worms belonging to the suborder Trichurata. They are parasitic in humans, hogs, rats, and many other mammals.

T. spiralis The species of *Trichinella* that commonly infests humans, causing trichinosis. Infection occurs when raw or improperly cooked meat, particularly pork and wild game, containing cysts is eaten. Larvae excyst in the duodenum and invade the mucosa of the small intestine, becoming adults in 5 to 7 days. After fertilization, each female deposits 1000 to 2000 larvae, which enter the blood or lymph vessels and circulate to various parts of the body where they encyst, esp. in striated muscle. SEE: *illus.*



TRICHINELLA SPIRALIS

Encysted in muscle tissue (×800)

trichinellosis (trīk'ī-nēl-lō'sīs) [Gr. *trichinos*, of hair, + *osis*, condition] Trichinosis.

trichinosis (trīk'īn-ō'sīs) ["] + *osis*, condition] Infection by the roundworm parasite *Trichinella spiralis*, resulting from consumption of undercooked pork or wild game containing *T. spiralis* cysts. Gastric juices release the worms from their cysts and they quickly reach sexual maturity. The female roundworms then burrow into the intestinal mucosae of organisms and produce larvae in the gastrointestinal tract that move through the bloodstream and lymphatic system and encyst in striated muscle tissue (chest, diaphragm, arms and legs), where they die. In the U.S. fewer than 0.5% of pigs are infected, and fewer than 40 cases of the disease are now reported annually, although it continues

to be common throughout the world. SYN: *trichinellosis*. SEE: *Nursing Diagnoses Appendix*.

SYMPTOMS: Occasionally, anorexia, nausea, vomiting, abdominal cramping, and diarrhea may be present when the infected meat is eaten (invasion – stage 1). After the larvae penetrate the intestinal mucosa and invade blood and lymph to migrate to the muscles (dissemination – stage 2), patients have fever, muscle pain (most often in the extremities), and periorbital and facial edema. Sometimes patients experience itching and burning of the skin, sweating, and skin lesions. Rarely, signs of encephalitis, myocarditis, and invasion of the diaphragm occur, which can result in death. After encystment (stage 3), the only symptom may be vague muscular pains, which may persist for weeks.

DIAGNOSIS: Diagnosis is based primarily on the patient's history of ingesting raw or under cooked pork, pork products, or game and the clinical findings. During the invasion stage, stools may contain larvae and mature worms. Laboratory testing reveals an extreme increase in eosinophils circulating in the blood (as high as 15,000/mm³).

TREATMENT: Albendazole is effective during the intestinal stage, and is administered for 14 days after diagnosis. Muscle pains should be relieved by analgesics. Corticosteroids are indicated for allergic reaction, severe inflammation, or central nervous system involvement. Once the larvae have encysted in the muscles, no curative therapy exists. Treatment is generally symptomatic and supportive.

PROGNOSIS: The prognosis depends on the number of worms ingested. The majority of patients recover.

PREVENTION: Pork and wild game should always be cooked to an internal temperature of at least 160°F (71°C) to destroy trichinella; smoking and pickling do not destroy the organism. The meat industry advocates irradiation to ensure roundworm destruction, but this process is controversial.

PATIENT CARE: The caregiver provides support and encourages the patient to report adverse symptoms, because treatment is primarily directed at their relief. The patient should also obtain sufficient rest, bedrest in severe cases to prevent a relapse. Health care professionals should educate the public about the importance of properly cooking and storing meats from all carnivorous animals. Travelers to foreign countries should be advised against eating pork or pork products, as the animals may have been fed raw garbage. All cases of trichinosis should be reported to local public health authorities.

trichinous (trik'in-üs) [Gr. *trichinos*, of hair] Infested with trichinae.

tricho- [Gr. *thrix*, *trichos*, hair] SEE: *trichi-*.

trichoanesthesia (trik'ō-än'ēs-thē'zē-ä) Loss of sensibility of the hair.

trichobezoar (trik'ō-bē'zōr) [+ Arabic *bazahr*, protecting against poison] Hairball.

trichocyst (trik'ō-sist) [+ *kystis*, bladder] **1.** A cell structure derived from cytoplasm. **2.** In some single-celled organisms, a vesicle equipped with a thread that can be thrust out for the purposes of defense or attack.

Trichodectes (trik'ō-dēk'tēz) [+ *dektes*, biter] A genus of lice that infests dogs and sheep. Some are the intermediate hosts of tapeworms.

trichoepithelioma (trik'ō-ēp'ī-thē-lē-ō'mä) [+ *epi*, upon, + *thele*, nipple, + *oma*, tumor] A benign skin tumor originating in the hair follicles.

trichoesthesia (trik'ō-ēs-thē'zē-ä) [+ *aisthesis*, sensation] **1.** The sensation felt when a hair is touched. **2.** A paresthesia causing a sensation of the presence of a hair on a mucous membrane or on the skin.

trichogen (trik'ō-jēn) [+ *gennan*, to produce] An agent stimulating hair growth.

trichogenous (trik'ōj'en-üs) Promoting hair growth.

trichoglossia (trik'ō-glōs'ē-ä) [+ *glossa*, tongue] Hairy condition of the tongue.

trichohyalin (trik'ō-hī'ä-lin) [+ *hyalos*, glass] The hyaline of the hair.

trichoid (trik'ōyd) [+ *eidōs*, form, shape] Hairlike.

tricholith (trik'ō-lith) [+ *lithos*, stone] **1.** A hairy nodule on the hair; seen in piedra. **2.** A calcified intestinal bezoar that contains hair.

trichology (trik'ōl'ō-jē) [+ *logos*, word, reason] The study of the hair and its care and treatment.

trichoma (trik'ō-mä) [Gr., hairiness] **1.** Inversion of one or more eyelashes. SYN: *entropion*. **2.** Matted, verminous, encrusted state of the hair.

trichomatosis (trik'ō-mä-tō'sis) [+ *osis*, condition] Entangled matted hair caused by scalp fungus.

trichomatous (tri-kōm'ä-tūs) Of the nature of or affected with trichoma.

trichome (tri'kōm) [Gr. *trichoma*, a growth of hair] **1.** A hair or other appendage of the skin. **2.** A colony of cyanobacteria in which the cells form chains.

trichomegaly (trik'ō-mēg'ä-lē) [Gr. *trichos*, hair, + *megas*, large] Long, coarse eyebrows.

trichomonacide (trik'ō-mō'nä-sid) Anything that is lethal to trichomonads.

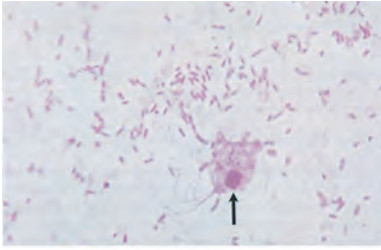
trichomonad (trik'ō-mō'näd) Related to or resembling the genus of flagellate *Trichomonas*.

Trichomonas (trik"ō'mō'nās) [l' + *monas*, unit] Genus of flagellate parasitic protozoa.

T. hominis A benign trichomonad found in the large intestine.

T. tenax A benign trichomonad that may be present in the mouth.

T. vaginalis A species found in the vagina that produces discharge. *T. vaginalis* is fairly common in women, esp. during pregnancy or following vaginal surgery. It is sometimes found in the male urethra and may be transmitted through sexual intercourse. SEE: *illus.; colpitis macularis*.



TRICHOMONAS VAGINALIS (arrow) AND BACTERIA IN VAGINAL SMEAR (×1000)

SYMPTOMS: *T. vaginalis* causes persistent burning, redness, and itching of the vulvar tissue associated with a profuse vaginal discharge that may be frothy or malodorous or both. Occasionally, infection with *T. vaginalis* is asymptomatic.

TREATMENT: Metronidazole (Flagyl) is taken orally by the woman and her sexual partner. The drug is contraindicated during the first trimester of pregnancy because of potential damage to the developing fetus; clotrimazole vaginal suppositories provide symptomatic relief during the first 12 weeks of gestation.



Alcohol should not be consumed during metronidazole therapy.

trichomoniasis (trik"ō-mō-nī'ā-sīs) [l' + " + *-iasis*, infection] Infestation with a parasite of the genus *Trichomonas*.

trichomycosis (trik"ō-mī-kō'sīs) [l' + *mykes*, fungus, + *osis*, condition] Any disease of the hair caused by a fungus.

t. axillaris An infection of the axillary region and sometimes pubic hairs caused by *Nocardia tenuis*.

t. nodosa Piedra.

trichonosis, trichonosis (trik-ō-nō'sīs, -ōn'ō-sūs) [Gr. *trichos*, hair, + *nosos*, disease] Any disease of the hair. SYN: *trichopathy*.

trichopathy (trik-ōp'ā-thē) [l' + *pathos*, disease, suffering] Trichonosis.

trichophagia, trichophagy (trik-ō-fā'jē-ā, -ōf'ā-jē) [l' + *phagein*, to eat] The habit of eating hair.

trichophobia (trik"ō-fō'bē-ā) [l' + *phobos*, fear] An abnormal dread of hair or of touching it.

trichophytic (trik"ō-fit'ik) [l' + *phyton*, plant] 1. Relating to *Trichophyton*. 2. Promoting hair growth.

trichophytic granulosa (trik"ō-fit'ik) Majocchi's disease.

trichophytid (tri-kōf'i-tīd) A skin disorder considered to be an allergic reaction to fungi of the genus *Trichophyton*.

trichophytin (tri-kōf'i-tīn) An extract prepared from cultures of the fungi of the genus *Trichophyton*; used as an antigen for skin tests and for the treatment of certain trichophytid infections.

trichophytobezoar (trik-ō-fī'tō-bē'zor) [l' + *phyton*, plant, + Arabic *bazahr*, protecting against poison] A hairball found in the stomach or intestine composed of hair, vegetable fibers, and miscellaneous debris.

Trichophyton (tri-kōf'it-ōn) A genus of parasitic fungi that lives in or on the skin or its appendages (hair and nails) and is the cause of various dermatomycoses and ringworm infections. Species that produce spores arranged in rows on the outside of the hair are designated ectothrix; if spores are within the hair, endothrix.



T. mentagrophytes A species, one form of which, called *granulare*, is parasitic on several mammals including horses, dogs, and rodents and can also affect humans. Another variety, called *interdigitale*, is associated with tinea pedis.

T. schoenleinii The causative agent of favus of the scalp. SEE: *favus*.

T. tonsurans The most frequent cause of ringworm of the scalp. SEE: *tinea capitis*.

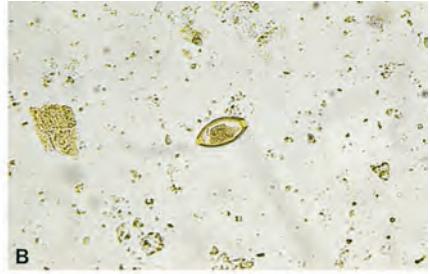
T. violaceum The causative agent of some forms of ringworm of the scalp, beard, or nails.

trichophytosis (trik"ō-fit-tō'sīs) [l' + *phyton*, plant, + *osis*, condition] Infestation with *Trichophyton* fungi.

trichoptilosis (trik"ōp-tīl-ō'sīs) [l' + *ptilon*, feather, + *osis*, condition] 1. The splitting of hairs at their ends, giving them a feather-like appearance. 2. A disease of hair marked by development of nodules along the hair shaft, at which point it splits off.

trichosis (tri-kō'sīs) [l' + *osis*, condition] Any disease of the hair or its abnormal growth or development in an abnormal place.

Trichosporon (tri-kōs'pō-rōn) [l' + *sporos*, a seed] A genus of fungi that causes superficial skin infections in immunocompetent hosts and opportunistic infections (e.g., endocarditis, fungemia, and lung, kidney, and splenic infections) in immunocompromised patients.



100 μ m

TRICHURIS TRICHIURA

(A) adult female ($\times 4$), (B) eggs in feces ($\times 100$)

- T. beigelii*** The causative agent of white piedra. SEE: *piedra*.
- trichosporosis** (trik"ō-spō-rō'sīs) [" + " + *osis*, condition] Infestation of the hair with *Trichosporon*.
- trichostrongyliasis** (trik"ō-strōn-jī-lī'ā-sīs) Infestation with the intestinal parasite *Trichostrongylus*; a rare disease in the U.S.
- trichostrongylosis** (trik"ō-strōn"jī-lō'sīs) Infestation with *Trichostrongylus*.
- Trichostrongylus** (trik"ō-strōn"jī-lūs) A genus of nematode worms of the family Trichostrongylidae. These worms are of economic importance because of the damage they cause to domestic animals and birds.
- trichotillomania** (trik"ō-tīl"ō-mā'nē-ā) [" + *tillein*, to pull, + *mania*, madness] The unnatural and irresistible urge to pull out one's own hair. Clomipramine has been effective in treating this condition.
- trichotomous** (trī-kōt'ō-mūs) [Gr. *tricha*, threefold, + *tome*, incision] Divided into three.
- trichotomy** (trī-kōt'ō-mē) Division into three parts.
- trichotoxin** (trik"ō-tōks'in) [Gr. *trichos*, hair, + *toxikon*, poison] An antibody or cytotoxin that destroys ciliated epithelial cells.
- trichotrophy** (trī-kōt'rō-fē) [" + *trophe*, nourishment] Nutrition of the hair.
- trichroic** (trī-krō'ik) [Gr. *treis*, three, + *chroa*, color] Presenting three different colors when viewed along each of three different axes.
- trichroism** (trī'krō-izm) [" + " + *-ismos*, condition] Quality of showing a different color when viewed along each of three axes. SYN: *trichromatism*.
- trichromatic** (trī'krō-māt'ik) [" + *chroma*, color] Rel. to or able to see the three primary colors; denoting normal color vision. SYN: *trichromic*.
- trichromatism** (trī-krō'mā-tizm) Trichroism.
- trichromatopsia** (trī'krō-mā-tōp'sē-ā) Normal color vision.

- trichromic** (trī-krō'mik) Pert. to normal color vision or the ability to see the three primary colors. SYN: *trichromatic*.
- trichuriasis** (trik"ū-rī'ā-sīs) [Gr. *trichos*, hair, + *oura*, tail + *-iasis*, condition] The presence of worms of the genus *Trichuris* in the colon or in the ileum.
- Trichuris** (trī-kū'ris) A genus of parasitic worms of the class Nematoda.
- T. trichiura*** A species that infests humans when the ova that have undergone incubation in the soil are ingested. The larvae develop into adults, which inhabit the large intestine. Symptoms of infestation include diarrhea and abdominal pain. Rectal prolapse may occur if a great number of worms are present. Mebendazole is the drug of choice; albendazole or ivermectin may be of benefit. SYN: *whipworm*. SEE: *illus*.
- tricipital** (trī-sīp'i-tāl) [Gr. *treis*, three, + L. *caput*, head] Three-headed, as the triceps muscle.
- tricrotic** (trī-krōt'ik) [Gr. *trikrotos*, rowed with a triple stroke] A condition in which three accentuated waves or notches occur with each pulse.
- tricrotism** (trī'krōt-izm) [" + *-ismos*, condition] The condition of being tricrotic.
- tricuspid** (trī-kūs'pid) [Gr. *treis*, three, + L. *cuspis*, point] **1.** Pert. to the tricuspid valve. **2.** Having three points or cusps.
- tricuspid area** The lower portion of the body of the sternum where sounds of the right atrioventricular orifice are best heard.
- tricuspid orifice** Right atrioventricular cardiac aperture.
- tricuspid tooth** A tooth with a crown that has three cusps.
- tricuspid valve** SEE: *valve*, *tricuspid*.
- trident, tridentate** (trī'dēnt, trī-dēn'tāt) [L. *tres*, *tria*, three, + *dens*, tooth] Having three prongs.
- tridermoma** (trī'dēr-mō'mā) [" + " + *oma*, tumor] A teratoid growth containing all three germ layers.

trielcon (trī-ĕl'kŏn) [*tr* + *helkein*, to draw] An instrument with three branches for removing bullets or other foreign bodies from wounds.

trifid (trī-fid) [L. *trifidus*, split thrice] Split into three; having three clefts.

trifocal (trī-fŏ'kāl) [L. *tri*-, three, + *focus*, hearth] Having three convergence points, as in a trifocal lens. SEE: *bifocal*; *focus*.

Trifolium pretense (trī-fŏl'ĕ-ŭm prĕ-tĕn'sĕ) [L., lit. "extended trefoil"] The scientific name for red clover, an herbal remedy containing phytoestrogens. Despite its estrogenic chemistry it is not an effective treatment for hot flashes occurring in menopause.

trifurcation (trī'fūr-kā'shŭn) [Gr. *treis*, three, + L. *furca*, fork] **1.** Division into three branches. **2.** In dentistry, the area of root division in a tooth with three roots.

trifurcation involvement The extension of periodontitis or a periodontal pocket into an area where the tooth roots divide.

trigeminal (trī-jĕm'in-āl) [L. *tres*, *tria*, three, + *geminus*, twin] Pert. to the trigemino or fifth cranial nerve.

trigeminy (trī-jĕm'ĭ-nĕ) Occurring in threes, esp. three pulse beats in rapid succession.

trigenic (trī-jĕn'ĭk) [Gr. *treis*, three, + *gennan*, to produce] In genetics, a condition in which three alleles are present at any particular locus on the chromosome.

trigger (trĭg'ĕr) [D. *trekker*, something pulled] **1.** Stimulus. **2.** To initiate or start with suddenness. **3.** A chemical that initiates a function or action.

trigger finger A state in which flexion or extension of a digit is arrested temporarily but is finally completed with a jerk. Any finger may be involved, but the ring or middle finger is most often affected. SEE: *illus*.

TREATMENT: A finger splint or cortisone injection may be used to treat this condition. Surgery may be required.

triggering The initiation of a mechanically generated breath after the detection of a change in airway pressure, after a change in air flow, or after an alteration in the flow wave form.

trigger point, trigger zone **1.** An area of tissue that is tender when compressed and may give rise to referred pain and tenderness. **2.** An area of the cerebral cortex that, when stimulated, produces abnormal reactions similar to those in acquired epilepsy.

active t.p. A trigger point that is painful when the involved muscle is at rest. Palpation will reproduce the patient's symptoms.

latent t.p. Trigger points that are not symptomatic when the involved muscle is at rest, but produce pain during pal-



TRIGGER FINGER

pation. Range of motion and strength may also be limited.

triglyceride (trī-glĭs'ĕr-ĭd) Any combinations of glycerol with three of five different fatty acids. These substances, triacylglycerols, are also called neutral fats. In the blood, triglycerides are combined with proteins to form lipoproteins. The liver synthesizes lipoproteins to transport fats to other tissues, where they are a source of energy. Fat in adipose tissue is stored energy. SYN: *triacylglycerol*. SEE: *hyperlipoproteinaemia*.

medium-chain t. Triglycerides with 8 to 10 carbon atoms. They are absorbed differently from long chain fatty acids (i.e., via the portal vein through the liver rather than as chylomicrons transported via the lymphatics) and therefore, have been used to treat malabsorption.

trigonal (trĭg'ŏ-nāl) [Gr. *trigonon*, a three-cornered figure] Triangular; pert. to a trigone.

trigone (trĭ'gŏn) A triangular space, esp. one at the base of the bladder, between the two openings of the ureters and the urethra. SYN: *t. of bladder*.

t. of bladder Trigone.

carotid t. The triangular area in the neck bounded by the posterior belly of the digastric muscle, the sternocleidomastoid muscle, and the midline of the neck.

olfactory t. A small triangular eminence at the root of the olfactory peduncle and anterior to the anterior perforated space of the base of the brain.

trigonectomy (trĭ'gŏn-ĕk'tŏ-mĕ) [*tr* + *ektome*, excision] Excision of the base of the bladder.

trigonid (trī-gō'nīd) The first three cusps of a lower molar tooth.

trigonitis (trīg'ō-nī'tīs) [" + *itis*, inflammation] Inflammation of the mucous membrane of the trigone of the bladder.

trigonocephalus (trīg'ō-nō-sēf'ā-lūs) A fetus exhibiting trigonocephaly.

trigonocephaly (trī-gō'nō-sēf'ā-lē) The condition of the head of the fetus being shaped like a triangle.

trihybrid (trī-hī'brīd) [Gr. *treis*, three, + L. *hybrida*, mongrel] In genetics, the offspring of a cross between two individuals differing in three unit characters.

triiodothyronine (trī'ī-ō'dō-thī'rō-nēn) ABBR: T₃. One of two forms of the principal hormone secreted by the thyroid gland. Chemically it is 3,5,3'-triiodothyronine (liothyronine). SEE: *tetraiodothyronine*; *thyroid gland*; *thyroid function test*; *thyroxine*.

trilaminar (trī-lām'i-nār) Composed of three layers.

trill (trīl) [It. *trillare*, probably imitative] A tremulous sound, esp. in vocal music.

trilogy (trīl'ō-jē) A series of three events.

trimanual (trī-mān'ū-āl) [" + *manualis*, by hand] Performed with three hands, as an obstetrical maneuver.

trimensual (trī-mēn'shū-āl) [" + *mensualis*, monthly] Occurring every 3 months.

trimester (trī-mēs'tēr) A 3-month period.

first t. The first 3 months of pregnancy.

second t. The middle 3 months of pregnancy.

third t. The third and final 3 months of pregnancy.

trimethylene (trī-mēth'ī-lēn) Cyclopropane.

trimmer (trīm'ēr) A device or instrument used to shape something by cutting off the material along its margin.

gingival margin t. A cutting instrument for shaping gingival contours. It has a curved and angled shaft for use either on the right or left sides and on the mesial or distal surfaces.

model t. A rotary flat grinder used to trim dental plaster or stone casts. Water keeps the cutting surface clean and obviates any dust problem as the casts are squared into proper study models.

trimorphous (trī-mor'fūs) [" + *morphe*, form] 1. Having three different forms as the larva, pupa, and adult of certain insects. 2. Having three different forms of crystals.

Trimox (trī'mōks") SEE: *amoxicillin*.

trinitrophenol (trī'nī-trō-fē'nōl) A yellow crystalline powder that precipitates proteins. It is used as a dye and as a reagent. SYN: *picric acid*.

trinitrotoluene (trī'nī-trō-tōl'ū-ēn) ABBR: TNT. C₇H₅N₃O₆; an explosive compound.

triolein (trī-ō'lē-ēn) Olein.

triorchid, triorchis (trī-or'kīd, -kīs) [" + *orchis*, testicle] A person who has three testicles.

triorchidism (trī-or'kīd-īzm) [" + " + *-ismos*, condition] The condition of having three testicles.

triose (trī'ōs) A monosaccharide having three carbon atoms in its molecule.

trioxalen (trī-ōk'sā-lēn) An agent used to promote repigmentation in vitiligo. Trade name is Trisoralen. SEE: *psoralen*; *vitiligo*.

trip (trīp) A slang term used to refer to hallucinations produced by various drugs, including LSD, mescaline, and some narcotics.

tripara (trīp'ā-rā) [L. *tres, tria*, three, + *parere*, to bear] A woman who has had three pregnancies that have lasted beyond 20 weeks or that have produced an infant of at least 500 g; also designated Para III.

Tripedia (trī-pēd'ē-ā) Diphtheria and tetanus toxoids and acellular pertussis vaccine adsorbed. Dtap vaccine.

tripeptide (trī-pēp'tīd) [Gr. *treis*, three, + *pepton*, digested] The product of a combination of three amino acids formed during proteolytic digestion.

triphalangia (trī'fā-lān'jē-ā) [" + *phalanx*, closely knit row] A deformity marked by the presence of three phalanges in a thumb or great toe.

triphasic (trī-fā'sīk) [" + *phasis*, phase] Consisting of three phases or stages, said of electric currents.

triphenylmethane (trī-fēn'īl-mēth'ān) A coal tar-derived chemical that is the basis of some dyes and stains.

Tripier's amputation (trīp-ē-āz') [Léon Tripier, Fr. surgeon, 1842–1891] Amputation of a foot with part of the calcaneus removed.

triple (trīp'l) [L. *tripplus*, threefold] Consisting of three; threefold; treble.

triplegia (trī-plē'jē-ā) [" + *plege*, stroke] Hemiplegia with paralysis of one limb on the other side of the body.

triple-marker test Testing for Down syndrome by assessing maternal serum levels of alpha-fetoprotein, human chorionic gonadotropin, and unconjugated estriol. The test is sometimes used as an alternative to amniocentesis.

triplet (trīp'lēt) [L. *tripplus*, threefold] 1. One of three children born of a single gestation. SEE: *Hellin's law*. 2. A combination of three of a kind.

triplex (trī'plēks, trīp'lēks) [Gr. *triploos*, triple] Triple; threefold.

triploid (trīp'loīd) Concerning triploidy.

triploidy (trīp'loī-dē) In the human, having three sets of chromosomes.

triplopia (trīp-lō'pē-ā) [" + *ope*, vision] A condition in which three images of the same object are seen.

tripod (trī'pōd) [Gr. *treis*, three, +

pous, foot] A stand having three supports, usually legs.

tripodia (trī-pō'dē-ă) Having three feet.

tripoding (trī'pōd-ing) The use of three bases for support (e.g., two legs and a cane, or one leg and two crutches).

-tripsy (trīp'sē) [Gr. *tripsis*, friction] A suffix indicating *intentional crushing of something*.

triptan A class of medications used to treat cluster and migraine headaches. Members of this class act as agonists at 5-hydroxytryptamine (5-HT) receptors in the brain. Each of them has a generic name that ends in "-triptan," including frovatriptan, naratriptan, rizatriptan, and sumatriptan.

-triptyline (trīp'til-ēn") A suffix used in pharmacology to designate a cyclic antidepressant.

triquetral (trī-kwē'trāl) [L. *triquetrus*] Triangular.

triquetrum (trī-kwē'trūm, -tră) *pl. triquetra* [L. *triquetrus*, triangular] Triquetral bone. **triquetral** (-trēl), *adj.*

triradius (trī-ră'dē-ūs) In classifying fingerprints, the point of convergence of dermal ridges coming from three directions.

trisaccharide (trī-săk'ă-rīd) A carbohydrate that on hydrolysis yields three molecules of simple sugars (monosaccharides).

trismic (trīz'mīk) Concerning trismus.

trismoid (trīz'moyd) [Gr. *trismos*, grating, + *eidōs*, form, shape] **1.** Of the nature of trismus. **2.** A form of trismus nascentium; once thought to be due to pressure on the occiput during delivery.

trismus (trīz'mūs) [Gr. *trismos*, grating] Tonic contraction of the muscles of mastication; may occur in mouth infections, encephalitis, inflammation of salivary glands, and tetanus. SYN: *lockjaw*.

trisomic (trī-sōm'īk) In genetics, an individual possessing 2n+1 chromosomes, that is, one set of chromosomes contains an extra (third) chromosome. SEE: *chromosome*; *karyotype*.

trisomy (trī-sō-mē) In genetics, having three homologous chromosomes per cell instead of two.

t. 13 A severe developmental disorder in which a third copy of chromosome 13 is present in the cell nucleus. It is often lethal in utero. Children who survive fetal development may have severe facial, scalp, and cranial deformities, and a predisposition to leukemia. SYN: *Patau syndrome*.

t. 18 A severe, usually lethal developmental disorder in which a third copy of chromosome 18 is present in the cell nucleus. Children with trisomy 18 usually do not survive beyond the first year of life. The condition is characterized by cranial, neurological, facial, cardiac, and gastrointestinal malformations. The disease can be sometimes detected

during pregnancy with ultrasound or specialized blood tests. SYN: *Edward's syndrome*.

t. 21 Down syndrome.

TRISS (trīs) *trauma injury severity score*.

tristichia (trī-stīk'ē-ă) [" + *stichos*, row] The presence of three rows of eyelashes.

trisulfate (trī-sūl'fāt) A chemical compound containing three sulfate, SO₄, groups.

trisulfide (trī-sūl'fīd) A chemical compound containing three sulfur atoms.

tritanomalopia (trī'tă-nōm'ă-lō-pē-ă) [Gr. *tritos*, third, + *anomalos*, irregular, + *ope*, sight] A color vision defect similar to tritanopia but less pronounced. SYN: *tritanomaly*.

tritanomaly (trī'tă-nōm'ă-lē) Tritanom-
alopia.

tritanopia (trī'tă-nō'pē-ă) [Gr. *tritos*, third, + *an-*, not, + *ope*, vision] Blue blindness; color blindness in which there is a defect in the perception of blue. SEE: *color blindness*.

tritiate (trīt'ē-ăt) To treat with tritium.

tritiated thymidine (trīt'ē-ăt'id thīmī-dēn", trīsh') ³H-Tdr; a radioactively labeled nucleoside used to measure T lymphocyte proliferation in vitro. Thymidine is essential for DNA synthesis; thus the amount of ³H-Tdr taken up is a general measure of the number of new lymphocytes produced.

tritium (trīt'ē-ūm, trīsh'ē-ūm) [Gr. *tritos*, third] SYMB: H³. The mass three isotope of hydrogen; triple-weight hydrogen.

triturable (trīt'ū-ră-bl) [L. *triturare*, to pulverize] Capable of being powdered.

triturate (trīt'ū-răt) **1.** To reduce to a fine powder by rubbing. **2.** A finely divided substance made by rubbing.

trituration (trīt'ū-ră'shūn) [LL. *triturare*, to pulverize] **1.** The act of reducing to a powder. **2.** A finely ground and easily mixed powder. **3.** The mixing of dental alloy particles with mercury. Trituration may be done either manually in a mortar with a pestle or with a mechanical device. The goal of trituration is to abrade the alloy particles to facilitate the uptake of mercury.



Mercury compounds are toxic; care should be taken to avoid touching mercury during trituration. Inhaling mercury vapor and mercury particles produced when removing amalgam restorations also should be avoided.

trivalence (trīv'ă-lēns) Condition of being trivalent.

trivalent (trī-vă'lēnt, trīv'ăl-ēnt) [Gr. *treis*, three, + L. *valens*, powerful] **1.** Combining with or replacing three

hydrogen atoms. **2.** Having three components (e.g., a trivalent vaccine).

trivalve (trī'vālv) Having three valves.

trivial name A nonsystematic or semisystematic name and qualifying term used to name drugs. These names do not provide assistance in determining biological action or function of the drug. Examples are aspirin, caffeine, and belladonna.

tRNA *transfer RNA*.

trocar (trō'kār) [Fr. *trois quarts*, three quarters] A sharply pointed surgical instrument contained in a cannula; used for aspiration or removal of fluids from cavities.

trochanter (trō-kān'tēr) [Gr. *trokhanter*, to run] Either of the two bony processes below the neck of the femur.

greater t. A thick process at the lateral upper end of the femur projecting upward to the union of the neck and shaft.

lesser t. A conical tuberosity on the medial and posterior surface of the upper end of the femur, at the junction of the shaft and neck.

t. roll A cushion or pillow used to hold the hip of a postoperative patient in neutral position.

third t. The gluteal tubercle of the femur when it is unusually prominent.

trochanteroplasty (trō-kān'tēr-plās'tē) Plastic surgery of the neck of the femur.

troche, troch (trō'kē, trōk') [Gr. *trokhiskos*, a small wheel] A solid, discoid, or cylindrical mass consisting chiefly of medicinal powder, sugar, and mucilage. Troches are used by placing them in the mouth and allowing them to remain until, through slow solution or disintegration, their mild medication is released. SYN: *lozenge*.

trochiscus (trō-kis'kūs) [L., Gr. *trochiskos*, a small disk] A medicated tablet or troche.

trochlea (trōk'lē-ā) *pl.* **trochleae** [Gr. *trokhileia*, system of pulleys] **1.** A structure having the function of a pulley; a ring or hook through which a tendon or muscle projects. **2.** The articular smooth surface of a bone on which glides another bone.

trochlear (trōk'lē-ār) **1.** Of the nature of a pulley. **2.** Pert. to a trochlea.

trochlearis (trōk'lē-ār'īs) [L.] The superior oblique muscle of the eye.

trochlear nerve The fourth cranial nerve, a small mixed nerve arising from the midbrain. It is both sensory and motor to the superior oblique muscle of the eye. SYN: *fourth cranial nerve*.

trochlea of the elbow A surface on the distal humerus that articulates with the ulna.

trochocardia (trō'kō-kār'dē-ā) [Gr. *trokchos*, a wheel, + *kardia*, heart] Rotary displacement of the heart on its axis.

trochocephalia, trochocephaly (trō'kō-

sē-fā'lē-ā, -sēf'ā-lē) [r' + *kephale*, head] Roundheadedness, a deformity due to premature union of the frontal and parietal bones.

trochoid (trō'koyd) [Gr. *trokchos*, a wheel, + *eidōs*, form, shape] Rotating or revolving, noting an articulation resembling a pivot or pulley. SEE: *joint, pivot*.

Troglotrematidae (trōg'lō-trē-māt'ī-dē) A family of flukes that includes *Paragonimus* (human lung fluke).

trohoc (trō'hök) [*cohort* spelled backwards] A colloquial term for a case control study, that is, a study in which an effect is identified, and epidemiologists look retrospectively to find the cause.

Troisier's node (trwā-zē-āz') [Charles E. Troisier, Fr. physician, 1844–1919] Signal node.

troland (trō'länd) A unit of visual stimulation to the retina of the eye. It is equal to the illumination received per square millimeter of the pupil from a source of 1 lux brightness.

Trombicula (trōm-bīk'ū-lā) A genus of mites belonging to the Trombiculidae. The larvae, called redbugs or chiggers, cause an irritating dermatitis and rash. Some are vectors of disease.

T. akamushi A species that transmits the causative agent of scrub typhus.

trombiculiasis (trōm-bīk'ū-lī-ā-sīs) Infestation with Trombiculidae.

Trombiculidae (trōm-bīk'ū-lī'dē) A family of mites; only the genus *Trombicula* is of medical significance.

troph- SEE: *tropho-*.

trophedema (trōf'ē-dē'mā) [Gr. *trophe*, nourishment, + *oidema*, a swelling] Permanent, localized edema of a limb or limbs. Repeated low-grade infection may also obstruct the flow of lymph.

Tropheryma whipplei (trō-fēr'ī-mā (h)wīp-ēl-ī [NL.]) A gram-positive, aerobic bacillus that grows in branching filaments. It is the cause of Whipple's disease. SEE: *Whipple's disease*.

trophic (trōf'ik) [Gr. *trophikos*] Concerned with nourishment; applied particularly to a type of efferent nerves believed to control the growth and nourishment of the parts they innervate. SEE: *autotrophic*.

trophism (trōf'izm) Nutrition.

tropho-, troph- Combining forms meaning *nourishment*.

trophoblast (trōf'é-ū-blāst'") The outermost layer of the developing blastocyst (blastodermic vesicle) of a mammal. It differentiates into two layers, the cytotrophoblast and syntrophoblast, the latter coming into intimate relationship with the uterine endometrium, with which it establishes nutrient relationships. SEE: *fertilization* for illus. **trophoblastic** (trōf'ō-blāst'ik), *adj.*

trophoblastic disease (trōf'ō-blāst'ik)

ABBR: TD. Any neoplasm of trophoblastic origin. SEE: *chorioadenoma destruens*; *choriocarcinoma*; *hydatid mole*.

trophoblastoma (trōf'ō-blās-tō'mă) [" + " + *oma*, tumor] A neoplasm due to excessive proliferation of chorionic epithelium. SYN: *chorioepithelioma*.

trophocyte (trōf'ō-sīt) A cell that nourishes (e.g., Sertoli cells of the testicle, which support developing spermatozoa). SYN: *trephocyte*.

trophoneurosis (trōf'ō-nū-rō'sīs) [" + *neuron*, nerve, + *osis*, condition] Any trophic disorder caused by defective function of the nerves concerned with nutrition of the part.

disseminated t. Thickening and hardening of the skin. SYN: *sclerema*; *scleroderma*.

facial t. Progressive facial atrophy.

muscular t. Muscular changes in connection with nervous disorders.

trophonucleus (trōf'ō-nū'klē-ūs) [" + *nucleus*, kernel] Protozoan nucleus concerned with vegetative functions in metabolism and not reproduction.

trophopathia (trōf'ō-pāth'ē-ă) [" + *pathos*, disease, suffering] 1. Any disorder of nutrition. 2. A trophic disease.

trophozoite (trōf'ō-zō'īt) [" + *zoon*, animal] A sporozoan nourished by its hosts during its growth stage.

-trophy Combining form meaning *nourishment*.

tropia (trō'pē-ă) [Gr. *trope*, turn] Deviation of the eye or eyes away from the visual axis; observed with the eyes open and uncovered. Esotropia indicates inward or nasal deviation; exotropia, outward; hypertropia, upward; hypotropia, downward. SYN: *manifest squint*; *strabismus*. SEE: *-phoria*.

-tropia Suffix meaning *turning*.

tropical (trōp'ī-kal) [Gr. *tropikos*, turning] Pert. to the tropics.

tropical immersion foot Immersion foot.

tropical lichen Acute inflammation of the sweat glands. SYN: *Miliaria*.

-tropin [Gr. *tropos*, a turn] Combining form, used as a suffix, indicating the stimulating effect of a substance, esp. a hormone, on its target organ.

tropine (trō'pīn) An alkaloid, C₈H₁₅NO, that smells like tobacco. It is present in certain plants.

tropism (trō'pīzm) [Gr. *trope*, turn, + *ismos*, condition] The involuntary response of an organism as a bending, turning, or movement toward (positive tropism) or away from (negative tropism) an external stimulus such as light, heat, gravity, or various chemical changes. SEE: *chemotropism*; *phototropism*.

tropocollagen (trō'pō-kōl'ă-jēn) [" + *collagen*] The basic molecular unit of collagen fibrils, composed of three polypeptide chains.

tropometer (trōp-ōm'ē-ter) [" + *met-*

ron, measure] 1. A device for measuring the rotation of the eyeballs. 2. An instrument for measuring torsion in long bones.

tropomyosin (trō'pō-mī'ō-sīn) An inhibitory protein in muscle fibers; it blocks myosin from forming cross-bridges with actin until shifted by troponin-calcium ion interaction.

troponin (trō'pō-nīn) An inhibitory protein in muscle fibers. The action potential at the sarcolemma causes the sarcoplasmic reticulum to release calcium ions, which bond to troponin and shift tropomyosin away from the myosin-binding sites of actin, permitting contraction. SEE: *muscle for illus*.

t. I A protein that is released into the blood by damaged heart muscle (but not skeletal muscle), and therefore is a highly sensitive and specific indicator of recent myocardial infarction.

t. T A protein, found in both skeletal and cardiac muscle, that can be detected in the blood following injury to heart muscle. Assays for it can be used as rapid tests for myocardial infarction (MI). Troponin I (which is released only by heart and not by skeletal muscles) is a more specific marker for MI than troponin T.

Trotter's syndrome (trōt'érz) A unilateral neuralgia in the mandible, tongue, and ear. The causes are mandibular nerve lesions, deafness on the same side due to eustachian tube lesions, and damage to the levator palatini muscle resulting in kinesthesia of the soft palate.

trough (trōf) A groove or channel.

arm t. A concave positioning device attached to a wheelchair armrest that positions the arm and prevents lateral leaning, thus encouraging postural alignment.

focal t. A three-dimensional area within which structures are accurately reproduced on a panoramic radiograph. Positioning the patient within the focal trough is critical to producing a panoramic radiograph that clearly reproduces oral structures.

gingival t. Gingival sulcus.

synaptic t. The depression in a muscle fiber adjacent to the axon terminal of a motor neuron in a myoneural junction.

Trousseau's sign (trōo-sōz') [Armand Trousseau, Fr. physician, 1801–1867] A muscular spasm of the hand and wrist resulting from pressure applied to nerves and vessels of the upper arm. It is indicative of latent tetany, usually as a result of hypocalcemia.

Trousseau's spots Streaking of the skin with the fingernail, seen in meningitis and other cerebral diseases.

trov weight A system of weighing gold, silver, precious metals, and jewels in

which 5760 gr equal 1 lb; 1 gr equals 0.0648 g. SEE: *Weights and Measures Appendix*.

trp tryptophan.

true (troo) [AS. *treowe*, faithful] **1.** Real, genuine, or actual. Opposite of false. **2.** Straight.

true rib Any of the seven upper ribs on each side with cartilages articulating directly with the sternum. SEE: *rib*.

truncal (trüŋg'käl) [L. *truncus*, trunk] Rel. to the trunk.

truncate (trüŋg'kät) [L. *truncare*, to cut off] **1.** Having a square end as if it were cut off; lacking an apex. **2.** To shorten by amputation of a part of the entity.

trunk (trüŋk) [L. *truncus*, trunk] **1.** The body exclusive of the head and limbs. SYN: *torso*. **2.** The main stem of a lymphatic vessel, nerve, or blood vessel.

celiac t. The trunk arising from the abdominal aorta. Most of the blood supply for the liver, stomach, spleen, gallbladder, pancreas, and duodenum comes from this trunk.

lumbosacral t. Part of the fourth and all of the fifth lumbar spinal nerves. These nerves accompany part of the first, second, and third sacral nerves to form the sciatic nerve.

pulmonary t. The great vessel that arises from the right ventricle of the heart and gives rise to the right and left pulmonary arteries to the lungs.

sympathetic t. Either of two long chains of paravertebral sympathetic ganglia, connected by sympathetic nerve fibers, and extending along the vertebral column from the skull to the coccyx.

trusion (troo'zhün) [L. *trudere*, to show] Malposition of a tooth or teeth.

truss (trüs) [ME. *trusse*, a bundle] **1.** A restraining device for pushing a hernia, esp. an inguinal or abdominal wall hernia, back in place. A truss is almost always a poor substitute for surgical therapy. **2.** To tie or bind as with a cord or string.

trust In the relations between health care providers and patients, reliance by both parties on the integrity and sincerity of each other, and the patient's confidence in the ability and good will of the care provider. Trust is essential in the relationship between patients and those who provide medical care for them.

truth serum One of several hypnotic drugs supposedly having the effect of causing a person on questioning to talk freely and without inhibition. In actual practice, serum is not given, but a short-acting barbiturate or benzodiazepine is given intravenously. The reliability of the information obtained is questionable.

trybutyrase (trī-bū'tē-rās) An enzyme present in the stomach that digests the

short-chain diglycerides of butter. SEE: *digestion*.

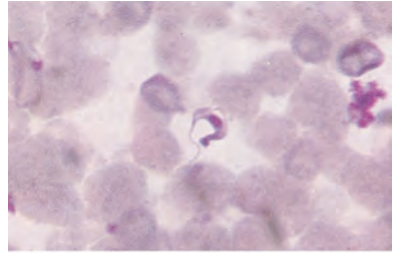
try-in (trī'in) The temporary placement of a dental restoration or device to determine its fit and comfortableness.

trypanocide (trī-pän'ü-sīd") [Gr. *trypanon*, a borer, + L. *occidere*, to kill] **1.** Destructive to trypanosomes. **2.** An agent that kills trypanosomes. SYN: *trypanosomicide*. **trypanocidal** (trīp"än-ō-sī'däl), *adj.*

trypanolysis (trīp-än-öl'ī-sīs) [" + *lysis*, dissolution] The dissolution of trypanosomes.

Trypanoplasma (trī"pän-ō-pläz'mä) [" + LL. *plasma*, form, mold] A genus of protozoan parasites resembling trypanosomes.

Trypanosoma (trī"pän-ō-sō'mä) [" + *soma*, a body] A genus of parasitic, flagellate protozoa found in the blood of many vertebrates, including humans. The protozoa are transmitted by insect vectors. The only two species relevant for disease in humans are *T. brucei* and *T. cruzi*. SEE: *illus*.



TRYPANOSOMA (center) IN BLOOD

(Orig. mag. ×1000)

T. brucei A species with three subspecies: *T. brucei brucei*, *T. brucei gambiense*, and *T. brucei rhodesiense*. The subspecies *T. brucei brucei* causes a wasting disease in cattle called nagana but does not produce disease in humans. The subspecies *T. brucei gambiense* causes African sleeping sickness in western and central Africa. The subspecies *T. brucei rhodesiense*, transmitted by the tsetse fly, causes African sleeping sickness in eastern and southern Africa.

T. cruzi The causative agent of American trypanosomiasis (Chagas' disease). It is transmitted by blood-sucking insects (triatomids) of the family Reduviidae.

trypanosome (trī'pän-ō-sōm) Any protozoan belonging to the genus *Trypanosoma*. **trypanosomal**, **trypanosomic**, *adj.*

trypanosomiasis (trī-pän"ō-sō-mī'ä-sīs) [" + *soma*, body, + *-iasis*, infection] Any of the several diseases occurring in

humans and domestic animals caused by a species of *Trypanosoma*. SEE: *sleeping sickness*.

African t. African sleeping sickness, caused by *Trypanosoma gambiense*.

American t. A disease caused by *Trypanosoma cruzi* and transmitted by the biting reduviid bug. It is characterized by fever, lymphadenopathy, hepatosplenomegaly, and facial edema. Chronic cases may be mild or asymptomatic, or may be accompanied by myocarditis, cardiomyopathy, megaesophagus, megacolon, or death. SYN: *Chagas' disease*.

ETIOLOGY: A bloodborne infection, American trypanosomiasis may be transmitted from person-to-person by needlestick injury, transfusion, organ donation, or during childbirth.

trypanosomid (trī-pān'ō-sō-mīd) A skin eruption in any disease caused by a trypanosome.

trypsin (trīp'sīn) [Gr. *tripsis*, friction] 1. A proteolytic enzyme formed in the intestine from trypsinogen. It catalyzes the hydrolysis of peptide bonds in partly digested proteins and some native proteins, the final products being amino acids and various polypeptides. SEE: *chymotrypsin*; *digestion*; *enzyme*; *pancreas*.

trypsinogen (trīp-sīn'ō-jěn) [ʹ + *gennan*, to produce] The proenzyme or inactive form of trypsin that is released by the pancreas and converted to trypsin in the intestine.

tryptamine (trīp'tā-mēn") [*trypt(ophan)* + ""] A metabolite of tryptophan that acts as an enhancer of impulse propagation in the brain.

tryptase (trīp'tās) An enzyme (specifically a neutral proteinase) produced by mast cells that mediates many allergic phenomena, including anaphylaxis, asthma, conjunctivitis, and rhinitis.

tryptic (trīp'tik) Rel. to trypsin.

tryptolysis (trīp-tōl'i-sīs) [ʹ + *lysis*, dissolution] The hydrolysis of proteins or their derivatives by trypsin.

tryptone (trīp'tōn) A peptide produced by the action of trypsin on a protein.

tryptophan (trīp'tō-fān) ABBR: trp. $C_{11}H_{12}N_2O_2$; An essential amino acid present in high concentrations in animal and fish protein. It is necessary for normal growth and development. Tryptophan is a precursor of serotonin and niacin. In high doses, it may cause nausea, vomiting, and sedation.

tryptophanase (trīp'tō-fān-ās) An enzyme that catalyzes the splitting of tryptophan into indole, pyruvic acid, and ammonia.

tryptophanuria (trīp'tō-fā-nū'rē-ā) [*tryptophan* + Gr. *ouron*, urine] The presence of excessive levels of tryptophan in the urine.

T/S *thyroid:serum* (thyroid to serum iodine ratio).

TS *test solution*; *triple strength*.

T score A measure of bone density in which the mass of a patient's bones are compared with the bone mass of premenopausal women. A T score that is more than 1 standard deviation (SD) from the norm identifies bone that is osteopenic. A T score that is more than 2.5 SDs identifies osteoporosis.

TSD *target skin distance*.

tsetse fly (tsēt'sē) [S. African] One of several species of blood-sucking flies belonging to the genus *Glossina*, order Diptera, confined to Africa south of the Sahara Desert. It is an important transmitter of trypanosomes, the causative agents of African sleeping sicknesses in humans, and nagana and other diseases of cattle and game animals. SEE: *Trypanosoma*; *trypanosomiasis*.

TSH *thyroid-stimulating hormone*. SEE: *under hormone*.

TSH-RF *thyroid-stimulating hormone releasing factor*.

tsp *teaspoon*.

TSTA *tumor-specific transplantation antigen*.

tsutsugamushi disease (soot'soo-gā-moo'shī) [Japanese, dangerous bug] Scrub typhus.

TT *transit time* of blood through heart and lungs.

TTE (tē'tē'é') *transthoracic echocardiography*.

T-tube A device inserted into the common bile duct, most often following cholecystectomy and bile duct exploration. It has two main purposes: to allow drainage of bile, and to introduce media, when needed for postoperative biliary imaging (T-tube cholangiogram). On occasion (e.g., in distal duct obstruction due to cancer or when cholangioenterostomy is performed), the tube may be left in for a sustained period.

T.U. *toxic unit*; *toxin unit*.

tub (tüb) [ME. *tubbe*] 1. A receptacle for bathing. 2. The use of a cold bath. 3. To treat by using a cold bath.

tuba (too'bā) [L. *tubus*, tube] Tube.

tubal (tū'bāl) [L. *tubus*, tube] Pert. to a tube, esp. the fallopian tube.

tubal factor Any abnormality of the fallopian tubes that produces infertility.

tubal reflux The movement of endometrial, tubal, or uterine tissue into the peritoneal cavity.

tubatorision (tū'bā-tor'shūn) [ʹ + *torsio*, a twisting] The twisting of an oviduct.

tubba, tubboe (tüb'ā, -ō) Yaws that attacks the palms and soles.

tube (tüb) [L. *tubus*, a tube] A long, hollow, cylindrical structure. Particular tubes are listed under the first word. SEE: e.g., *endotracheal tube*; *fallopian tube*; *test tube*.

tubectomy (too-bĕk'tō-mē) Surgical removal of all or part of a tube, esp. the fallopian tube.

tube feeding Enteral tube feeding.

tubeless For a test, accomplished without an endoscope.

tubeless test (tūb'lĕs) A colloquial term for a test of gastrointestinal (GI) function that does not rely on the use of an endoscope. Thus there is no direct entrance into or visualization of the GI tract.

tuber (tū'bĕr) *pl.* **tubera** [L., a swelling] A swelling or enlargement.

t. cinereum A part of the base of the hypothalamus bordered by the mammillary bodies, the optic chiasma, and on either side by the optic tract. It is connected by the infundibulum with the posterior lobe of the pituitary.

tubercle (tū'bĕr-kl) [L. *tuberculum*, a little swelling] **1.** A small rounded elevation or eminence on a bone. **2.** A small nodule, esp. a circumscribed solid elevation of the skin or mucous membrane. **3.** The characteristic lesion resulting from infection by tubercle bacilli. It consists typically of three parts: a central giant cell, a midzone of epithelioid cells, and a peripheral zone of nonspecific structure. SEE: *tuberculosis*.

adductor t. The tubercle of the femur to which is attached the tendon of the adductor magnus.

articular t. The tubercle at the base of the zygomatic arch to which is attached the temporomandibular ligament; it is lateral to the articular eminence of the glenoid fossa, with which it is often confused.

deltoid t. A tubercle on the anterior border of the acromion to which the deltoid muscle attaches.

dental t. A small elevation of variable size on the crown of a tooth representing a thickened area of enamel or an accessory cusp.

fibrous t. A fibrous tissue that has replaced a previously inflamed area.

genital t. The embryonic structure that becomes the clitoris or the penis.

Gerdy's t. SEE: *Gerdy's tubercle*.

lacrima t. A small tubercle between the lacrimal crest and the frontal process of the maxilla.

mental t. A small tubercle on either side of the midline of the chin.

miliary t. A small tubercle resembling a millet seed, caused by tuberculosis. SEE: *tuberculosis, miliary*.

pubic t. A small projection at the lateral end of the crest of the pubic bone. The inguinal ligament attaches to it.

supraglenoid t. A rough, elevated area just above the glenoid cavity of the scapula. The long head of the biceps muscle of the arm attaches to this tubercle.

t. of the upper lip The prominence of the upper part of the vermilion border that represents the distal termination of the philtrum of the upper lip.

tuberculation (tū-bĕr'kū-lā'shŭn) The formation of tubercles.

tuberculid, tuberculide (tū-bĕr'kū-līd, -līd) [L. *tuberculum*, a little swelling] A tuberculous cutaneous eruption caused by toxins of tuberculosis. SYN: *tuberculoderma*.

follicular t. A cutaneous eruption characterized by the presence of groups of follicular lesions, esp. on the trunk.

papulonecrotic t. A form of tuberculid characterized by symmetrically distributed bluish papules, esp. on the extremities. These undergo central necrosis and, on healing, leave deep scars.

tuberculin (tū-bĕr'kū-līn) [L. *tuberculum*, a little swelling] A solution of purified protein derivative of *Mycobacterium tuberculosis*. It is injected intradermally to determine whether a person has been infected with tuberculosis. SYN: *purified protein derivative; tuberculoprotein*. SEE: *tuberculin skin test*.

tuberculin skin test A test to determine the presence of infection with tuberculosis (TB). A solution containing purified protein derivative of TB is injected intradermally into the arm, and the response is read 48 to 72 hr later. A 5-mm induration is considered a positive reaction if the patient has been in close contact with persons infected with TB, is infected with human immunodeficiency virus (HIV), has risk factors for HIV, or has a chest x-ray examination that suggests a history of pulmonary TB. A 10-mm induration is considered positive in people born in nations where TB is endemic, in nursing home patients, in patients with other serious illnesses, and in people of low socioeconomic status. In all other people, a 15-mm induration is considered a positive result. A positive response indicates infection but does not distinguish between active infection and that which has been controlled by the immune system or drugs.

tuberculin tine test A tuberculin test performed with a special disposable instrument that contains multiple sharp points or prongs for piercing the skin. The tines penetrate the skin and introduce the tuberculin applied to them. The test is read in 48 to 72 hr. The tine test has largely been replaced by testing with an intradermal injection of purified protein derivative. SYN: *tine test*.

tuberculitis (tū'bĕr-kū-lī'tīs) Inflammation of a tubercle.

tuberculocele (tū-bĕr'kū-lō-sĕl') [t + *cele*, tumor] Tuberculosis of the testis.

tuberculoceal (tū-bĕr'kū-lō-sī'dāl) Any-

thing that destroys *Mycobacterium tuberculosis*.

tuberculoderma (tū-bēr'kū-lō-dēr'mă) [" + Gr. *derma*, skin] Tuberculid.

tuberculo-fibrosis (tū-bēr'kū-lō-fi-brō'sis) [" + " + Gr. *osis*, condition]

1. Chronic pulmonary inflammation with formation of fibrous tissue. 2. Interstitial pneumonia.

tuberculo-oid (tū-bēr'kū-loyd) [L. *tuberculum*, a little swelling, + Gr. *eidōs*, form, shape] Resembling tuberculosis or a tubercle.

tuberculoma (tū-bēr'kū-lō'mă) [" + Gr. *oma*, tumor] 1. A tuberculous abscess. 2. Any tuberculous neoplasm.

tuberculosis (tū-bēr'kū-lō'sis) [" + Gr. *osis*, condition] ABBR: TB. An infectious disease caused by the tubercle bacillus, *Mycobacterium tuberculosis*, and characterized pathologically by inflammatory infiltration, formation of tubercles, caseation, necrosis, abscesses, fibrosis, and calcification. It most commonly affects the respiratory system, but other parts of the body such as the gastrointestinal and genitourinary tracts, bones, joints, nervous system, lymph nodes, and skin may also become infected. Fish, amphibians, birds, and mammals (esp. cattle) are subject to the disease. Three types of the tubercle bacillus exist: human, bovine, and avian. Humans may become infected by any of the three types, but in the U.S. the human type predominates. Infection usually is acquired from contact with an infected person or an infected cow or through drinking contaminated milk. In the U.S., about 10 to 15 million persons have been infected with tuberculosis. In 2005 about 14,000 active cases were reported. Worldwide, about 2 billion people harbor the infection; about 9 million have active disease, and an estimated 1.7 million die from TB each year. The percentage of drug-resistant TB cases varies internationally.

Tuberculosis usually affects the lungs, but the disease may spread to other organs, including the gastrointestinal and genitourinary tracts, bones, joints, nervous system, lymph nodes, and skin. Macrophages surround the bacilli in an attempt to engulf them but cannot, producing granulomas with a soft, cheesy (caseous) core. From this state, lesions may heal by fibrosis and calcification and the disease may exist in an arrested or inactive stage. Depending on the person's immune status and other factors, the disease may become reactivated as pulmonary TB or disseminated infection. Reactivation or exacerbation of the disease or reinfection gives rise to the chronic progressive form.

The incidence of TB declined steadily from the 1950s to about 1990, when the

acquired immunodeficiency syndrome (AIDS) epidemic, an increase in the homeless population, an increase in immigrants from endemic areas, and a decrease in public surveillance caused a resurgence of the disease. Populations at greatest risk for TB include patients with human immunodeficiency virus (HIV), Asian and other refugees, the urban homeless, alcoholics and other substance abusers, persons incarcerated in prisons and psychiatric facilities, nursing home residents, patients taking immunosuppressive drugs, and people with chronic respiratory disorders, diabetes mellitus, renal failure, or malnutrition. People from these risk groups should be assessed for TB if they develop pneumonia; all health care workers should be tested annually.

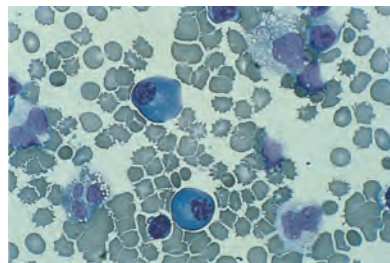
Currently the only vaccine available to prevent tuberculosis is the BCG vaccine. It has somewhat limited effectiveness but is used in regions of the world where TB is endemic. SEE: *illness*; *immunological therapy*; *tuberculin skin test*; *vaccine*, BCG; *Nursing Diagnoses Appendix*.

INCUBATION PERIOD: Approx. 4 to 12 weeks elapse between the time of infection and the time a demonstrable primary lesion or positive tuberculin skin test (TST) occurs.

SYMPTOMS: Pulmonary TB produces chronic cough, sputum, fevers, sweats, and weight loss. TB may also cause neurological disease (meningitis), bone infections, urinary bleeding, and other symptoms if it spreads to other organs.

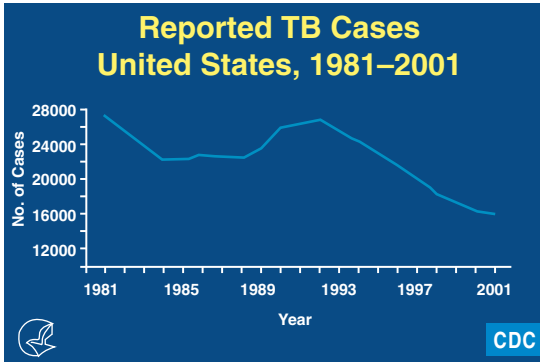
DIAGNOSIS: Tests used to diagnose latent infection with tuberculosis include a positive tuberculin skin test (TST) or a blood assay. A presumptive diagnosis of active disease is made by finding acid-fast bacilli in stained smears from sputum or other body fluids. The diagnosis is confirmed by isolating *M. tuberculosis* in cultures or rapid nucleic acid test probes.

TREATMENT: Regimens for TB have been developed for patients, depending on their HIV status, the prevalence of



TUBERCULOSIS

Pleural fluid with plasma cells (×1000)



TUBERCULOSIS

Reported tuberculosis cases in the United States, 1981-2001

multidrug resistant disease in the community, drug allergies, and drug interactions. Uncomplicated TB in the non-HIV infected patient is typically treated with a four-drug regimen for 6 months. Regimens evolve: prescribers should consult published guidelines for current standards of care. Commonly used drugs include isoniazid (INH), rifampin (RIF), ethambutol (EMB), pyrazinamide, ciprofloxacin, and rifapentin. Medications are typically given in combinations rather than alone. A long course of therapy may be prescribed for patients co-infected with HIV/AIDS or for patients with drug-resistant bacilli. Multiply drug-resistant TB (MDR-TB) is tuberculosis resistant to either INH or RIF. Extensively drug-resistant TB (XDR-TB) is resistant to INH or RIF, any fluoroquinolone (e.g., ciprofloxacin), and at least one parenteral TB drug. Both MDR-TB and XDR-TB have very high mortality rates. SEE: *multidrug resistant t.*



All patients with HIV should be tested for TB, and all patients with TB should be tested for HIV, because about one fourth of all patients with one disease will be infected with the other.

PATIENT CARE: All patients suspected of or confirmed to have TB should be placed in airborne isolation until they are no longer infectious. Health care professionals and visitors should wear particulate respirators when in the patient's room. Patients should be taught to cough and sneeze into tissues, and to dispose of secretions in a lined bag taped to the side of the bed or in a covered disposal. The patient should wear a mask when outside the isolation room for any reason. Patients should be observed for complications

such as hemoptysis, bone or back pain, and bloody urine. The patient and family or other support persons should be taught about the importance of regular follow-up visits, of following and completing the treatment regimen exactly as prescribed, of adverse effects to be reported, and of signs and symptoms of recurring TB. Persons who have been exposed to an infected patient should receive a TB test; chest x-rays and prophylactic INH also may be prescribed.

avian t. Tuberculosis of birds caused by *Mycobacterium avium*.

bovine t. Tuberculosis of cattle caused by *Mycobacterium bovis*.

endogenous t. Tuberculosis that reactivates after a previous infection.

exogenous t. Tuberculosis originating from a source outside the body.

hematogenous t. The spread of tuberculosis from a primary site to another site via the bloodstream.

latent t. Infection with tuberculosis without active lung disease. It is detected by tuberculin skin testing.

miliary t. Tuberculosis that spreads throughout the body via the bloodstream. It may be fatal.

multidrug resistant t. ABBR: MDR-TB. *Mycobacterium tuberculosis* bacilli that are resistant to therapy with at least two standard antitubercular drugs (esp. isoniazid and rifampin, the two drugs that have formed the cornerstone of therapy for tuberculosis). MDR-TB must be treated with at least three antitubercular drugs to which the organism is presumed or proven to be sensitive. About 3% of cases of TB are drug-resistant.

open t. Tuberculosis in which the tubercle bacilli are present in bodily secretions that leave the body.

tuberculostatic (tū-bēr'kū-lō-stāt'ik) Arresting the growth of the tubercle bacillus.

tuberculous (tū-bēr'kū-lōt'ik) Concerning tuberculosis.

tuberculous (tū-bēr'kū-lūs) [*L. tuberculum*, a little swelling] Relating to or affected with tuberculosis, or conditions marked by infiltration of a specific tubercle, as opposed to the term *tubercular*, referring to a nonspecific tubercle.

tuberculum (tū-bēr'kū-lūm) *pl.* **tubercula** [*L. tuberculum*, a little swelling] A small knot or nodule; a tubercle.

tuberosity (tū'bēr-ō'sīs) A condition in which nodules develop; a nonspecific term that indicates no specific disease process.

tuberosity (tū-bēr-ōs'ī-tē) [*L. tuberositas*, tuberosity] **1.** An elevated round process of a bone. **2.** A tubercle or nodule.

ischial t. A palpable prominence on the inferior margin of the ischium that supports a person's weight when sitting.

maxillary t. A rounded eminence on the posteroinferior surface of the maxilla that enlarges with the development and eruption of the third molar. It articulates medially with the palatine bone and laterally with the lateral pterygoid process of the sphenoid. It forms the anterior surface of the pterygopalatine fossa, including a groove for the passage of the maxillary nerve, which is anesthetized in this region for a maxillary or second-division block.

radial t. A bump on the inside (medial) surface of the proximal end of the radius bone onto which the distal tendon of the biceps brachii muscle attaches

tuberos (tū'bēr-ūs) Pert. to tubers.

tubo- Combining form meaning *tube*.

tuboabdominal (tū'bō-ō-dōm'in-āl) [*L. tubus*, tube, + *abdominalis*, pert. to the abdomen] Pert. to the fallopian tubes and the abdomen.

tubo-ovarian (tū'bō-ō-vā-rē-ān) [" + *LL. ovarium*, ovary] Pert. to the fallopian tube and the ovary.

tubo-ovariotomy (tū'bō-ō-vā-rē-ōt'ō-mē) [" + *LL. ovarium*, ovary, + *Gr. tome*, incision] Excision of ovaries and oviducts.

tubo-ovariitis (tū'bō-ō-vā-rī'tīs) [" + " + *Gr. itis*, inflammation] Inflammation of the ovary and fallopian tube.

tuboperitoneal (tū'bō-pēr-ī-tō-nē'āl) [" + *Gr. peritoneion*, peritoneum] Rel. to the fallopian tube and peritoneum.

tuboplasty (tū'bō-plās'tē) **1.** Plastic repair of any tube. **2.** Plastic repair of a fallopian tube or tubes in an attempt to restore patency so that fertilization of the ovum may occur. SYN: *salpingoplasty*.

tuboplasty, transcervical balloon Catheterization and dilation of the fallopian tubes, a method of treating infertility in women whose fallopian tubes are occluded proximally. A balloon catheter is

inserted through the cervical os of the uterus and into the fallopian tube to the point of occlusion in the tube. The balloon is then expanded by filling it with sterile saline. This dilation of the tube may restore tubal patency. SEE: *catheter*, *balloon*; *infertility*.

tuborrhoea (tū-bor-rē'ā) [" + *Gr. rhoia*, flow] Discharge from the eustachian tube.

tubotorsion (tū'bō-tor'shūn) The act of twisting a tube.

tubouterine (tū'bō-ū'tēr-in) [" + *uterinus*, pert. to the uterus] Rel. to the fallopian tube and the uterus.

tubular (tū'bū-lār) [*L. tubularis*, like a tube] Rel. to or having the form of a tube or tubule.

tubule (tū'būl) [*L. tubulus*, a tubule] A small tube or canal.

Bellini's t. SEE: *Bellini's tubule*.

collecting t. One of the small ducts that receive urine from several renal tubules, which join together to provide a passage for the urine to larger straight collecting tubules (papillary ducts of Bellini) that open into the pelvis of the kidney. SEE: *kidney* for *illus*.

convoluted t. of the kidney The proximal and distal convoluted tubules of the nephron that, with the loop of Henle and collecting tubule, form the renal tubule through which the glomerular filtrate passes before entering the renal pelvis. SEE: *kidney* for *illus*; *nephron*.

dentinal t. One of the very small canals in the dentin. These extend from the pulp cavity of the tooth to the enamel and are occupied by odontoblastic processes and occasional nerve filaments.

galactophorous t. Lactiferous *t.*

Henle's t. Henle's loop.

lactiferous t. One of the lactiferous ducts of the breast. It provides a channel for the milk formed in the lobes of the breast to pass to the nipple.

mesonephric t. One of the embryonic tubules that in the female gives rise only to vestigial structures but in the male gives rise to the efferent ducts of the testes.

renal t. The part of a nephron through which renal filtrate from the renal corpuscle flows and is changed to urine by reabsorption and secretion. The parts, in order, are the proximal convoluted tubule, the loop of Henle, the distal convoluted tubule, and collecting tubule. SEE: *kidney* for *illus*; *nephron*.

seminiferous t. One of the very small channels of the testes in which spermatozoa develop and through which they leave the testes. These tubules may be either straight or convoluted.

transverse t. ABBR: T-tubule. An invagination of the cell membrane of a muscle fiber that carries the action po-

tential to the interior of the cell and the innermost sarcomeres.

tubulin (tū'bü-līn) A protein present in the microtubules of cells.

tubulization (too'bü-lī-zā'shūn) A method of repairing severed nerves in which the nerve ends are placed in a tube of absorbable material.

tubuloalveolar (too'bü-lō-äl-vē'ō-lār) Consisting of tubes and alveoli, as in a tubuloalveolar salivary gland.

tubulocyst (too'bü-lō-sist) The cystic dilatation of a functionless duct or canal.

tubulodermoid (tū'bü-lō-dēr'moyd) [" + Gr. *derma*, skin, + *eidōs*, form, shape] A dermoid tumor caused by the persistent embryonic tubular structure.

tubulorrhesis (too'bü-lō-rēk'sīs) [" + *rhēsis*, a breaking] Focal ruptures of renal tubules.

tubus (too'būs) [L.] Tube.

tuft (tüft) A small clump, cluster, or coiled mass.

enamel t. An abnormal structure formed in the development of enamel, consisting of poorly calcified twisted rods.

tugging A dragging or pulling.

tracheal t. SEE: *tracheal tugging*.

tui na (twā nah, too'ī) [Chinese Mandarin, lit., "poke-pinch"] A traditional method of Chinese massage in which the body is lifted, squeezed, and pushed to improve circulation and enhance disease resistance.

tularemia (tū-lār-ē'mē-ā) [*Tulare*, part of California where disease was first discovered] An acute plague-like infectious disease caused by *Francisella tularensis*. It is transmitted to humans by the bite of an infected tick or other bloodsucking insect, by direct contact with infected animals, by eating inadequately cooked meat, or by drinking water that contains the organism. Streptomycin or gentamicin is effective in treating the disease. SYN: *deer fly fever*; *rabbit fever*.

SYMPTOMS: The incubation period is 2 to 10 days; symptoms include headache, fever, chills, vomiting, and body aches.

tumbu fly (tūm'boo, toom') A species of fly belonging to the genus *Cordylobia* in Africa and the genus *Dermatobia* in tropical America. Their larvae develop in the skin of wild domesticated animals, and humans are frequently attacked.

tumefacient (tū-mē-fā'shēnt) [L. *tumefaciens*, producing swelling] Producing or tending to produce swelling; swollen.

tumefaction (tū'mē-fāk'shūn) [L. *tumefactio*, a swelling] Intumescence.

tumentia (tū-mēn'shē-ā) [L.] Swelling.
vasomotor t. Irregular swellings in the lower extremities associated with vasomotor disturbances.

tumescence (tū-mēs'ēns) 1. A condition of being swollen or tumid. 2. A swelling.

tumor (tū'mor) [L. *tumor*, a swelling] 1. A swelling or enlargement; one of the four classic signs of inflammation. 2. An abnormal mass. Growth or proliferation that is independent of neighboring tissues is a hallmark of all tumors, benign and malignant. SYN: *neoplasm*. SEE: *cancer*.

brain t. An inexact term to describe any intracranial mass—neoplastic, cystic, inflammatory (abscess), or syphilitic. SEE: *illus*; *Nursing Diagnoses Appendix*.



BRAIN TUMOR

Neoplastic brain tumors may be benign or malignant, and malignant brain lesions may be primary or secondary; resulting from metastatic spread of other cancers. Primary malignant brain tumors make up from 10% to 30% of adult cancers, about 20% in children, although any of these tumors may occur at any age. Incidence in children is usually greatest prior to age 12, with astrocytomas, medulloblastomas, ependymomas, and brain stem gliomas the most common types. In adults the most common types of tumors are gliomas and meningiomas, usually occurring supratentorially. Other malignant tumor types are oligodendrogliomas and acoustic neuromas (Schwannomas). Most malignant brain tumors are metastatic, with 20% to 40% of patients with cancer developing brain metastasis. The cause of primary brain cancers is unknown; however, one known environmental risk is exposure to ionizing radiation. Cell phone use has been implicated in acoustic neuromas. Central nervous system changes occur as the lesions invade and destroy tissue, and because they compress the brain, cranial nerves, and cerebral blood vessels, causing cerebral edema and in-

creases in intracranial pressure (ICP). Most clinical signs are due to the increased ICP, but signs and symptoms may vary due to the type of tumor, its location, and the degree and speed of invasion. Usually symptom onset is insidious, with brain tumors frequently misdiagnosed.

DIAGNOSIS: The patient is evaluated for neurological deficits, such as headache, mental activity changes, behavioral changes, weakness, sensory losses, or disturbances of vision, speech, gait, or balance. The patient is monitored for seizure activity and for increased intracranial pressure (ICP). Diagnostic tools include skull x-rays, brain scan, CT scan, MRI, cerebral angiography, and EEG. Lumbar puncture demonstrates increased pressure and protein levels, decreased glucose levels, and (sometimes) tumor cells in the cerebrospinal fluid (CSF). Definitive diagnosis is by tissue biopsy performed by stereotactic surgery.

TREATMENT: Treatment includes excision of the tumor if it is resectable, and size reduction if it is not respectable; relieving cerebral edema, reducing ICP, and managing other symptoms; and preventing further neurologic damage. The treatment modality(ies) is/are determined by the tumor's histology, radiosensitivity, and location. Functional MRI can map the brain function surrounding a tumor to help design a surgical approach that removes the tumor while avoiding damage to areas critical for normal functioning. Surgery, radiation, chemotherapy, and/or decompression for increased ICP with diuretics, corticosteroids, or sometimes ventricular or ventroperitoneal CSF shunting. Focused and computerized robotic radiation methods such as the Gamma Knife and Cyberknife permit delivery of more radiation to the tumor and less to surrounding normal tissue.

PATIENT CARE: Radiation therapy can cause inflammation, so the patient is monitored for increasing ICP. If radiation is to be used following surgery, it will be delayed until the surgical wound has healed. However, even after local healing occurs, radiation can break down the wound, so the incisional area must be assessed for infection and sinus formation. Chemotherapy for malignant brain tumors includes use of nitrosoureas (BCNU, CCNU, procarbazine) to help break down the blood-brain barrier allowing entrance of other chemotherapy agents. Antiemetics are provided prior to and following chemotherapy administration to minimize nausea and prevent vomiting, and the patient is assessed over the following weeks for bone marrow suppression and advised to report any signs of infection or bleeding

and avoid contact with crowds and individuals with respiratory infections. The oral agent temozolomide (Temodar) crosses the blood-brain barrier and is usually well tolerated by the patient. Intrathecal or intra-arterial administration helps to increase drug actions. Convection-enhanced delivery systems infuse the antitumor agent directly into the brain, bypassing the blood-brain barrier to pump drugs slowly through 2 to 4 implanted catheters into the area where a tumor was removed to attach to and kill remaining tumor cells and to shrink a tumor prior to surgery. A disc-shaped drug wafer can be implanted during surgery to deliver chemotherapy directly to the tumor. MRI spectroscopy reveals the physiology of treated tumors to differentiate dead tissue from an actively growing tumor. The patient must be monitored closely for changes in neurologic status and increases in ICP. A patent airway must be maintained and respiratory changes monitored. Patient safety must be ensured. Temperature also is monitored closely. Steroids and osmotic diuretics are administered as prescribed. Fluid intake may be restricted to 1500 ml/24 hr. Fluid and electrolyte balance is monitored to prevent dehydration. Stress ulcers may occur, so the patient is assessed for abdominal distention, pain, vomiting, and tarry stools. Stools also are tested for occult blood. Antacids and anti-histamine-2 agents are administered as prescribed.

Postcraniotomy surgery, all general patient care concerns apply. General neurologic status and ICP remain the assessment priorities. Patient positioning post surgery depends on the procedure: after supratentorial craniotomy, the head of the bed should be elevated 30° and the patient positioned on the side to promote venous drainage, reduce cerebral edema, allow drainage of secretions and prevent aspiration. After infratentorial craniotomy, the patient should be kept flat for 48 hr but log-rolled side to side every 2 hr to minimize immobility complications. Because brain tumors and their treatment frequently result in residual disabling neurologic deficits, a rehabilitation program should be started early. Physical and occupational therapists help the patient to maintain independence and quality of life, providing aids for self-care and mobility as needed. If the patient is aphasic or develops dysphagia, a speech pathologist is consulted. Depression is common, and psychological consultation for behavioral or drug therapies may be helpful.

Emotional support is provided to the patient and family as they struggle to cope with treatments, disabilities, changes in lifestyle, and end-of-life is-

sues. The patient and family are referred to resource and support services (e.g., social service, home health care agencies, the American Cancer Society, and other such voluntary agencies).

Brenner's t. SEE: *Brenner's tumor*.

brown t. A benign fibrotic mass found within the bone of patients with unchecked hyperparathyroidism. The tumor appears brown on gross examination because it contains blood and by-products of the metabolism of hemoglobin, such as hemosiderin.

Buschke-Loewenstein t. A giant condyloma acuminata, typically found on the genitals or anus, caused by infection with papilloma virus. In men, it is almost always found under the foreskin (it is rarely reported in circumcised men). It may transform into a verrucous carcinoma and cause deep local tissue invasion.

calcifying epithelial odontogenic t. Pindborg tumor.

carotid body t. A benign tumor of the carotid body.

collision t. 1. A malignant growth made up of two or more different cell types occurring simultaneously in the same location. 2. A cancerous growth made up of two or more malignancies that have metastasized toward each other.

connective tissue t. Any tumor of connective tissue such as fibroma, lipoma, chondroma, or sarcoma.

desmoid t. A tumor of fibrous connective tissue. SYN: *desmoma*.

erectile t. A tumor composed of erectile tissue.

false t. An enlargement due to hemorrhage into tissue or extravasation of fluid into a space, rather than cancer.

fibroid t. Uterine leiomyoma.

follicular t. A sebaceous cyst.

functioning t. A tumor that is able to synthesize the same product as the normal tissues from which it arises, esp. an endocrine or nonendocrine tumor that produces hormones.

giant cell t. 1. A malignant or benign bone tumor that probably arises from connective tissue of the bone marrow. Histologically, it contains a vascular reticulum of stromal cells and multinucleated giant cells. 2. A yellow giant cell tumor of a tendon sheath. 3. Epulis. 4. Chondroblastoma.

giant cell t. of bone A benign or malignant tumor of bone in which the cells are multinucleated and surrounded by cellular spindle cell stroma.

giant cell t. of tendon sheath A localized nodular tenosynovitis.

granulosa cell t. An estrin-secreting neoplasm of the granulosa cells of the ovary.

granulosa-theca cell t. An estrogen-

secreting tumor of the ovary made up of either granulosa or theca cells.

Gubler's t. SEE: *Gubler's tumor*.

heterologous t. A tumor in which the tissue differs from that in which it is growing.

homologous t. A tumor in which the tissue resembles that in which it is growing.

Hürthle cell t. SEE: *Hürthle cell tumor*.

islet cell t. A tumor of the islets of Langerhans of the pancreas.

Klatskin t. SEE: under *Klatskin*.

Krukenberg's t. SEE: *Krukenberg's tumor*.

lipoid cell t. of the ovary A masculinizing tumor of the ovary. It may be malignant.

mast cell t. A benign nodular accumulation of mast cells.

melanotic neuroectodermal t. A benign tumor of the jaw, occurring mostly during the first year of life.

mesenchymal mixed t. A tumor composed of tissue that resembles mesenchymal cells.

milk t. A colloquial term for a galactocele. SYN: *galactocele* (1). SEE: *aked breast*.

Pancoast's t. SEE: *Pancoast's tumor*.

papillary t. Neoplasm composed of or resembling enlarged papillae. SEE: *papilloma*.

phantom t. 1. An apparent tumor due to muscular contractions or flatus that resolves on re-examination of the patient. 2. A mass that resembles a tumor in only one view of a chest x-ray film. On other views it either disappears or appears to be an encapsulated fluid collection.

primary t. In a patient with metastatic cancer, the lesion assumed to be the source of the metastases.

Recklinghausen t. SEE: under *Recklinghausen, Friedrich D. von*.

sand t. Psammoma.

teratoid t. Tumor of embryonic remains from all germinal layers. SEE: *teratoma*.

turban t. Multiple cutaneous cylindromata that cover the scalp like a turban.

vascular t. Hemangioma.

Warthin's t. SEE: *Warthin's tumor*.

Wilms' t. SEE: *Wilms' tumor*.

tumor ablation Destruction of tumor masses that cannot otherwise be treated by means of the application of chemicals, heat, or other forms of energy.

tumoraffin (tū'mor-āf-in) [L. *tumor*, a swelling, + *affinis*, related] Having an affinity for tumor cells.

tumor angiogenesis factor ABBR: TAF. A protein present in animal and human cancer tissue that in experimental studies appears to be essential to growth of

the cancer. The substance is thought to act by stimulating the growth of new blood capillaries that supply the tumor with nutrients and remove waste products.

tumor burden The sum of cancer cells present in the body.

tumoricidal (too'mor-i-sī'dāl) Lethal to neoplastic cells.

tumorigenesis (too'mor-i-jěn'ě-sīs) The production of tumors.

tumorigenic (tū'mor-i-jěn'ik) [t' + Gr. *genesis*, generation, birth] Forming and developing tumors.

tumorlet A small benign growth (e.g., in the lungs or uterus), usually made of smooth muscle cells.

tumor marker A substance whose presence in blood serves as a biochemical indicator for the possible presence of a malignancy. Examples of markers and the malignancies they may indicate are carcinoembryonic antigen for cancers of the colon, lung, breast, and ovary; beta subunit of chorionic gonadotropin for trophoblastic and testicular tumors; alpha-fetoprotein for testicular teratocarcinoma and primary hepatocellular carcinoma; and prostate-specific antigen for prostate cancer.

tumor necrosis factor ABBR: TNF. A polypeptide protein mediator or cytokine released primarily by macrophages and T lymphocytes; it helps regulate the metabolism of fats, the immune response, and some hematopoietic functions. There are two factors: alpha (TNF α), also called cachectin, produced by macrophages, and beta (TNF β), called lymphotoxin, which is produced by activated CD4+ T cells. The functions of TNF are very similar to those of interleukin-1. A monoclonal antibody against TNF α , infliximab, is used to treat rheumatoid arthritis and other diseases in which TNF α causes inflammatory damage. Antagonists to tumor necrosis factor (such as adalimumab, etanercept, and infliximab) are used to treat diseases impacted by TNF, such as rheumatoid arthritis or Crohn disease. SEE: *cytokine*; *interleukin-1*.

tumor necrosis factor receptor-associated periodic syndrome ABBR: TRAPS. A rare, dominantly inherited autoinflammatory disorder marked by bouts of abdominal pain, fever, myalgia and arthralgia, pleurisy, and conjunctivitis. It is caused by a mutation in a cell receptor for tumor necrosis factor. SEE: *tumor necrosis factor*.

tumorous (too'mor-ūs) Tumor-like.

Tunga (tūng'ā) A genus of fleas of the family Hectopsyllidae.

T. penetrans A small flea common in tropical regions. It infests humans, cats, dogs, rats, pigs, and other animals and produces a severe local inflammation frequently liable to secondary infection.

tungiasis (tūng-gī'ā-sīs) Infestation of the skin with *Tunga penetrans*.

tungsten (tūng'stēn) SYMB: W (for wolfram). A metallic element; atomic weight, 183.85; atomic number, 74.

tungsten carbide A hard alloy composed of tungsten and carbon. It is used as a metallic alternative to diamond in the manufacture of histological knives and surgical instruments.

tunic (tū'nik) [L. *tunica*, a sheath] A layer of tissue.

tunica (tū'nī-kā) *pl.* **tunicae** [L. *tunica*, a sheath] A layer, or coat, of tissue.

t. adventitia The outermost fibroelastic layer of a blood vessel or other tubular structure. SYN: *tunica externa*.

t. albuginea The white fibrous outer layer of the eye, testicle, ovary, or spleen.

t. externa Tunica adventitia.

t. interna SEE: *t. intima*.

t. intima The lining of a blood vessel composed of an epithelial (endothelium) layer and the basement membrane, a subendothelial connective tissue layer, and usually an internal elastic lamina. SYN: *Bichat's tunic*.

t. media The middle layer in the wall of a blood vessel composed of circular or spiraling smooth muscle and some elastic fibers.

t. mucosa The mucous membrane lining of various structures.

t. muscularis The smooth muscle layer in the walls of organs such as the bronchi, intestines, and blood vessels.

t. serosa The membrane lining the walls of the closed body cavities and folded over the organs in those cavities, forming the outermost layer of the wall of these organs. The body cavities are the thoracic, abdominal, and pericardial cavities.

t. vaginalis The serous membrane surrounding the front and sides of the testicle. It is the thin, flattened remnant of a pouch of peritoneum pulled into the scrotum by the testis as it descends during fetal development.

t. vasculosa Any vascular layer.

tuning fork A device that vibrates at a specific frequency when it is struck, e.g., 128, 256, or 512 Hz. It is used in simple tests of hearing and vibration sense.

tunnel (tūn'ēl) A narrow channel or passageway.

carpal t. The canal in the wrist bounded by osteofibrous material through which the flexor tendons and the median nerve pass. SYN: *flexor tunnel*.

flexor t. Carpal t.

tarsal t. The osteofibrous canal in the tarsal area bounded by the flexor retinaculum and tarsal bones. The posterior tibial vessels, tibial nerve, and flexor tendons pass through this tunnel.

Tuohy needle (too'hē ne-dil) A needle

with a curved point that is used in epidural anesthesia. The curve reduces the possibility that the point of the needle and the anesthetic will enter the dura mater.

TUR *tolerable upper limit; transurethral resection* (of the prostate).

turbid (tŭr'bid) [L. *turba*, a tumult] Cloudy; not clear. SEE: *turbidity*.

turbidimeter (tŭr-bī-dīm'ē-ter) [L. *turbidus*, disturbed, + Gr. *metron*, measure] A device for estimating the degree of turbidity of a fluid.

turbidimetry (tŭr-bī-dīm'ē-trē) [ʹ + Gr. *metron*, measure] Estimation of the turbidity of a liquid.

turbidity (tŭr-bīd'ī-tē) [L. *turbiditas*, turbidity] Opacity due to the suspension of flaky or granular particles in a normally clear liquid.

turbinal (tŭr'bi-nāl) [L. *turbinalis*, fr. *turbo*, a child's top] Shaped like an inverted cone.

turbinate (tŭr'bī-n-āt) [L. *turbinalis*, fr. *turbo*, a child's top] **1.** Shaped like an inverted cone. **2.** A concha; a scroll-like bone on the lateral wall of the nasal cavity.

turbinated (tŭr'bī-nā'tēd) [L. *turbo*, whirl] Top-shaped or cone-shaped. SEE: *concha*.

turbineotomy (tŭr-bin'ēk'tō-mē) [ʹ + Gr. *ektome*, excision] Excision of a turbinated bone.

turbinoplasty (tŭr-bin'ō-plās-tē) Reduction of the size of the nasal turbinates. The surgery is used occasionally in the management of snoring and airflow disorders.

turbinotome (tŭr-bin'ō-tōm) [ʹ + Gr. *tome*, incision] An instrument for excision of a turbinated bone.

turbinotomy (tŭr-bin'ōt'ō-mē) [ʹ + Gr. *tome*, incision] Surgical incision of a turbinated bone.

Turcot syndrome (tēr-kōz') An autosomal recessive syndrome in which multiple colonic polyps are found in conjunction with malignant brain tumors.

turgescence (tŭr-jēs'ēns) [L. *turgescens*, swelling] Swelling or enlargement of a part.

turgescient (tŭr-jēs'ēnt) [L. *turgescens*, swelling] Swollen; inflated.

turgid (tŭr'jīd) [L. *turgidus*, swollen] Swollen; bloated.

turgometer (tŭr-gōm'ē-tēr) [L. *turgor*, swelling, + Gr. *metron*, measure] A device for measuring turgescence.

turgor (tŭr'gor) [L., a swelling] **1.** Normal tension in a cell. **2.** Distention, swelling.

skin t. The resistance of the skin to deformation, esp. to being grasped between the fingers. In a healthy person, when the skin on the back of the hand is grasped between the fingers and released, it returns to its normal appearance either immediately or relatively

slowly. The state of hydration of the skin can determine which of these reactions occurs, but age is the most important factor. As a person ages, the skin returns much more slowly to its normal position after having been pinched between the fingers. The skin over the forehead or sternum may be used when assessing turgor in elderly persons.

t. vitalis Normal fullness of the capillaries and blood vessels.

turista (tŭ-rēs'tā) [Sp.] One of the many colloquial names applied to travelers' diarrhea, esp. that which occurs in tourists in Mexico.

Turner's syndrome (tŭr'ēnrz) [Henry Hubert Turner, U.S. physician, 1892–1970] Gonadal dysgenesis.

turning [AS. *turnian*, to turn] **1.** Rotating to change position. **2.** Version (2).

turpentine (tŭr'pēn-tīn) [Gr. *terebinthos*, turpentine tree] Oleoresin obtained from various species of pine trees. It is a mixture of terpenes and other hydrocarbons obtained from pine trees. It was once used in liniments and counterirritants.

TURP syndrome (tŭrp sīn'drōm") Hypopnatremia that results from bladder irrigation with dilute fluids during and after transurethral resection of the prostate gland.

turunda (tŭ-rŭn'dā) [L.] **1.** A surgical tent, drain, or tampon. **2.** A suppository.

tussiculation (tŭ-sīk'ū-lā'shŭn) A short, dry cough.

tussis (tŭs'is) [L.] Cough.

tussive (tŭs'iv) [L. *tussis*, cough] Relating to a cough. SYN: *tussal*.

tutamén (tŭ-tā'mēn) *pl.* **tutamína** [L.] Any tissue that has a protective action.

twelfth cranial nerve The hypoglossal nerve, motor to muscles of the tongue. SEE: *cranial nerve; hypoglossal nerve*.

Twelve-Item Short-Form Health Survey ABBR: SF-12. An abbreviated version of the Medical Outcomes Study 36-Item Short-Form Health survey. SEE: *Medical Outcomes Study 36-Item Short-Form Health Survey*.

twig The final branch of a structure such as a nerve or vessel.

twilight sleep A state of partial anesthesia and hypococonsciousness in which pain sense has been greatly reduced by the injection of morphine and scopolamine. The patient responds to pain, but afterward the memory of the pain is dulled or effaced. Although once in common use as a method of analgesia for childbirth and minor surgery, twilight sleep has been replaced by more effective contemporary approaches to pain control.

twilight state A state in which consciousness is disordered, and autonomic dysfunction or dissociation may occur. This may occur in epilepsy.

twin (twín) [AS. *twinn*] One of two children developed within the uterus at the same time from the same pregnancy. **SEE: illus.; fetus papyraceus; Hellin's law.**

INCIDENCE: Per 1000 live births, incidence rates for American whites are 1:88; for American blacks, 1:70. Generally, the rates are higher in blacks and East Indians and lower in Northern Europeans.

RESEARCH ON TWINS: Identical and fraternal twins provide a unique resource for investigating the origin and natural history of various diseases and discovering the different rates of environmental and hereditary factors in causing physical and mental disorders. Esp. important are studies that follow the course of identical twins separated shortly after birth and who then grew up in different social, economic, educational, and environmental conditions. In other research, the second-born twin was found to be at increased risk for an unfavorable outcome (e.g., need for intubation and resuscitation, lower 5-min Apgar score), even when delivered by cesarean section.

biovular t. Dizygotic twins.

conjoined t. Twins that are united. **SEE: Siamese twins.**

dizygotic t. Twins from two separate, fertilized ova. **SYN: biovular twins; fraternal twins.**

enzygotic t. Monozygotic twins.

fraternal t. Dizygotic twins.

growth discordant t. The unequal growth of twins while in utero. The

smaller twin is at greater risk of having congenital anomalies than is the normal birth-weight twin. **SYN: unequal twins.**

identical t. Monozygotic twins.

impacted t. Twins so entwined in utero as to prevent normal delivery.

interlocked t. Twins in which the neck of one becomes interlocked with the head of the other, making vaginal delivery impossible.

monozygotic t. Twins that develop from a single fertilized ovum. Monozygotic twins have the same genetic makeup and, consequently, are of the same gender and strikingly resemble each other physically, physiologically, and mentally. They develop within a common chorionic sac and have a common placenta. Each usually develops its own amnion and umbilical cord. Such twins may result from development of two inner cell masses within a blastocyst, development of two embryonic axes on a single blastoderm, or the division of a single embryonic axis into two centers. **SYN: enzygotic twins; identical twins; true twins; uniovular twins.**

parasitic t. The smaller of a pair of conjoined twins, when there is a marked disparity in size.

true t. Monozygotic twins.

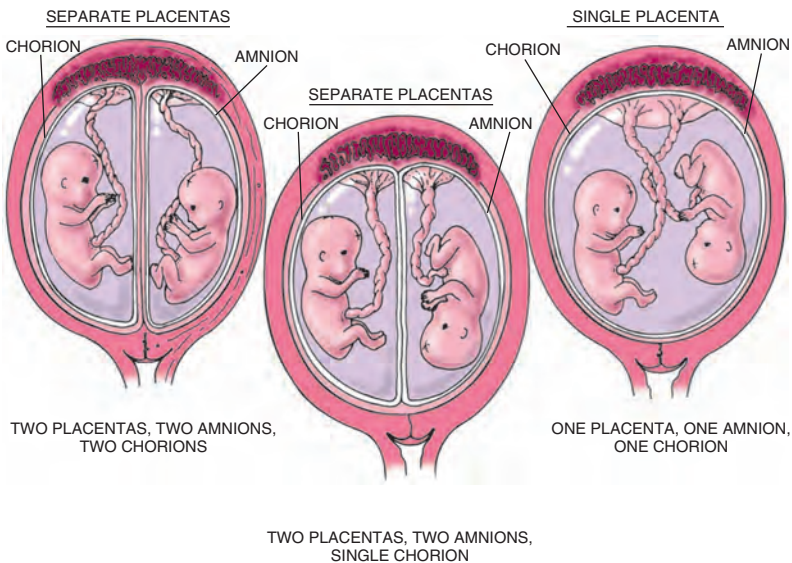
unequal t. Growth discordant twins.

uniovular t. Monozygotic twins.

vanishing t. Fetal resorption in multiple gestation. **SEE: gestation, multiple.**

twinge (twínj) [AS. *twengan*, to pinch] A sudden keen pain.

twinning (twín'ing) Delivery of or producing twins.



POSSIBLE RELATIONS OF FETAL MEMBRANES IN TWIN PREGNANCIES

twinning of teeth A dental anomaly in which two teeth are joined together
SYN: *geminism*.

Twinrix (twin'rīks) Hepatitis A inactivated, and hepatitis B (recombinant) vaccine.

twitch (twich) [ME. *twicchen*] **1.** A single contraction of one muscle fiber in response to one nerve impulse. SEE: *myokymia*. **2.** To jerk convulsively.

twitching (twich'ing) Repeated contractions of portions of muscles.

two-point discrimination test A test of cutaneous sensation involving determination of the ability of the patient to detect that the skin is being touched by two pointed objects at once. It is used to determine the degree of sensory loss following disease or trauma affecting the nervous system.

two-way interactive television ABBR: IATV. A means of telecommunication used to link two geographically distant sites via real-time audio and visual media.

TXA₂ *thromboxane A₂*

tylectomy (tī-lēk'tō-mē) [Gr. *tylos*, knot, + *ektome*, excision] Lumpectomy.

tylion (tīl'ē-ōn) [Gr. *tyleion*, knot] The point at the middle of the anterior edge of the optic groove.

tyloma (tī-lō'mā) [Gr. *tylos*, knot, + *oma*, tumor] A callus.

tylosis (tī-lō'sīs) [ʹ + *osis*, condition] Formation of a callus.

tymp- SEE: *tympano-*.

tympal (tīm'pān-āl) [Gr. *tympanon*, drum] Tympanic (1).

tympalectomy (tīm'pān-ēk'tō-mē) [ʹ + *ektome*, excision] Excision of the tympanic membrane.

tympanic (tīm'pān'īk) [Gr. *tympanon*, drum] **1.** Pert. to the tympanum. SYN: *tympal*. **2.** Resonant. SYN: *tympanic* (2).

tympanitic (tīm'pān-īt'īk) **1.** Pert. to or characterized by tympanites. **2.** Tympanic (2).

tympanitis (tīm'pān-ī'tīs) [Gr. *tympanon*, drum, + *itis*, inflammation] Otitis media.

tympano-, tympan-, myringo-, myring- [Gr. *tympanon*, drum] Combining forms meaning *tympanic membrane* or *eardrum*.

tympanocentesis (tīm'pā-nō-sēn-tē'sīs) Drainage of fluid from the middle ear by using a small gauge needle to puncture the tympanic membrane. The fluid is cultured to determine the identity of any microbes that may be present.

tympano-eustachian (tīm'pā-nō-ū-stā'kē-än) Concerning the tympanic cavity and eustachian tube.

tympanography (tīm'pā-nōg'rā-fē) Radiographic examination of the eustachian tubes and middle ear after introduction of a contrast medium.

tympano-hyal (tīm'pā-nō-hī'āl) Concerning the tympanic cavity and hyoid arch.

tympanomalleal (tīm'pā-nō-māl'ē-āl) Concerning the tympanic membrane and malleus.

tympanomandibular (tīm'pā-nō-mān-dīb'ū-lār) Concerning the middle ear and mandible.

tympanomastoiditis (tīm'pān-ō-mās'toy-dī'tīs) [ʹ + *mastos*, breast, + *eidōs*, form, shape, + *itis*, inflammation] Inflammation of the tympanum and mastoid cells.

tympanometry (tīm'pā-nōm'ē-trē) A procedure for objective evaluation of the mobility and patency of the eardrum and for detection of middle-ear disorders and patency of the eustachian tubes. SEE: *audiometry*.

tympanoplasty (tīm'pān-ō-plās'tē) [ʹ + *plassein*, to form] Any one of several surgical procedures designed either to cure a chronic inflammatory process in the middle ear or to restore function to the sound-transmitting mechanism of the middle ear. SEE: *Nursing Diagnoses Appendix*.

tympanosclerosis (tīm'pā-nō-sklē-rō'sīs) Infiltration by hard fibrous tissue around the ossicles of the middle ear.

tympanosis (tīm'pā-nō'sīs) [ʹ + *osis*, condition] Tympanites.

tympanostomy (tīm'pā-nōs'tō-mē) Myringotomy.

tympanostomy tube A tube placed through the tympanic membrane of the ear to allow ventilation of the middle ear as part of the treatment of otitis media with effusion. SYN: *grommet*. SEE: *otitis media with effusion*.

tympanotemporal (tīm'pā-nō-tēm'pō-rāl) Concerning the tympanic cavity and area of the temporal bone.

tympanotomy (tīm'pān-ōt'ō-mē) [ʹ + *tome*, incision] Incision of the tympanic membrane. SYN: *myringotomy*.

tympaneous (tīm'pān-ūs) [Gr. *tympanon*, a drum] Marked by abdominal distention with gas.

tympanium (tīm'pān-ūm) [L.; Gr. *tympanon*] The middle ear or tympanic cavity. SYN: *cauvum tympani*; *eardrum*. SEE: *ear*, *middle*.

tympany (tīm'pā-nē) **1.** Abdominal distention with gas. **2.** Tympanic resonance on percussion. It is a clear hollow note like that of a drum. It indicates a pathological condition of the lung or of a cavity.

Tyndall effect [John Tyndall, Irish natural philosopher, 1820–1893] The scattering of light as it passes through a colloid filled with particles. It is seen, for example, in a slit lamp examination of an eye with an inflamed anterior chamber.

type (tīp) [Gr. *typos*, mark] The general character of a person, disease, or substance.

asthenic t. Having a thin, flat, long-chested body build with poor muscular development.

athletic t. Having broad shoulders, a deep chest, flat abdomen, thick neck, and powerful muscular development.

blood t. Blood group.

body t. Classification of the human body according to muscle and fat distribution. SEE: *ectomorph*; *endomorph*; *mesomorph*; *somatotype*.

phage t. Distinguishing subgroups of bacteria by the type of bacteriophage associated with that specific bacterium.

pyknic t. Having a rounded body, large chest, thick shoulders, broad head, thick neck, and usually short stature.

TYPHIM VI (tī'fīm) Typhoid VI polysaccharide vaccine.

typhlectasis (tif'lĕk'tā-sīs) [Gr. *typhlon*, cecum, + *ektasis*, dilatation] Cecal distention.

typhlectomy (tif'lĕk'tō-mē) [+ *ektome*, excision] Excision of the cecum. SYN: *cecectomy*.

typhlenteritis (tif'lĕn-tĕr-ī'tīs) [+ *enteron*, intestine, + *itis*, inflammation] Inflammation of the cecum. SYN: *typhlitis*.

typhlitis (tif-lī'tīs) [+ *itis*, inflammation] Inflammation of the cecum. It is often encountered during profound chemotherapy-induced neutropenia. SYN: *typhlenteritis*.

typhlocicliditis (tif'lō-dīk-lī-dī'tīs) [+ *diklis*, door, + *itis*, inflammation] Inflammation of the ileocecal valve.

typhloenteritis (tif'lō-ĕn-tĕr-ī'tīs) [+ *enteron*, intestine, + *itis*, inflammation] Cecitis.

typhlon (tif'lōn) [Gr.] Cecum.

typho- [Gr. *typhos*, fever] Combining form meaning *fever*, *typhoid*.

typhoid (tī'fōyd) [Gr. *typhos*, fever, + *eidōs*, form, shape] Resembling typhus.

typhoidal (tī-fōy'dāl) Resembling typhoid.

typhoid fever A severe infectious disease marked by fever and septicemia. The Centers for Disease Control and Prevention (CDC) report 400 cases per year in the U.S., mostly among travelers. An estimated 21 million cases of typhoid fever and 200,000 deaths occur worldwide, as it is endemic in areas where sanitation is poor. SYN: *enteric fever*. SEE: *vaccine*, *typhoid*.

SYMPTOMS: Gastrointestinal symptoms may develop within 1 hr of *Salmonella typhi* ingestion, but usually subside prior to the onset of the typhoid fever symptoms. The disease is marked initially by a gradually increasing fever up to 104°F (40°C), anorexia, malaise, myalgia, headache, and slow pulse for about 7 days, followed by remittent fever up to 104°F (40°C) that usually occurs in the evening, a flat, rose-colored, fleeting rash (primarily on the abdo-

men), chills and diaphoresis, increasing abdominal pain and distention, diarrhea or constipation, generalized lymphadenopathy, abdominal pain, anorexia, weakness, and exhaustion, cough and moist crackles, a tender abdomen with enlarged spleen, and delirium as the bacteria spread through the bloodstream. About 14 days after the infection begins, persistent fever and increased weakness and fatigue are present but usually subside by about 21 days into the illness, although relapses may occur. Internal bleeding usually develops as the result of gastrointestinal ulcers, abscesses, and intestinal perforation, and this may lead to hypovolemic shock. Damage to the liver and spleen is commonly seen. In approx. 10% of patients, typhoid fever is complicated by pneumonia, thrombophlebitis, osteomyelitis, septic arthritis, cerebral thrombosis, meningitis, myocarditis, or acute circulatory failure, which account for the majority of deaths.

ETIOLOGY: Typhoid fever is caused by *S. typhi*, gram-negative bacteria that enter the gastrointestinal (GI) tract, infect the biliary tract, invade the lymphoid tissues and walls of the ileum and colon seeding the intestinal tract with millions of bacilli, and then gain access to the bloodstream. The disease is most commonly transmitted via the fecal-oral route through water or food contaminated by human feces, but it can be spread also by vomitus and oral secretions during the acute stage. Unlike *S. enteritidis*, it lives only in humans. A small percentage of persons become carriers after recovering from infection.

DIFFERENTIAL DIAGNOSIS: Paratyphoid, pneumonia, dysentery, meningitis, smallpox, and appendicitis are among the differential diagnoses. Diagnostic points of value are the presence of rose spots, splenomegaly, leukopenia, the Widal serological test result, blood culture, and examination of feces for the presence of the causative organism. The best means of providing bacterial confirmation is through bone marrow culture. This method is successful even after patients have received antibiotics. SEE: *paratyphoid fever*.

TREATMENT: The disease is treated with ciprofloxacin or other antimicrobials based on organism sensitivity testing for 10 days. Dexamethasone is administered a few minutes before antibiotics are given in patients with shock or decreased levels of consciousness. Travelers should be aware that the most important safeguards are good food handling and water sanitation. The CDC recommends vaccination with typhoid vaccine, which is available in a live attenuated oral and parenteral form and intramuscular form for people

traveling to developing countries in Africa, Asia, the Indian subcontinent, Central and South America, and the Caribbean. The oral vaccine is taken in multiple doses, with adults and children over age 6 prescribed one capsule every other day for a total of four doses. Each dose should be taken 1 hr prior to a meal with cool water, and the capsules kept in the refrigerator. The one-dose parenteral vaccine may be used as an option for children aged 2 to 6 years, immunocompromised individuals, and people who might not adhere to the oral regimen. Vaccination protects only 50% to 80% of those vaccinated, so all travelers should protect themselves from enteric illness by following the adage, "boil it, cook it, peel it, or forget it." The vaccinations should be completed at least 1 week before the trip; boosters are required every 2 to 5 yrs, depending on the type of vaccine. The vaccinations should not be given to patients who are taking mefloquine for malaria prophylaxis. SEE: *Standard Precautions Appendix*.

PATIENT CARE: Contact precautions (handwashing, patient handwashing, glove and gown for disposal of feces or fecally contaminated objects) are followed until three consecutive stool cultures at 24-hr intervals are negative. Drugs are administered as prescribed, and the patient is observed for signs and symptoms of complications, such as bacteremia, intestinal bleeding, and bowel perforation. During the acute phase, the temperature is monitored, but antipyretics usually are not administered as these mask the fever and can result in hypothermia; tepid sponge baths are also provided to promote vasodilation without shivering. The incontinent patient is cleansed, and high fluid intake by mouth or IV is encouraged to maintain adequate hydration. Fluid and electrolyte balance is monitored. Adequate nutrition is maintained. Rest is encouraged and oral hygiene and skin care provided. Abscesses may need to be drained surgically. The caregiver explains the importance of follow-up care and examination to ensure that the patient is not a carrier.

If the patient's stool cultures are still positive at the time of discharge, he or she should be careful to use good hand hygiene, especially after defecating, and should avoid preparation of uncooked foods (e.g., salads) for family members. Individuals who retain positive cultures (asymptomatic carrier state) should not be employed as food handlers. All cases of typhoid fever should be reported to the state health department. While traveling in endemic areas, people should be careful to buy bottled water, or boil tap water for 5 min prior to

drinking, cooking, or brushing teeth with it; avoid ice in beverages and desserts, and treats containing ice; eat well-cooked foods that are still steaming hot; avoid raw food, including garden or fruit salads; peel all fresh fruits prior to eating them by first vigorously washing the hands, then washing the outside of the fruit, then peeling it; and avoid food sold by street vendors.

typholysin (tī-fōl'ī-sīn) [" + *lysis*, dissolution] A lysin destructive to typhoid bacilli.

typhomalarial (tī'fō-mā-lā'rē-āl) [" + *It. malaria*, bad air] Having symptoms of both typhoid and malarial fevers.

typhous (tī'fūs) [Gr. *typhos*, fever] Pert. to typhus fever.

typhus (tī'fūs) [Gr. *typhos*, fever] Any of several rickettsial infections transmitted to people by lice, fleas, or mites. The causative microbe invades the lining of blood vessels and smooth muscle cells, causing widespread vasculitis. The most common causes of typhus are *Rickettsia prowazekii*, *R. typhi*, and *Orientia tsutsugamushi*. *R. prowazekii* causes the epidemic typhus found in crowded conditions with poor sanitation, such as refugee camps. SEE: *Nursing Diagnoses Appendix*.

SYMPTOMS: The disease may be mild, marked only by a flat rash that spreads out from the trunk and petechiae or by flulike symptoms. In more severe cases, patients have fever, skin necrosis, and gangrene on the tips of the fingers, toes, earlobes, and penis as a result of thrombus formation in blood vessels; focal inflammation and thrombosis in organs throughout the body, including the brain, produce organ-specific signs. Rickettsial infections are diagnosed by identifying the organism through immunofluorescent staining.

TREATMENT: Typhus is treated with doxycycline for 7 days. SEE: *Standard and Universal Precautions Appendix*.

COMPLICATIONS: Bronchopneumonia occurs more frequently than lobar pneumonia. Hypostatic congestion of the lungs, nephritis, and parotid abscess also may occur.

PROGNOSIS: The prognosis is variable. Mortality may be quite high in epidemic typhus and almost nonexistent in murine typhus. Broad-spectrum antibiotics are life-saving if given early enough.

endemic t. Murine t.

epidemic t. An infectious disease caused by *Rickettsia prowazekii* and transmitted by the human body louse (*Pediculus humanus corporis*).

flea-borne t. Murine t.

louse-borne t. *Rickettsia prowazekii*.

Mexican t. A louse-borne epidemic

typhus present in certain portions of Mexico.

mite-borne t. Scrub typhus.

murine t. A disease caused by *Rickettsia typhi* and occurring in nature as a mild infection of rats and transmitted from rat to rat by the rat-louse or flea. Humans may acquire it by being bitten by infected rat fleas or ingesting food contaminated by rat urine or flea feces. SYN: *endemic typhus*; *flea-borne typhus*.

recrudescence t. The recurrence of epidemic typhus after the initial attack.

typical (tip'ī-kāl) [Gr. *typikos*, pert. to type] Having the characteristics of, pert. to, or conforming to a type, condition, or group.

typing (tip'ing) Identification of type (e.g., of a specimen of genetic material through the detection of its specific nucleic acid sequences).

bacteriophage t. Determination of the subdivision of a bacterial species by a type-specific bacteriophage.

blood t. The method used to determine the antigens present on a person's blood cells.

tissue t. The determination of the human leukocyte antigens present on a cell or organ. Tissue typing is an essential element in matching proposed donors and recipients for organ transplantation. SEE: *transplantation*.

typo- Combining form meaning *type*.

typodont (tī'pō-dōnt) A replica of the natural dentition and alveolar mucosa used in training dental professionals.

typoscope (tī'pō-skōp) [Gr. *typos*, type, + *skopein*, to examine] A reading aid device for patients with amblyopia or cataract.

typus (tī'pūs) [L.] Type.

tyr tyrosine.

tyramine (tī'rā-mēn) An intermediate product in the conversion of tyrosine to epinephrine. Tyramine is found in most cheeses and in beer, broad bean pods, yeast, wine, and chicken liver.



When persons taking certain monoamine oxidase inhibitors eat these foods, they may experience severe hypertension, headache, palpitation, neck pain, and perhaps intracranial hemorrhage.

tyrannism (tīr'ān-izm) [Gr. *tyrannos*, tyrant, + *-ismos*, condition] Sadism.

tyrogenous (tī-rōj'ēn-ūs) [Gr. *tyros*, cheese, + *gennan*, to produce] Having origin in or produced by cheese.

Tyroglyphus (tī-rōg'li-fūs) [Gr. *tyros*, cheese, + *glyphein*, to carve] A genus

of sarcoptoid mites commonly known as cheese mites. They infest cheese and dried vegetable food products and occasionally infest humans, causing pruritus. This genus includes species that cause grocer's itch, vanillism, and copra itch.

tyroid (tī'royd) [ʹ + *eidōs*, form, shape] Caseous; cheesy.

tyromatosis (tī'rō-mā-tō'sīs) [ʹ + *oma*, tumor, + *osis*, condition] Caseation (1).

tyrosinase (tī-rō-sīn-ās) [Gr. *tyros*, cheese] An enzyme that acts on tyrosine to produce melanin. It is used as a tumor marker for malignant melanoma, since almost all melanomas express the enzyme.

tyrosine (tī'rō-sīn) ABBR: tyr. C₉H₁₁NO₃; an amino acid present in many proteins, esp. casein. It serves as a precursor of epinephrine, thyroxine, and melanin. Two vitamins (ascorbic acid and folic acid) are essential for its metabolism.

tyrosinemia (tī'rō-sī-nē'mē-ā) A disease of tyrosine metabolism caused by a deficiency of the enzyme tyrosine aminotransferase. In addition to an accumulation of tyrosine in the blood, mental retardation, keratitis, and dermatitis are present. Treatment consists of controlling phenylalanine and tyrosine intake.

tyrosinosis (tī'rō-sīn-ō'sīs) [ʹ + *osis*, condition] A condition resulting from faulty metabolism of tyrosine, whereby its oxidation products appear in the urine.

tyrosinuria (tī'rō-sīn-ū'rē-ā) [ʹ + *ouron*, urine] Tyrosine in the urine.

tyrosis (tī-rō'sīs) [ʹ + *osis*, condition] 1. Curdling of milk. 2. Vomiting of cheesy substance by infants. 3. Caseation (1).

tyrosyluria (tī'rō-sīl-ū'rē-ā) Increased tyrosine-derived products in the urine.

tyvelose (tī'vel-ōs) A carbohydrate, 3-6-dideoxy-D-mannose, derived from certain strains of *Salmonella* and *Trichinella*.

Tzanck cell A degenerated cell from the keratin layer of the skin, disconnected from adjacent cells. It is seen in pemphigus.

Tzanck test (tsānk) [Arnault Tzanck, Russ. dermatologist in Paris, 1886–1954] The examination of cells scraped from the lower surface of a vesicle to determine the underlying disease (e.g., infection with a herpesvirus).

tzetze (sēt'sē) Tsetse fly.



U 1. *unit*. 2. Symbol for the element uranium.

²³⁵**U** Isotope of uranium with atomic weight 235.

U-100 *one hundred units of insulin per ml of solution*. A common concentration of commercially available insulins.

UAO *upper airway obstruction*.

ubiquinol (ū-bīk'wī-nōl) Coenzyme QH₂, the reduced form of ubiquinone.

ubiquinone (ū-bīk'wī-nōn) [*ubiquitous* + coenzyme *quinone*] Coenzyme Q, a lipid-soluble quinone present in virtually all cells. It collects reducing equivalents during intracellular respiration and is converted to its reduced form, ubiquinol, while involved in this process. This substance is widely used in Europe and Asia as a health food supplement for congestive heart failure and other disorders, although confirmation of its effectiveness is uncertain.

ubiquitin (ū-bīk'wī-tin) An intracellular protein that helps to destroy misfolded proteins. It is also important in promoting the functions of proteins that make up ribosomes.

UBT *urea breath test*.

UDP *uridine diphosphate*.

Uhthoff's sign (oot'hōfs) [Wilhelm Uhthoff, Ger. ophthalmologist, 1853–1927] The transient decrease in vision, double vision, or nystagmus when body temperature rises; seen in patients with multiple sclerosis.

ulcer (ūl'sēr) [L. *ulcus*, ulcer] A lesion of the skin or mucous membranes marked by inflammation, necrosis, and sloughing of damaged tissues. A wide variety of insults may produce ulcers, including trauma, caustic chemicals, intense heat or cold, arterial or venous stasis, cancers, drugs (e.g., nonsteroidal anti-inflammatory drugs), and infectious agents such as *Herpes simplex* or *Helicobacter pylori*.

amputating u. An ulcer that destroys tissue to the bone by encircling the part.

aphthous u. A lesion of the skin or mucous membranes (e.g., of the oral mucosa, conjunctiva, or genitalia). It is usually less than 0.5 cm in diameter. If it persists for longer than 2 weeks, it should be biopsied to rule out cancer. SYN: *aphthous stomatitis*; *canker sore*.

ETIOLOGY: Aphthous ulcers are found in stomatitis, Behçet's syndrome, Crohn's disease, acquired immunodeficiency syndrome (AIDS), and some cancers.

TREATMENT: For patients with oral ulcers, application of a topical anes-

thetic or a protective paste provides symptomatic relief and makes it possible to eat without pain.

chronic leg u. Any longstanding, slowly healing ulcer of a lower extremity, esp. one caused by occlusive disease of the arteries or veins or by varicose veins.

Curling's u. SEE: *Curling's ulcer*.

Cushing's u. SEE: under *Cushing, Harvey*.

denture u. An ulcer of the oral mucosa caused by irritation from wearing dentures.

PATIENT CARE: To prevent irritation and ulceration of the mucus membranes of the mouth, denture wearers should clean dentures daily and remove them while sleeping. Poorly fitting dentures should be reconstructed or padded by a dentist.

duodenal u. An open sore on the mucosa of the first portion of the duodenum, most often the result of infection with *Helicobacter pylori*. It is the most common form of peptic ulcer. SEE: *peptic ulcer*.

follicular u. A tiny ulcer originating in a lymph follicle and affecting a mucous membrane.

fungus u. 1. An ulcer in which the granulations protrude above the edges of the wound and bleed easily. 2. An ulcer caused by a fungus.

gastric u. An ulcer of the gastric mucosa.

ETIOLOGY: Common causes are nonsteroidal anti-inflammatory drugs, use of alcohol or tobacco, and infection with *Helicobacter pylori*. SEE: *peptic ulcer*.

Hunner's u. Interstitial cystitis.

indolent u. A nearly painless ulcer usually found on the leg, characterized by an indurated, elevated edge and a nongranulating base.

Meleney's u. SEE: under *Meleney*.

peptic u. SEE: *peptic ulcer*.

perforating u. An ulcer that erodes through an organ (e.g., the stomach or duodenum).

phagedenic u. Tropical ulcer.

pressure u. Pressure sore.

rodent u. A basal cell carcinoma that has caused extensive local invasion and tissue destruction, esp. on the face. The usual sites are the outer angle of the eye, near the side and on the tip of the nose, and at the hairline. SYN: *Jacob's ulcer*.

serpiginous u. A creeping ulcer that heals in one part and extends to another.

shield u. A corneal ulcer found in