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T  symbol, tesla; tera-: (absolute) temperature; thymine.

T₁ in magnetic resonance imaging, a time constant; called also spin-lattice relaxation time.

T₁ recovery the time taken for about 63% of the original longitudinal tissue magnetization to recover after termination of an external radiofrequency pulse. T₁ recovery times vary between different soft tissues. Fat has a shorter T₁, central nervous system tissue is intermediate, and water, such as cerebrospinal fluid, has a longer T₁ recovery time. By using a short time delay between energizing radiofrequency pulses, these tissue differences can be emphasized.

T₁ weighted scans achieved by setting shorter time intervals between excitation radiofrequency pulses and shorter time to receive the peak echo signal than for other MRI scans. Fat is bright, soft tissues are displayed as various shades of gray, and cerebrospinal fluid, tendons, ligaments, air, and cortical bone are dark. Gadolinium contrast agent is bright.

T₁ in magnetic resonance imaging, a time constant for the transverse tissue magnetization to decrease to 37% of the prior level. Called also spin-spin relaxation time.

T₂* decay the decay of the free induction decay signal that occurs following the removal of the radiofrequency pulse.

T₂ weighted scan achieved by using a longer time to receive the peak echo signal and longer intervals between excitation radiofrequency pulses than for other MRI scans. Fluids are bright, soft tissues are displayed as various shades of gray, and tendons, ligaments, air, and cortical bone are dark.

T₂ mycotoxin a trichothecene mycotoxin (a secondary toxic metabolite) produced by a number of Fusarium spp., including F. tricinctum when growing on stored grain, usually corn. The toxin affects rapidly dividing cells, thereby causing necrosis of skin, cells lining the alimentary tract, and cells of the lymphoid and hemopoietic systems. This may result in peripheral neuropathy and defective blood clotting. The toxin is also a teratogen and causes stillbirth, abortion, and fetal abnormalities. Clinical signs include feed refusal and vomiting in species that can vomit. Called also trichothecene.

T₃ tri-iodothyronine.

T₄ thyroxine.

free T₄ see free thyroxine.

TT₄ see total thyroxine.

T₁₂ a value derived by multiplying the value for T₄ by the value for T₃ expressed as RT₁U (resin T₁ uptake).

T₃m chemical symbol, thulium.

Tₙ tubular maximum (of the kidneys); used in reporting kidney function studies, with inferior letters representing the substance used in the test, as TₙPAH (tubular maximum for para-aminophenolic acid).

Tₚax in pharmacology, the time it takes to reach the maximum plasma concentration after administration of a drug; when the rate of absorption equals the rate of elimination.

2,4,5-T (2,4,5-trichlorophenoxy) acetic acid, a broad-leaf herbicide. Now banned from use in the US and some other countries.

T-1824 see Evans blue dye.

t in genetics, symbol for translocation.

T₁/₂ in pharmacology, the half-time or elimination half-life of a drug; the time it takes for half of the absorbed drug to be eliminated from the body.

T₁/₂ context in pharmacology, the context-sensitive half-time or elimination half-life of an administered drug.

θ theta, small letter; eighth letter in the Greek alphabet.

τ tau, small letter; 19th letter in the Greek alphabet. Used to designate an interval of time.

TA toxin–antitoxin.

TA Terminologia Anatomica.

T antigen tumor antigen.

T banding telomeric (or terminal) banding; a staining technique with Giemsa or acridine orange stain used in the preparation of karyotypes; stains the teleric regions of chromosomes.

T cell see T lymphocyte.

T c. receptor antigen-specific heterodimetric proteins, either αβ or γδ, present on the surface of T lymphocytes, the specificity of which is generated by somatic mutation and somatic recombination of a relatively small number of genes similar to that responsible for the generation of antibody diversity.

T conformational state deoxy (‘tense’) conformational form of hemoglobin.

T effector cell includes large granular lymphocytes, called also natural killer cell and cytotoxic T lymphocyte.

T helper cell see helper lymphocyte.

T lymphocyte see T lymphocyte.

T tube see transverse tubules.

t-PA tissue plasminogen activator.

t-distribution see t statistic.

t statistic, t distribution the statistical distribution of the ratio of the sample mean to its sample standard deviation for a normal random variable with zero mean. It is the basis of various t-tests used to make inferences about the mean of a normal variable.

T-strain mycoplasma see Ureaplasma.

T-test a test of statistical significance that uses a formula from which a t value is derived. The value is then compared with a set of t-distribution tables to see whether the null hypothesis should be rejected or not.

Ta chemical symbol, tantaly.

TAA tumor-associated antigen.

TAB a vaccine prepared from killed typhoid, paratyphoid A and paratyphoid B bacilli.

tabanid [ˈtæbənɪd] a fly of the family Tabanidae, including the genera Chrysops, Haematopota, Pangonia and Tabanus.

Tabanus [ˈtæ-bənəs] a genus of blood-sucking biting flies (horse flies, deer flies or march flies) in the family Tabanidae that transmit trypanosomes and anthrax to various animals and have a painful bite.

tabby genetically determined coat color patterns that occur in different cat breeds and in any coat type or colors. The four variations are: mackerel, with parallel vertical stripes on the body and rings around the tail and legs; classic or banded, with thicker, horizontal stripes forming swirls; spotted, with spots instead of stripes; and ticked, with bands of color in individual hairs and an overall uniform appearance.

t. point see points.

tabes [ˈtæbəz] any wasting of the body; progressive atrophy of the body or a part of it.

tabescent [ˈtæbəs-ənt] growing emaciated; wasting away.

tabetiform [ˈtæbetɪ-form] resembling tabes.

tablature [ˈtæ-plə-ˈtɔr-ə] separation of the chief cranial bones into inner and outer tables, separated by a diploe.

table [ˈtə-bal] a flat layer or surface, e.g., smooth surface on top of (occlusal surface) of teeth especially on the incisors of the horse, used in telling the age of the horse.

hydraulic t. used for surgery of large animals so it can be adjusted to the appropriate height and in some cases starting from floor level to accommodate animals anesthetized on the floor, then raised.

inner t. the inner compact layer of the bones covering the brain.

instrument t. used to arrange instruments for ready access by the surgeon and assistants. It often overhangs the surgery table.

outer t. the outer compact layer of the bones covering the brain.

restraint t. of different designs and size according to their purpose. Examples are restraint tables for hoof trimming of cattle and restraint tables for collecting semen from rams. The animal is stood next to the upright table and strapped to it, or placed in a cage, and the table is then moved to a horizontal position and further restraints applied.
statistical t. tables of values used in statistics, e.g., t-tables.
t. ties sterilizable nylon or cotton ropes that can be tied to a recumbent, anesthetized dog or cat firmly to an operating table.
vitreous t. inner table.

table top technique a technique of radiography in which the use of a grid is unnecessary, and the cassette can be moved about on the table top so that it is just below the anatomic part of the patient to be radiographed.

tablespoon (sa’bol-sp. r) a unit of volume or capacity. In metric measurements, used for medicinal purposes, exactly equal to 15 ml; in the US and UK, as a household measure, slightly less; in Australia, it is 20 ml. Abbreviated as Tbsp.

tablet (tab’lat) a solid dosage form containing a medicinal substance with or without a suitable diluent (filler).
enteric-coated t. one coated with material that delays release of the medication until after it leaves the stomach.
t. triturate a small, loosely packed tablet to be dissolved in water immediately before injection, e.g., apomorphine.
tabula vitrea (tabl-‘u-vitra) inner layer of very dense bone in the bones of the cranium.
tabular (tabl-‘u-lar) resembling a table; data presented in rows and columns.
Tocacea African genus of the plant family Apocynaceae; may contain cardiac glycoside that causes abdominal pain, vomiting, diarrhea, hepatitis. Includes T. yototaccola.
tachogram (tak-o-gram) the graphic record produced by tachography.
tachography (tak-o- graf’-e) the recording of the movement and speed of blood flow.
tachy- word element. [Gr.] rapid, swift.
tachyarrhythmia (tak’e-ar-thr’-me-ә) tachycardia associated with an irregularity in the normal heart rhythm. Includes both atrial and ventricular tachycardias.
re-entrant t. one caused by a depolarization wave crossing areas of nonuniform excitability or conduction

tachycardia (tak’i-kahr’-de-ә) abnormally rapid heart rate.
arrhythmic t. the heart rate is faster than normal, the rhythm is irregular.
atrial t. rapid contraction of the atrium arising from an ectopic focus with a discharge rate higher than the sinus node.
ectopic t. rapid heart rate in response to impulses arising outside the sinoatrial node.
idioventricular t. tachycardia arising from the ventricle. Usually of a slower rate than ventricular tachycardia.
junctional t. that arising in response to impulses originating in the atrioventricular junction, i.e., the atrioventricular node.
paroxysmal t. episodes of an abrupt and marked increase in heart rate not associated with exercise or excitement, with an equally sudden return to normal.
sinus t., simple t. an increase in heart rate from heightened activity of the sinoatrial node, such as occurs with exercise, excitement, or pain.
supraventricular t. an elevated heart rate due to either junctional or atrial tachycardia.
ventricular t. see ventricular tachycardia.

Tachygonetria a large genus of oxyurid worms, in the superfamly Oxyuroidea, found in the large intestine of tortoises.
tachymeter (tak’i-met’-ә) an instrument for measuring rapidity of motion.
tachyphagia (tak’i-fa’-ja) rapid eating.
tachyphylaxis (tak’e-fil’-aks’-i) ‘rapid protection’; acute decrease in response to a drug or other physiologically active agent as a result of either a high-intensity, prolonged stimulus or a low-intensity, repeated stimulus. The resulting desensitization may be temporary or, if immunologically mediated, persistent (e.g., seral desensitization therapy for allergic conditions).
tachynea (tak’n-e-ә) (tak’n-e’-ә) very rapid respirations. The rate is fast and the depth shallow, as in heat stroke, because the initiating mechanism is hyperthermia, and there is no hypercapnia. Also can reflect pain, anxiety, or restrictive lung or pleural disease that limits expansion of lungs.

T-02: Tactile hairs on the head of the cat. The dots on the lips show the tactile (tak’i) pertaining to touch.
t. hair hairs particularly sensitive to touch. See also hair (1).

T. asiatica adult tapeworm in humans, larval stage (cysticercus) in pigs. Commonly known as the Asian Taenia. T. brauni adult tapeworms in dogs and jackals and the larval stage (coenurus) in rats, mice, and porcupines. It is probably a subspecies of T. serialis.
T. crassiceps adult tapeworms in foxes and coyotes, the larval stage (cysticercus) in rodents.

T. taeniaeformis an immunosuppressive agent used in allogenic organ transplant to reduce the risk of rejection. It is derived from Streptomyces tsukubaensis. It selectively binds FK-binding proteins and the complex inhibits calcineurin. There is a slightly increased risk of cutaneous carcinogenesis when used topically on humans, rodents, and monkeys. It is used topically in the treatment of inflammatory and immune-mediated skin diseases of dogs and cats.
tactical treatment treatment precipitated by emergence of clinical signs as opposed to strategic treatment to prevent development of the disease.
t. hair hairs particularly sensitive to touch. See also hair (1).

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T. crassiceps adult tapeworms in foxes and coyotes, the larval stage (cysticercus) in rodents.
**T. hydatigena** tapeworms in small intestine of dogs, wolves, and wild Carnivora, and the larval stage, formerly known as *Cysticercus tenuicolus*, found in the sheep and other ruminants, and in pigs and occasionally primates.

**T. hyenae** tapeworms are in hyenas and the cisternici in antelopes.

**T. krabbe** adult tapeworms are found in the dog and in wild carnivores and the larval cestode, formerly known as *Cysticercus tarandi*, in the muscles of wild ruminants, especially deer.

**T. laticollis** tapeworms found in carnivores and larval forms in rodents. Possibly a synonym for *T. pisiformis*.

**T. macrocystis** adult tapeworms in lynx and coyote, and the intermediate stage in snowshoe hares (lagomorphs).

**T. maris** the adult tapeworms in the marten and the cysticercus in the vole.

**T. multiceps** (syn. *Multiceps multiceps*) the adult tapeworms are found in the dog and wild canines, the larval stage, formerly known as *Coenurus cerebralis*, in the brain and spinal cord of sheep and goat.

**T. mustelae** adult tapeworms in martens, weasels, otters, skunks, badgers, and larval stages in voles and other rodents.

**T. omissa** adult tapeworms in the cougar and larvae in deer.

**T. ovis** adult tapeworms are found in dogs and wild carnivores and the larval stage, formerly known as *Cysticercus ovis*, in the skeletal and cardiac muscle of sheep and goats.

**T. parva** adult tapeworms in genets, larval stage in rodents.

**T. pisiformis** adult tapeworms found in small intestine of dog, fox, some wild carnivores, and very rarely in cats. The metacestode stage, formerly known as (*Cysticercus pisiformis*), found in lagomorphs, in the liver and peritoneal cavity.

**T. polyacantha** adults are in the intestine of foxes and the metacestodes in microtine rodents.

**T. rileyi** adult tapeworms found in lynx, larvae in rodents.

**T. saginata** adult tapeworms are intestinal parasites of humans, and the metacestode (*Cysticercus bovis*) in cattle and some wild ruminants. Cysticercosis (beef cysticercosis) is a significant cause of carcass condemnation in developed countries. Sources of infection include sewage, sludge, and night soil deposited on pasture, irrigation water containing sewage effluents used for crops fed to cattle, flooded streams containing sewage effluents, and human excreta spread with animal slurry or deposited in cattle feed troughs by impatient livestock attendants.

**T. serialis** the adult tapeworm is found in dogs and foxes and the metacestode, formerly known as *Coenurus serialis*, in the subcutaneous and intramuscular tissues of lagomorphs.

**T. serrata** see *T. pisiformis* (above).

**T. solium** the adults are found in the small intestine of humans and some apes, the metacestode, formerly known as *Cysticercus cellulosae*, in the skeletal and cardiac muscle of pigs and in the brain of humans. *T. taeniacformis* the adult is found in the small intestine of cats and other related carnivores and the metacestode, formerly known as *Cysticercus liricollis*, in the livers of rodents. *T. twitchelli* adult tapeworms found in wolverines, larvae in lungs and pleural cavity of porcupines.

**Taenia** a genus of tapeworms. Serve as vectors for *Taenia solium*, *Taenia saginata*, and *Taenia multiceps* associated with other deformities of the vertebral column, atresia of the fasciolaris, related carnivores and the metacestode, formerly known as *Cysticercus* Carnivora, and the larval stage, formerly known as *Cysticercus pisiformis*, found in lagomorphs, in the liver and peritoneal cavity.

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**taeniaceid** ['te-ne-a-sid] teniaceid.

**taeniufuge** ['te-ne-a-fu-ge] teniufuge.

**Taeniorhynchus** a genus of mosquitos. Serve as vectors for filarioid nematodes and various viruses.

**tag** [taɡ] 1. a small appendage, flap or polyp. 2. label. See ear tag, tail tag.

**3. broken or dung-covered wool.**

**cutaneous t.** see fibrovascular *papilloma*.

**radioactive t.** a radioisotope that has been incorporated in a chemical compound.

**skin t.** common, small, benign, soft, tag-like pedunculated skin lesion on neck, axilla, and groin. Also called acrochordon.

**Tagetes minuta** African grass in the family Poaceae; its sharp awns cause subcutaneous abscesses, dermatitis especially of the lower limbs. Called also kackiebos, muster John Henry.

**tahr** short-horned, Asian goat-antelopes in the subfamily Caprinae; also introduced into New Zealand for recreational hunting.

**Tahyna virus** a virus of the California group of the genus *Bunyavirus*, family *Bunyaviridae*, associated with the occurrence of encephalitis in humans and for which many domestic and wild animals act as reservoirs.

**tail** [tɔɪ] the caudal terminal appendage of the vertebral column made up of the coccygeal vertebrae and their attendant tissues. See also *Manx*.

**t. amputation** see *dock*.

**banged t.** see bangtail.

**t. biting** a vice in pigs that bite each other's tail because of boredom initially and then as a habit, causing blood loss and frequently local abscess formation or spinal cord abscess. In dogs, seen as a vice in association with tail chasing (see below). In caged mice may be attributable to crowding.

**t. bleeding** collection of blood from the ventral median coccygeal vein, e.g., in cattle; laboratory rodents are also bled from the ventral coccygeal artery or by amputation of the end of the tail.

**bob t., bobbed t.** see *bobbtail*.

**t. boot** a leather sleeve that is wrapped around the butt of a horse’s tail, laced up, and secured to a harness by a retaining strap. Designed to protect the tail from wear while traveling. Nowadays bandaging is a more common method of protection.

**t. brace** a device for supporting the tail in an elevated position for extended periods of time, usually as an adjunct to a surgical procedure on the tail or in the perineal region, e.g., dogs after surgery for perianal fistulae and horses after ventral myotomy (‘nicking’).

**t. carriage** the way in which the tail is carried relative to the body. A high carriage of the butt of the tail with the hair streaming in the wind is the objective in show horses. See also *nicking* (2).

**caudal t. fold** see caudal tail fold.

**t. cellulitis** at the tail tip, a common sequel to unsanitary vaccination against pleuropneumonia; at the buttl accidental to injury.

**t. chasing** an obsessive-compulsive behavior seen occasionally in dogs, particularly Bull terriers. The dog periodically lapses into episodes of chasing its tail. Most deliberately do not catch it, but those that do can cause serious self-trauma.

**t. deformity** most cases are sporadic but it is inherited as part of the inherited tail-absent syndrome in cattle and pigs.

**t. elevation** posture indicative of irritation in the vagina, e.g., after irrigation of cervix and uterus with Lugol’s iodine; tail held out from the body, plus rigidity, a sure indication of the presence of tetanus.

**t. fold dermatitis** see fold dermatitis.

**t. gland** in the dog, an oval-shaped collection of large sebaceous glands and hepatoïd cells that empty into hair follicles on the proximal dorsal one-third of the tail. In the cat, a collection of sebaceous glands on the dorsal surface along the length of the tail. In animals with primary disorders of keratinization, the site can become matted with secretions and inflammation is common. In cats the term is erroneously called ‘stud tail’, but it can occur in either sex. Called also supracaudal gland.

**ingrown t.** dogs with naturally short, kinked tails (corkscrew tails), e.g., British bulldoggs and Pugs, may have deep skin folds surrounding the tail that are subject to moist dermatitis and secondary infection.

**t. jack** see tailing.

**limber t.** a painful condition of the tailbase recognized in gundogs, mainly Labrador retrievers and pointers. Originally associated with hunting, but now known to occur under other circumstances. The affected dog holds the tail base horizontally, away from the rump, with the remainder of the tail hanging limp, and is reluctant to sit. Believed to be due to tendonitis or myositis associated with vigorous hyperextension of the tail, the condition usually recovers spontaneously. Called also frozen tail, rudder tail, cold water tail, caudal/coccygeal myopathy.

**t. and mane dystrophy** see *mane* and tail dystrophy.

**otter t.** in dogs, describes a thickly haired, medium-length tail with a thick base tapering to a rounded end; seen in Labrador retrievers.

**t. paint** special paint applied to the tailhead of cows as a heat map detection aid. When cows stand to be mounted the paint is rubbed off.
cold store t. cut lean surfaces of chilled meat are covered with a bacterial Achromobacter spp.
musty t. an unpleasant odor in poultry meat from chickens raised on litter containing wood shavings. The odor is caused by chloroanisolines generated by bacterial action on wood preservatives in the shavings.
taipan [təˈpæn] highly venomous, fast moving, large snakes in the genus Oxyuranus, found in Australia and Papua New Guinea. Envenomation of animals and humans is characterized by neurotoxicity and coagulopathy.
take-off 1. part of the horse's jumping gait, the lifting of the forequarters off the ground from the hindlegs at the beginning of the jump. 2. see automatic takeoff.
takin (Budorcas taxicolor) a medium-sized, Himalayan and East Asian goat-antelope with a thick, long, shaggy coat, short legs, and curled horns. The national animal of Bhutan.
talampicillin [taˈlæm-ˈsɪk-lɪn] an antibiotic derived from ampicillin.
talapoin (Miopithecus spp.) the smallest of the Old World monkeys, native to central Africa.
talc [ˈtælk] a naturally occurring hydrous magnesium silicate, sometimes with a small amount of aluminum silicate; used as a dusting powder. Called also talcum.
t. granulomatous peritonitis t alc, or starch, spilled in the peritoneal cavity provokes the development of granuloma by e.g., the serous membrane.
talcosis [ˈtæl-kəsɪs] a condition due to inhalation or implantation in the body of talc.
talcum [ˈtælkəm] talc, talcum powder.
Talfan disease see porcine viral encephalomyelitis.
talipes [təˈlɪpɛz] see dactylomegaly.
tall higher than average.
t. Cape honeyflower Melianthus major.
t. chloris Chloris ventricosa.
t. delphinium Delphinium trollolium.
t. yellowtop Senecio magnificus.
Tallebudgera horse disease see Ageratina adenophora.
tallow natural, hard fat taken from cattle or sheep. It is used in prepared animal feeds to act as a binder and reduce dust. It has a high calorific value and is palatable to pigs and poultry.
tallow tree Chinese tallow tree; see Sapium sebiferum. Called also Chinese tallow wood.
Tallquist method a very old method for estimation of the hemoglobin content of blood in which a drop of blood is absorbed onto white paper and compared with a color chart.
talocalcaneal joint [təˈlɑrkə-lɛnəl] see tarsal joints, Table 10.
talocalcanean [təˈlɑrkə-ˈkænən] pertaining to the talus and calcaneus.
talocalcaneoeentral joint the joint between the talus and central tarsal bone; see also tarsal joints, Table 10.
talocrural [təˈlɔkrʊrəl] tarsocrural.
talofibular [ˈtæləfɪbʊlər] pertaining to the talus and fibula.
talonavicular [ˈtælənævɪkəl] pertaining to the talus and navicular bone.
talus [təˈlæs] the most proximal of the tarsal bones. Called also the Tibial tarsal bone. See also Table 9.
tamandua (Tamandua spp.) nocturnal, semiarboreal anteater, native to Central and South America; they are distinguished by a cream to brown body and striking, black vest-like marking. Includes the northern tamandua (T. mexicana) and southern tamandua (T. tetradactyla).
tamarin a small, New World monkey in the family Callitrichidae, native to Central and South America. Many species have a prominent mustache.
cotton-topped t. (Saquinus oedipus) distinguished by a crest of long white hair that falls over the shoulders; gold to orange, up to 20 in. long and up to 1 lb in weight. An endangered species.
golden lion t. (Leontopithecus rosalia) a long gold to orange coat, darker around the face. An endangered species.
tamias striatus eastern chipmunk, the only member of the subgenus Tamias, native to eastern North America. See chipmunk.
Tamm-Horsfall mucoprotein a normal product of the ascending limb of the loop of Henle and the distal renal tubules; the principal constituent of hyaline casts.
tampan [təˈmæpn] a tick; see Ornithodorus.
tampon [təˈmɒpn] a pack, pad, or plug made of cotton, sponge, or other material, variously used in surgery to plug the nose, vagina, etc., for the control of hemorrhage or the absorption of secretions.
tamponade [təˈmɒpnəd] 1. surgical use of a tampon. 2. pathological compression of a part.
cardiac t. compression of the heart due to collection of fluid or blood in the pericardial sac. There is impaired cardiac filling resulting in decreased

T-04: Cow in the process of being restrained by tailing. From Bassett, J.M., McCurnin D.M., McCurnin’s Clinical Textbook for Veterinary Technicians, 7th ed. Saunders, 2010.

T. paralysis is characterized by a flaccid, anesthetized tail. Occurs with injury, myelitis, or myelomalacia of caudal segments of the spinal cord.
t. pulse the pulse as felt in the ventral coccygeal artery in cattle. Best felt at the level of the tip of the vulva.
t. pyoderma equine staphylococcal folliculitis.
t. rigidity tail is stiff instead of its usual, whip-like in cattle, flexibility. Indicative of the presence of tetanus.
t. root where the tail joins the body.
t. setting see nicking (2).
t. skin dehiscence the skin of the tail in gerbils is thin and easily stripped with improper handling.
t. sore the early or mild lesions in a tail-biting problem of pigs.
t. stock first part of the tail, of a whale or dolphin, before it divides into the flukes.
t. switching movement of the tail, common in horses but also in cattle, from side to side, or dorsally and ventrally, with contact with the rump, usually in response to irritation by flies.
t. tag used extensively for the identification of cattle. Made of metal or plastic in sharply contrasting colors and with identifying marks or numbers and letters on them so that animals, owners, and veterinarians can be easily identified. The tag is wrapped around the thinner, meaty part of the tail, just above the brush and fixed with one of several patented attachments. See also backtag.
t. sucking a vice of cats, particularly Siamese, in which the tip of the tail is usually wet and becomes discolored.
t. tie see tail-hitch.
t. tip necrosis disease of confined cattle on slatted floors; caused by treading injury. Also occurs with ergot alkaloid ingestion in ruminants and with Salmonella dublin infection in calves.
t. tone complete absence indicative of good outcome of epidural anesthesia; occurrence spontaneously indicative of lesion to cauda equina, in cattle usually due to mounting injury caused by a heavy bull or cow.
t. worm equine staphylococcal dermatitis.
tail-hitch [tɔɪl] a half-hitch applied to a horse's tail, used in restraint for standing castration by pulling horse up on its toes to an overhead beam. Useful also in tying a cow's tail out of the way and in applying traction to a calf in posterior presentation at a dystocia. Called also tail tie.
tailhead dorsal aspect of the root of the tail.
tailing 1. the restraint technique used in cattle; the butt of the tail is grasped with both hands and raised vertically as far as it will go without breaking. While the tail is in this position the animal is unlikely to kick and then only lightly. Called also tail jack, tail restraint, tail-hitch.
2. the addition in vitro of the same nucleotide by terminal transferase to the 3'-hydroxyl terminus of a double-stranded DNA molecule. Called also homopolymeric tailing.
taillessness see tail absence.
taint an unpleasant odor and flavor in a human foodstuff of animal origin. Caused by the ingestion of the substance, commonly a plant such as Mentha piperita, Caltha palustris, Datura stramonium, Euphorbia spp., or while in storage, e.g., milk stored with pineapples, or as a result of animal metabolism, e.g., boar taint.
stroke volume and cardiac output and ultimately congestive heart failure. The heart shadow on radiography is enlarged, the heart sounds on auscultation are muffled. See also pericardial effusion.

**Tamworth** a golden-red, long faced, prick-eared bacon pig produced in the UK.

tan [tan] tanbark.

*Tanacetum* [tan ˈæ-teɪtɪm] genus in the plant family Asteraceae; reported to be associated with abortion in cattle; includes *T. acutum*, *T. parthenium* (feverfew), *T. vulgare* (tansy).

*Tanaecium exitosum* South American member of the plant family Bignoniaceae; contains an unidentified toxin that causes cardiomyopathy, enteritis, frequent micturition in cattle.

**Tanaisia** a genus of flies in the family Eucyclidiidae.

*T. brugii* found in the kidneys and ureters of chickens, turkeys, and pigeons but is apparently without much pathogenic effect.

*T. sarudyni* found in ruffed grouse.

**tanapox** [ˈtæ-nəpɒks] a poxvirus that infects African nonhuman primates, but may also cause disease in humans. Named after the Tana River Valley in Kenya.

tanbark dry shredded residue of the tree bark used in tanning leather. Springly and absorbent and is in demand as a surface for horses to work and exercise on or to stand on if they are sorefooted.

tank [tæŋk] an artifical receptacle for liquids.

horse floatation t. used to suspend horses with limb-bone injuries during repair phase. Water is warmed and filtered and the horse may be kept in the tank for periods of up to 3 months but if suspension has been almost complete and is ceased suddenly the osteoporosis due to weightlessness may cause bone fractures.

x-ray processing t. usually in four compartments, one for developing, one for wash water, one for fixing, and one for rinsing.

tankage made from heat-digested animal abattoir residues without gut contents, hide, horn, hoof. Concentrated and dried and possessing a high biological value protein content of 60%. See also meat meal.

tannate [ˈtænət] any of the salts of tannic acid, all of which are astringent.

tanner grass [tænər ˈgrɑs] *Brachiaria radicans*.

tannia see Xanthosoma.*

tannic acid [ˈtænɪk] a polyphenol obtained from the bark and fruit of many plants, used as an astringent.

tanning the process of tanning hides to make leather; tanning is by a tanning bark process or a chemical process called chrome tanning.

**tannins** secondary plant metabolites, probably important in anti-herbivore defense; divisible into the common condensed tannins, and less common and more toxic hydrolysable tannins, e.g., gallotannins in oak trees, punicalgin in *Terminalia obovata*, capable of damaging the kidneys; condensed tannins bind to protein, interfere with the availability of proteins from feeds, and are poorly absorbed from the gut. The presence of condensed tannins in some legumes, such as vetch and trefoil, may preclude their use in grazing ruminants.

tansy *Tanacetum vulgare*. See also tansy ragwort and tansy mustard.

tantalum (T) [ˈtæn-tə-ləm] a chemical element, atomic number 73, atomic weight 180.948. It is a noncorrosive and malleable metal used for plates or disks to repair cranial defects, for wire sutures, and for making prosthetic appliances.

tancyte [tan-sɪt] special cell in the ependyma lining the third ventricle in the brain; the function is unknown.

**tap** tryptophagen activation peptide.

tap [tæp] 1. a quick, light blow. 2. to drain off fluid by paracentesis.

bone t. an instrument for cutting a screw thread inside a drill hole in bone. May have a fixed handle or come in bit form so that the bit size can be interchanged in a handle fitted with a chuck.

peritoneal t. paracentesis of the abdominal cavity

spinal t. lumbar puncture.

tape [tæp] a long, narrow strip of fabric or other flexible material.

t. closure application of tape strips across the incision can be used to hold wound edges in apposition.

t. preparation see acetate tape preparation.

vaginal t. special tape for use in closing the vestibulovaginal junction to prevent recurrence of cervicovaginal prolapse. See also Bulner method.

**tapeinocysthy** [ˈtæp-ə-sɪs-θi] flattening or depression of the skull.

**tapetal** [ˈtæp-ə-təl] emerating from or pertaining to the tapetum.

**tapetum** (especially the cat and large herbivores) caused by choroidal blood vessels piercing through the tapetum. More commonly called stars of Winslow.

**tapetum** [ˈtæp-ə-təm] pl. *tapeta* [ˈtæp-ə-tə] 1. a covering structure or layer of cells. 2. a stratum in the human brain composed of fibers from the body and splenium of the corpus callosum sweeping around the lateral ventricle. 3. common abbreviation for tapetum lucidum (see below).

t. lucidum a type of tapetum lucidum made of cells called iridocytes, as found in carnivores.

t. fibrosa a type of tapetum lucidum composed predominantly of organized bundles of collagen as found in ungulates.

**t. lucidum** the iridescent reflecting tissue layer of the fundus (typically the choroid) of some species of animals that gives their eyes the property of shining in the dark. It is characteristic of crepuscular animals and is believed to allow incident light two opportunities to stimulate the retinal photoreceptors.

**tapeworm** [ˈtæp-ərəm] a class of the phylum Platyhelminthes, class Eucestoda, or flataworms; includes members of the genera *Taenia*, *Diphyllobothrium*, *Dipylidium*, and *Echinococcus*. Most adult tapeworm infestations have little apparent effect on the health of farm livestock (with the exception of *Anoplocephala perfoliata* in horses and some of the poultry cestodes) and are mostly esthetic problems in companion animals.

**taeniid** t. *Taenia solium*. *Asian* t. *Taenia asiatica*. *bass* tapeworm *Proteocephalus ambiguus*. *beef* t. *Taenia saginata*. *brood* t. *Diphyllobothrium latum*. *broad fish tapeworm* *Diphyllobothrium latum*.

dog t. *Dipylidium caninum*. *dwarf* t. *Hymenolepis nana*. *fish* t. *Dipylidium latum*. *fringed tapeworm* *Thysanosoma actinioideis*. *hydatid* t. *Echinococcus granulosus*. *pork* t. *Taenia solium*. *unarmed* t. *Taenia solitaria*. *T-05: Tapetum of the dog. From Maggs, D.J., Miller, P.E., Ohi, R. Slatter’s Fundamentals of Veterinary Ophthalmology, 4th ed. Saunders, 2008.*

**T-06: Example of typical tapeworm with dorsoventrally flattened, ribbonlike appearance.** Hendrix, C.M., Robinson E, Diagnostic Parasitology for Veterinary Technicians, 5th ed. Mosby, 2016.
tapir (Tapirus spp.) a medium- to large-sized ungulate, native to Southeastern Asia, Central and South America; it has a rounded body, thick head, and a short, prehensile proboscis.

tapotement [tah-pot-maw] a technique used in massage therapy in which gentle percussion is used to stimulate sensory nerves and vasodilate capillaries.

tar [tahr] a dark-brown or black, viscid liquid obtained from various species of pine or from bituminous coal. See also wood tar derivatives.

t. pitch see coal tar pitch.

t. derivatives include phenol (carbolic acid), cresols, cresceost, all potent poisons. See also wood tar derivatives.

t. cause of burns in dogs and cats, usually made more severe because it sticks tightly to the skin and haircoat.

tarbutt see Flourensia cernua

tardive [tahr-div] late; applied to a disease in which the characteristic lesion is late in appearing.

t. cell see T. emetic

t. emetic see t. sheath

t. sheath see t. pad

t. pad see tarsal sheath

t. joint see tarsus.

t. tendon see tarsal tendon.

t. plate dense fibrous layer within the eyelids providing rigidity and facilitating eyelid opening and closure. More developed in the upper lid than the lower lid of mammals.

t. sheath the synovial sheath around the deep flexor tendon in the horse.

t. tunnel the osseofibrous passage for the tibial nerve, and flexor tendons, formed by the flexor retinaculum and the tarsal bones.

tarsalia [tahr-sa-lə] the bones of the tarsus.

tarsalis [tahr-sa-lish] [L.] tarsal.

tarsectomy [tahr-sock-te-me] 1. excision of one or more bones of the tarsus. 2. excision of the tarsal plate of the eyelid.

tarsier small, arboreal, almost hairless, Southeast Asian carnivorous primate in the family Tarsiidae and closely related to the monkeys, apes, and humans. They have very large eyes, elongated tarsal bones, and long digits.

tarsitis [tahr-si-tis] inflammation of the connective tissue portion (tarsal plate) of the eyelid; blepharitis.

tarso(0) - 1. word element. [Gr.] edge of eyelid. 2. tarsus of the foot.

tarsocclusion [tahr-sock-lo-si] surgical fracture of the tarsus.

tarsoconjunctiva [tahr-so-kon-junk-ˈt̬ː-va] the tarsal plate and palpebral conjunctiva.

t. graft, t. transposition transposition of the tarsus and palpebral conjunctiva by a sliding graft technique; used in reconstruction of the eyelid.

t. sheath see t. pad

t. joint the articulation between the tibial tarsal bone (talus) and the tibia and fibula.

t. tendon see t. sheath

tarsomalacia [tahr-so-ma-lə-ˈʃa] softening of the tarsal plate of an eyelid.

tarsometatarsal [tahr-so-met-ˈə-tahr-ˈsi] pertaining to the tarsus and metatarsus.

tarsometatarsus [tahr-so-met-ˈə-tahr-ˈso] the bone of the lower shank of birds made up of fused tarsal and metatarsal bones.

tarsophyma an obsolete term for a circumscribed mass of the eyelid.

tarsoplasty [tahr-so-plas-ˈte] plastic repair of the tarsal plate of the eyelid.

tarsorrhaphy [tahr-sor-ˈə-fə] temporary or permanent joining with suture of a portion of the entire eyelid and lower eyelids for the purpose of protecting the cornea by shortening or closing the palpebral fissure.

tarsotomy [tahr-so-tə-mə] surgical incision of a tarsus, or the tarsal plate of an eyelid.

tarsus [tahr-ˈsoʊs] 1. the hock or ankle made up of up to seven bones comprising the articulation between the cannon bone and the tarsus of the foot.

t. emetic see anthimy potassium tartrate.

t. scraper see dental scaler.

Taru disease [tahr-roo-e] 6-phosphofructokinase 1 deficiency.

tarweed see Amsinckia.

Tasmanian devil (Sarcophilus harrisii) the world’s largest surviving carnivorous marsupial, once native to mainland Australia, now found only in the Australian island state, Tasmania. Numbers have declined sharply with the occurrence of Tasmanian devil facial tumor disease (see below). The size of a small dog, it is noted for its rowdy, nocturnal behavior and threatening appearance and sounds. The faunal emblem of Tasmania, well known worldwide via the Looney Tunes cartoon character Taz.
taurine \(\text{tawr}^\prime\text{en}\) \(\text{taw}^\prime\text{rin}\) a sulfur-containing amino acid found free in mammalian tissues. Because of obligatory excretion and only limited ability to synthesize taurine, it is a dietary essential amino acid for cats. It is a conditionally essential dietary amino acid in dogs; dietary sources are usually adequate, but under some conditions deficiency can occur. Called also 2-aminoethanesulfonic acid.

t. nutritional deficiency taurine is the predominant free amino acid in the retina, and in cats central retinal degeneration and blindness may result from diets low in animal protein. Dilated cardiomyopathy has also been associated with taurine deficiency in cats and dogs.

taurolactone \(\text{taw}^\prime\text{ro-ko}^\prime\text{laht}\) a salt of taurolactic acid, one of the bile acids.

taurouric acid \(\text{taw}^\prime\text{ro-ro-ko}^\prime\text{lik}\) the bile acid, cholic acid, conjugated to taurine.

taurourine conjugates primary and secondary bile acids linked to taurine in the liver and secreted into bile.

tautomer \(\text{taw}^\prime\text{to-maw}\) a chemical compound exhibiting, or capable of exhibiting, tautomerism.

tautomerism \(\text{taw}^\prime\text{tuh-mawr-uh-miz}\) stereoisomerism in which the compounds are mutually interconvertible, under normal conditions, forming a mixture that is in dynamic equilibration.

taxan see American badger.

taxine \(\text{tak}^\prime\text{suh-neen}\) a group of toxic diterpenoid alkaloids found in Taxus spp. Cause sudden death through depression of conduction in the myocardium and consequent heart failure and anoxia. It also causes depression of smooth muscle activity and possibly of activity of the respiratory center.

taxis \(\text{tak}^\prime\text{siss}\) 1. an orientation movement of a motile organism in response to a stimulus; it may be either toward (positive) or away from (negative) the source of the stimulus; used also as a word ending, affixed to a stem denoting the nature of the stimulus. 2. exertion of force in manual replacement of a displaced organ or part.

taxon \(\text{tak}^\prime\text{son}\) pl. taxa \(\text{Gr.}\) 1. a particular taxonomic grouping, e.g., a particular species, genus, family, order, class, phylum, or kingdom. 2. the name applied to a taxonomic grouping.

taxonomist \(\text{tak}^\prime\text{son-uh-mist}\) a specialist in taxonomy.

taxonomy \(\text{tak}^\prime\text{son-uh-me}\) the orderly classification of organisms into appropriate categories (taxa), with application of suitable and correct names. DNA t. based on the analysis of short segments of the genome, where nucleotide sequences represent a unique barcode, to identify it as belonging to a particular species.

\begin{itemize}
\item numerical t. a method of classifying organisms solely on the basis of the number of shared phenotypic characters, each character usually being given equal weight; used in the past in bacteriology.
\item Taxis \(\text{tak}^\prime\text{siss}\) genus of the Taxaceae family of cone-bearing (gymnosperm) trees and shrubs; contain the toxic diterpenoid alkaloids of the taxine group that cause abdominal pain, convulsions, vomiting, dyspnea, diarrhea in most patients, and acute heart failure and sudden death in a few cases. Includes T. baccata (common, English, Irish or churchyard yew), T. brevifolia (western or Californian yew), T. canadensis (American yew, ground hemlock), T. cuspidata (Japanese yew).
\end{itemize}

Tay–Sachs disease \(\text{tay}^\prime\text{aks}\) \(\text{saks}\) a sphingolipidosis of humans in which the inborn error of metabolism is a deficiency of the enzyme hexosaminidase A that results in accumulation of GM₂ ganglioside in the brain. Similar to GM₂ gangliosidosis in German shorthaired pointer and Japanese chin dogs.
Taylorella

Taylorella [to’är-əl’ə] a genus of fastidious, capnophilic, gram-negative rods in the family Alcaligenaceae.

T. asi nitens is isolated from asymptomatic male donkeys, as well as from stallions and a male onager; its pathogenicity is unknown.

T. equi nitens the cause of contagious equine metritis. Previously called Haemophilus equigenitalis.

tazi see Afghan hound.

tazobactam [ta’z-o-bak’tam] a penicillinic acid sulfone derivative, similar to sulbactam; often combined with other antibiotics to extend their spectrum of activity.

T8 1. tuberculosis. 2. thoroughbred horse.

T8 tuberculosis; tubercle bacillus.

tb chemical symbol, terbium.

TBA trichlorobenzoic acid.

TBG thyroxine-binding globulin.

TBZ thiazolidinazoles.

Tc chemical symbol, technetium.

Tc cell cytotoxic T lymphocyte: CTL.

TCA 1. trichloroacetic acid. 2. tricarboxylic acid cycle (Krebs cycle).

tCa total (blood) calcium.

TCAC cycle tricarboxylic acid cycle.

TCDD tetrachlorodibenzo-p-dioxin.

TCE trichloroethylene.

TCM traditional Chinese medicine.

TCM traditional Chinese veterinary medicine.

TCS total carbon dioxide content of a plasma sample; the sum of bicarbonate, carbonic acid, and dissolved CO2.

TCR T cell receptor.

TD Tracking Dog; the first level awarded to dogs in scent tracking tests. The next level is Tracking Dog Excellent (TDX).

TDAV Theiler's disease-associated virus.

Td cell delayed hypersensitivity T lymphocyte. Called also TD cell.

Tc cell delayed-type hypersensitivity T cell.

TCHM traditional Chinese herbal medicine.

TCHM traditional Chinese herbal medicine.

TCID tissue culture infective dose; that amount of a pathogenic agent that will produce pathological change when inoculated on tissue cultures.

TCID50 median tissue culture infective dose; that amount of a pathogenic agent that will infect 50% of cell cultures inoculated. Usually expressed as TCID50/ml.

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TCR T cell receptor.
t. cannula. short, narrow, 1-in.-diameter round-pointed metal or plastic tube used to pass from the exterior, through the teat canal and into the teat cistern. Used to relieve pressure in the gland when the teat canal is obstructed. Well-designed ones have a bulge followed by a constriction near the hub so that the tube is self-retaining. Called also teat tube.

t. chap. superficial erythema, soreness due to continual wetting; a sequel to use of a too concentrated or otherwise irritant teat dip.

t. cistern. the cavity inside the teat. Called also teat sinus or pars papillaris of the lactiferous sinus. It communicates with the mammary gland via the gland sinus and with the exterior via the papillary duct(s).

congenital t. defect. includes supernumerary teats, fused teats, absence of the mammary gland and teat, absence of a teat canal or cistern, imperforate udder cistern orifice, teat angulation in cows; in sows insufficient teats, teats too far posteriorly, inverted or vestigial teats.

t. dipping. the dipping of teats of dairy cows in a long-acting disinfectant at the end of each milking. It is an essential part of the NIRD 5 point mastitis control program. Premilking teat dips are also used in mastitis control. See also teat dip.

t. fibroma. rare tumor of heifer teats.

t. fibrosarcoma. rare tumor of heifer teats or udder.

t. fistula. laceration of the teat wall in a lactating cow results in a permanent leaker so that milk drains out continuously and the quarter is at great risk from infection.

t. flora. considered to be normal, i.e., without pathogenetic significance, in dairy cows. Staphylococcus, Corynebacterium bovis, coagulase negative staphylococci.

fused t.'s. two teats joined together along their length, with a common teat cistern.

imperforate t. a congenitally obstructed teat due to failure of formation of the teat canal (lactiferous duct).

insufficient t.'s. 12 is minimal in sows.

t. inversion. the tip of the teat is inverted so that the meatus of the teat canal is in a hollow. The end of the teat may close over the sphincter and obstruct it during sucking; an inherited defect in sows. Called also inverted nipples.

t. leak. see teat fistula (above).

t. lesions. common site for lesions caused by epitheliotropic viruses, e.g., cowpox, mammanitis; trauma common cause, teat lesions in housed cows, barbed wire cuts in cows at pasture; infections, e.g., udder acne transmitted by teat cup liners or milker's hands.

milking machine t. injuries. see black spot.

misplaced t. e.g., too far back in sows so that piglets cannot get access when the sow is lying down.

t. necrosis. in piglets born onto rough, abrasive floors; may not be apparent until mature. Piglets with spay leg are particularly prone because of continual contact of anterior abdomen to the floor. Called also nipple necrosis.

t. occlusion. due usually to tread trauma; rarely a congenital defect in which case all teats are usually affected.

t. orifice. the opening to the papillary duct; normally held closed by the sphincter muscle in the wall of the teat and elastic tissue around the orifice. Invasion through the orifice is the primary route in the causation of most cases of mastitis.

t. papillomas. better described as fibropapillomas of the bovine teat. May be long tag-like structures, or white sessile nodules 0.5-in. diameter or rice grain nodules all caused by different strains of a papillomavirus.

t. photosensitive dermatitis. part of a generalized dermatitis characterized by localization of inflammation to lateral teat surface.

t. polypl. in teat cistern causes intermittent obstruction requiring surgical removal.

rudimentary t. standard equipment in males; inherited defect in cows.

t. sanitation. cleaning and disinfection before milking; most farmers restrict this to a wash with running cold water followed, in meticulous parlors, by drying with individual paper towels.

t. sealers, t. sealant. are materials used to aid in bovine mastitis control. 1. a polyvinylpyrrolidone preparation used to put on teat skin to seal milk orifice and protect skin against infection for long periods. 2. an inert preparation to be infused into the teat at drying off to protect against new infections during the dry period.

t. siphon. see teat tube (below).

t. slitter. a surgical instrument in the form of 2-mm-diameter tube containing a sharp cutting blade concealed in its tip. The slitter is introduced into the teat cistern in the closed position, opened so that the blade protrudes, and then withdrawn so as to slit the stenosed sphincter.

t. slough. as part of gangrene of the gland.

t. sphincter. the muscle in the teat wall around the external orifice of the teat; its relaxation is necessary for the rapid expulsion of milk during 'let-down'.

sphincter contracted. due usually to injury; milking is uneven with much milk left in the affected quarter; requires surgical dilation.

t. spider. membranous obstruction of the teat canal.

t. stenosis. partial obstruction of the teat canal or cistern as a result of injury or inflammation.

t. stripping. removing the last of the milk in the teat after machine milking by occluding the teat at the top between the thumb and forefinger and then pulling downward so as to express all the milk from the teat. See also machine stripping, hand stripping, handmilking.

supernumerary t. in cows may be accompanied by a supernumerary mammary gland. May also be an adjunct to an existing teat and also share its teat cistern.

t. tube. a 1.5-mm-diameter metal or plastic tube with a tapered end for insertion in the external orifice of the cow's teat. Exit from the lumen is via holes in the side wall of the tube. Vary in length from 1.5–4 in. depending on purpose. Used mostly for the infusion of medicament into the teat and udder, but also for clearing the teat canal and cistern of debris and for evacuating milk from a quarter with a blocked teat. Called also teat siphon, teat cannula.

t. tuberculoid granulomas. granulomas in the teat wall and lower udder contain Mycobacterium terrae. See also enzootic nodular thelitis.

t. ulcerative dermatitis. deep ulcers in cows bedded on infected straw.

vestigial t. rudimentary non-functional teats.

wart. see teat papillomatosis.

teat canal. an outmoded term for the short, small-caliber duct(s) at the tip of the teat that communicates with the exterior. Called also papillary duct; formerly called streak canal. Now formally called ductus papillaris.

t. c. absent. considered to be an inherited defect.

teat cup. the solid metal cups that house the flexible teat cup liners at the end of the milk line on a milking machine. Called also teat cup shell.

t. c. cluster. four cups and a manifold, called a claw, which connects them to make a cluster; designed to milk one cow.

t. c. crawl. movement of the teat cup up the teat as internal pressure in the udder drops during milking. May pinch off the opening of the teat cistern and stop milk flow.

t. c. disinfection. the principal objective of the disinfection procedure is the teat cup liner.

t. c. repair. removal of the teat cups at the end of the milking process; performed manually or mechanically by the teat cup remover (see below).

t. c. remover. an automatic device that turns off the vacuum pressure and pulls off the teat cups when the flow of milk from the quarter falls below a critical point.

teat cup liner. the rubber inflation in a cup of the milking machine. Made of neoprene or silicone rubber, molded to approximate the shape of a teat.
or made of a simple extruded tube, consisting of a mouthpiece, a tube and a short milk tube that passes out the hole at the end of the teat cup and is connected to the milk line of the milking machine. Forced to alternately constrict and relax by variation of the vacuum pressure in the milking cup.  

**t. c. l. deflector shield** a small disk in the bottom of the liner that prevents a jet of milk entering at the end of the milk line and impinging on the end of the teat; experiments show a significant reduction in mastitis new infection rates when they are installed. 

**t. c. l. disinfection** disinfection of the liners between cows; performed manually, especially in barns where cows are milked in their stalls, or automatically, in some parlors as part of a complete cycle of backflush, disinfect, rinse. 

**t. c. l. slip** the firm adhesion between the milking machine cup liner and the teat skin is lost, and the cup drops down the teat, does not milk, and squeaks or squawks as air leaks past the incomplete barrier; may cause milk droplets from the affected cup to impact on the ends of the other teats of the cow and result in the spread of mastitis infection. 

**teat dip** for teat dipping or spraying in mastitis control. Suitable dips are chlorhexidine 1 in 5000, iodine preparations containing 100 ppm free iodine, or chlorine solutions containing 800–1200 ppm of free chlorine, linear dodecyl benzene sulfonic acid. 

**barrier t. d.** application of materials, latex or rubber-based, which physically protect the teat sphincter against infection; the common disadvantage is the difficulty in removing the material when milking commences, or if used during the dry period, lack of sufficient persistence. 

**teat sinus** the cavity that occupies most of the volume of the teat; dorsally it is continuous with the mammary gland sinus; ventrally it leads into the papillary duct and to the exterior; its confines consist of the distensible teat wall. Called also teat cistern. 

**t. s. absent** congenital defect immediately branding the animal as a cull. 

**technetium (Tc)** a chemical element, atomic number 43, atomic weight 99.

**99m Tc** the most frequently used radioisotope in nuclear medicine, a gamma emitter having a half-life of 6.04 hours and a primary photon energy of 140 keV.

**technic** the method of procedure and details of a mechanical or chemical process or surgical operation. 

**technique** the method of procedure and details of a mechanical or chemical process or surgical operation. 

**technician** see veterinarian technician, animal health technician, animal technician. 

**technologist** see veterinary technologist. 

**tectoral** pertaining to tectorum; of the nature of a roof or covering. 

**t. membrane** a gelatinous, fibrous, tongue-like structure resting on the tactile hairs in the spiral organ of the inner ear. 

**tectorium** Corti's membrane. 

**tectospinal** extending from the tectum of the midbrain to the spinal cord. 

**tectum** a roof-like structure. 

**t. of mesencephalon, t. of midbrain** the dorsal portion of the midbrain. 

**TED threshold** erythema dose. 

**Teddy** a breed of guinea pig characterized by its short, plush coat that stands up all over the body, giving it an appearance not unlike that of a teddy bear. 

**Teddy Roosevelt terrier** a small (8–15 in.) American farm and hunting terrier; muscular, low set with short legs, and short coat. Considered to be Rat terriers by some registration bodies. 

**tedesdale** polled longwool breed of sheep, curly forelocks with brown, black, and gray markings. Dual purpose but wool prized by home weavers. 

**teeth** small, bone-like structures of the jaws for the biting and mastication of food. Plural of tooth. See also dental, tooth, dentition. 

**t. abscess** see alveolar abscess, malar abscess. 

**accessional t.** the permanent molars, so called because they have no deciduous predecessors in the dental arch. 

**anodont t.** teeth with a limited period of growth; includes all teeth in carnivores and primates, but only the cheek teeth of mice, rats, and hamsters. Compare with elodont teeth (below). 

**aradicular t.** teeth without root(s). 

**t. attrition** see dental attrition. 

**baby t.** see deciduous teeth (below). 

**brachydont t.** a type of tooth with short crown and well-developed root(s); seen in humans, carnivores and pigs. 

**bunodont t.** see bunodont. 

**canine t.** the long, pointed tooth in the interdental space between incisors and cheek teeth; there is one in each jaw on both sides. 

**carnassial t.** see carnassial tooth. 

**t. cavity** see dental cavity, pulp cavity. 

**check t.** premolars and molars. 

**deciduous t.** a primary tooth in diphyodont species that is replaced by a permanent (secondary) tooth. Occasionally, particularly in small breeds of dogs, shedding of the deciduous tooth may not occur when the permanent replacement has erupted, necessitating veterinary intervention. See retained teeth (below). Called also milk teeth, temporary teeth, baby teeth in lay terminology. 

**displaced molar t.** see inherited displacement of molar teeth. 

**ectopic t.** see dental cyst. 

**elodont t.** see elodont. 

**t. eruption time** see Table 18. 

**fighting t.** modified canine and incisor teeth on the top and lower jaws of mature male cameldids. They curve slightly backward and are commonly removed or kept filed for reasons of safety. Called also fangs. 

**geminous t.** see gemination. 

**heterodont t.** see heterodont. 

**homodont t.** see homodont. 

**hypodont t.** see hypodont. 

**impacted t.** one so placed in the jaw that it is unable to erupt or to attain its normal position in occlusion. 

**incisor t.** the front teeth used for cropping grass or rending flesh. From two to four in each quadrant, depending on the species, except that they are missing in the upper jaw of ruminants. 

**inherited molar t. displacement** see inherited displacement of molar teeth. 

**lophodont t.** see lophodont. 

**milk t.** see deciduous teeth (above). 

**molar t.** permanent cheek teeth that are not preceded by premolars. They are typically big teeth used for grinding and with ridges on their occlusal surfaces (lophodont) in horses, worn rounded cusps (bunodont) in pigs, or including crescents (selenodont) in cattle, and either cutting edges or flattened areas in carnivores. 

**monophyodont t.** see monophyodont. 

**needle t.** any small sharp teeth in piglets but principally the canine teeth. 

**permanent t.** see permanent dentition. 

**t. pigmentation** see tetracycline stain. 

**pink t.** caused by staining with porphyrin, or by deficiency of dentin and enamel, a congenital defect. 

**polyphyodont t.** see polyphyodont. 

**premature t. loss** reported in sheep in New Zealand and South America. Characterized by acute then chronic gingivitis, then periodontitis and loss of teeth. Cause unknown. See also cara incheda. 

**premolar t.** cheek teeth present in both generations of the dentition, present between the molars and canines. The first premolar is exceptional in humans because it erupts late and is never replaced. In domestic
species, there are up to three or four deciduous, followed by up to four permanent premolars in both jaws and on both sides.

primary t. see deciduous teeth (above).

t. rasp see tooth rasp.

retained t. a persistent deciduous tooth, present when it should have exfoliated; in dogs most often canine or incisor. The deciduous crowns are likely to protrude at odd angles and cause difficult mastication, but more important is the probability that the erupting permanent teeth will be misdirected with damage to gums or palate or malocclusion. See dental interlock. Called also pseudopolyodontia.

secodont t. see secodont.

sectorial t. a cutting tooth. See carnassial tooth.

selenodont t. see selenodont.

temporary t. see deciduous teeth (above).

wolf t. see wolf tooth.

teething [tēth′ing] a lay term used for the eruption of deciduous teeth in immature animals; seemingly an innocuous event in domestic animals.

Teflon [te′fon] pl. tegelf polytetrafluoroethylene.

tegmen [te′g-mən] pl. tegmina [L.] a covering structure or roof.

t. tympani 1. the thin layer of bone separating the tympanic antrum from the cranial cavity. 2. the roof of the tympanic cavity, related to part of the petrous portion of the temporal bone.

segmentum [seg-men′təm] pl. segmenta [L.] a covering.

mesencephalic t. the part of the mesencephalon that contains the motor nuclei of the oculomotor and trochlear nerves, the red nucleus, and the reticular formation.

Tegu large and powerful South American lizards of the family Teiidae, most in the genus Tupinambis. Large numbers harvested for meat and skin in Argentina, an invasive species in Florida, and also common in the pet trade.

teichoic acids [ti-ko′ik] antigenic polymers of glycerol or ribitol phosphates found attached to the cell walls or in association with membranes of gram-positive bacteria; they determine group specificity of some species, e.g., the staphylococci.

teleogen [ti-le-ōj′on] a phase of the estrous cycle of the mature female in which the organ is not responsive to an artificial stimulus.

teleocrisis [ti-le-ōk′ri-sis] an end-stage. The sexual reproductive form of a fungus.

teleorganic [ti-le-ōr-gan′ik] necessary to life.

teleost [ti-le-ōst] fish of the class Ostichthyes, having the skeleton completely ossified.
critical t. 1. that below which a gas may be converted to a liquid by pressure. 2. the environmental temperature at which the body is unable to maintain a constant body temperature and at which heat production must be increased (cold temperatures) or at which heat loss must be increased (high temperatures).

effective t. the combination of air temperature, humidity, and wind speed. See also temperateness index.

environmental t. air temperature.

nonpermissive t. one at which a conditional gene mutation is nonfunctional. See also temperature-sensitive mutation.

normal body t. that usually registered by a healthy animal. See pyrexia.

permissive t. one at which a conditional gene mutation can express its normal function. See also temperature-sensitive mutation.

phase transition t. temperature, usually between 30°C and 40°C, at which biological membranes change from a rigid gel phase to a thinner, more fluid phase.

premortal t. fall the sudden fall in body temperature of a previously fevered animal just before death.

rectal t. the body temperature as measured by a rectal thermometer that has been in situ and in contact with the mucosa of the rectum with the anal sphincter tightly closed for at least 30 seconds. Alternative faster equipment is a dipolar electrode in a rectal probe.

t. stress exposure to excessively high or low environmental temperature.

wind chill t. a combination of wind velocity and air temperature. See also effective temperature (above).

temperature–humidity index [tem′par-a-char] air temperature as measured by a wet-bulb thermometer and an expression of apparent temperature and comfort of animals in it.

temperature-sensitive [tem′par-a-char] living organisms that are sensitive to temperatures outside of a narrow range, e.g., virus vaccine that does not replicate at deep body temperature, but does replicate in the respiratory tract.

t.-s. (ts) mutants strains of microorganisms that are able to grow at certain low temperatures, say 90°F (32°C), which is referred to as the permissive temperature, but are unable to grow at higher temperatures, say 102°F (39°C), which is referred to as the nonpermissive temperature. Such conditionally lethal mutants have been much used in the genetic analysis of microorganisms. At the nonpermissive temperature, the protein product of a particular gene is unstable, and hence nonfunctional, whereas the protein function is normal at the permissive temperature. These mutants have also been selected for use in vaccines because their inability to grow at higher temperatures limits their pathogenicity, e.g., ts strains of Mycoplasma gallisepticum, M. synoviae, and M. hypovirneumiae, which, when administered intranasally, grow in the upper, but not the lower, respiratory tract and thus do not cause serious disease.

t.-s. proteins proteins that are functional at lower temperatures, but not at higher ones. See temperature-sensitive mutants (above).

template [tem′pa-l] the macromolecule that serves as a pattern for the synthesis of another macromolecule. In nucleic acid synthesis, the DNA from which a new strand is copied. See also deoxyribonucleic acid, PCR.

temple [tem′pə-l] the lateral region on either side of the head, above the zygomatic arch; a term commonly used in humans (where it originally signified the passage of time (Latin tempus = time)) because this is where the first gray hairs are often seen in men). The term is not used in animals, except with reference to the temporal bone, muscle temporomandibular joint, temporal vessels, and nerves, etc. See also temporal.

temporal [tem′po-lər] subject to change with the passage of time.

temporar y [tem′par-o-rəl] 1. pertaining to the temple. Said of bones and muscles—see Tables 9 and 12. 2. pertaining to time; limited as to time; temporary.

t. distribution distribution of events or population in chronological time; a suitable scatter graph may reveal clusters that have epidemiological significance.

t. lobe the lower lateral portion of the cerebral hemisphere covered by the temporal bone of the skull.

t. summation occurs in the transmission of nerve impulses when a volley of impulses arrives at a synapse so that the duration of the impulses is briefer than the postsynaptic potential, and their deliveries of transmitter are combined to create a larger than normal response.

temporary [tem′par-ər] for a short time only.

temporomandibular [tem′par-ə-man-dib′u-lər] pertaining to the temporal bone and mandible.

t. dysplasia subluxation with open-mouth jaw locking occurs in Irish setters and Basset hounds, caused by developmental abnormalities in the
condylar process of the mandible and the mandibular fossa of the temporal bone. Called also temporomandibular joint (TMJ) syndrome.

tetaromandibular [tim-pə-rod-ō-ka-nite] pertaining to the temporal bone and maxilla.

temperocapital [tem-pə-ro-ok-spə-lə-tal] pertaining to the temporal and occipital bones.

temperosphenoid [tem-pə-ro-sfe-noid] pertaining to the temporal and sphenoid bones.

tempestable [tem-pə-stə-bəl] not subject to change with time.

TEN toxic epidermal necrolysis.

ten eighty (1080) sodium fluoroacetate.

ten eighty one (1081) fluoroacetamide.

10 Point Plan see Milk and Dairy Beef Residue Prevention Protocol

Tennicibacter marinum a gram-negative gliding bacterium that causes marine Flexibacter disease. Previously called Flexibacter marinum.

tenacious [tə-na-s̪həs] viscous; adhesive.

tenaculum [tə-nək-ə-ləm] a hook-like surgical instrument for grasping and holding parts.

tenascins [tə-nəs-sɪnz] a family of extracellular matrix proteins that modify interactions of cells with other matrix components, as well as growth factors, and these interactions typically result in increased cell motility. They are considered to be antiadhesive or adhesion-modulating extracellular matrix proteins.

tender said of wool whose fibers break easily because of a weakness caused by an illness or feed stress.

tenderizing [tən-dər-nɪz] natural tenderizing is caused by the action of enzymes already in tissues. This effect can be enhanced by quick freezing of enzyme preparations of papain (from pawpaw) or bromelin (from pineapple).

tenderness [tən-dər-nəs] a state of unusual sensitivity to touch or pressure.

rebound t. a state in which pain is felt on the release of pressure over a part.

tenderstretch tenderizing see tenderizing.

tendinitis [tənd-nətɪs] inflammation of tendons and of tendon–muscle attachments. It is one of the most common causes of lameness. Tendinitis may be associated with a calcium deposit (calcific tendinitis), which may also involve the bursa around the tendon or near the joint, causing bursitis.

tendinoplasty [tən-dɪ-nə-plə-stɪ] tenoplasty.

tendinosuture [tən-dɪ-no-soo-ərə] tenorrhaphy.

tendinous [tən-dɪ-nəs] pertaining to, resembling, or of the nature of a tendon.

tendo [ten-do] [L.] tendon.

t. Achilles, t. calcaneus Achilles tendon, the thick tendon of the triceps surae muscles (gastrocnemius and soleus) that inserts on the tuber calcanei; called also calcaneal tendon. Compare with tenco calcaneo communis (below).

t. calcaneo communis the common calcaneal tendon. It is made up of the aggregated tendons in the distal part of the crus that include those of the triceps surae (gastrocnemius and soleus that make up the Achilles tendon proper), the flexor digiti superficialis m., and the hamstrings (biceps femoris and semitendinosus muscles); because the term is long-winded, often Achilles tendon is preferred even though strictly it is not the same. Animals that are hamstring have this tendon severed and become hopelessly crippled.

tendolysis [tən-də-lə-sɪs] tenolysis; the freeing of a tendon from adhesions.

tendon [ten-dən] a sheet, cord or band of strong white fibrous tissue that connects a muscle to a bone or other structure. When the muscle contracts, or shortens, it pulls on the tendon. Tendons serve to convey an action to a remote site, change the direction of pull, and focus the force. Sheet-like tendons (aponeuroses) serve to support and squeeze, cordlike ones to act on joints. See also eunean tendon.

t. bowed t. inflammation of one or more of the tendons on palmar, or plantar, aspect of the fore- or hindlimbs, respectively. Occurring within the confines of the tendon a visibly curved, or bow-shape, to the affected region can be appreciated. The superficial flexor tendon is commonly affected, however similar damage can occur to the deep digital flexor tendon or the distal (inferior) check ligament where it is more correctly termed a desmitis. The horse is lame or inclined to lameness, the tendon is thickened and is visibly enlarged. It may be painful on palpation in the early, acute stages.

calcaneal t. see Achilles tendon.

t. cartilaginous metaplasia focal metaplasia with the formation of cartilage in tendons causes no apparent harm and is considered to be normal.

c. congenital t. contracture an inherited contracture of multiple tendons is identified in cattle. The joints are fixed in extension or flexion. A cause of dystocia. See also Akabane virus disease.

t. contracture contraction of tendon that can be congenital or acquired. Acquired flexural deformities can involve the deep digital flexor or superficial digital flexor tendons. Most commonly of the flexor tendons of the digit in foals but can affect other species (e.g., elephants, other equids). The action of the affected limb is restricted, and the limb is not fully extended at rest causing the animal to stand up on its toe. Correction is attempted by splints and casts and the parental administration of oxytetracycline that affects the structural organization of collagen. Called also contracted tendons.

flexor t.’s tendons of the superficial and deep flexor muscles of the digit. Commonly strained, lacerated, and separated in the racing horse.

t. graft historically performed in horses with badly torn or ruptured flexor tendons. Autologous grafts are taken from the lateral digital extensor tendon.

hamstring t. see hamstring.

t. implants see carbon fiber implants.

internal biceps t. a core of fibrous tissue within the biceps muscle of horses that serves a significant role in the stay apparatus.

interosseous t. suspensory ligament (1).

t. luxation slipping of the superficial flexor tendon of the hindlimb of the horse off the tuber calcis, usually laterally with disruption of the medial retinaculum; also occurs rarely in dogs and ostriches. See also periosis.

t. osseous metaplasia an abnormal ossification within a tendon; can cause restriction of function. See also tendon ossification (below).

t. ossification occurs extensively in gallinaceous birds in the tendons of the legs and feet, the wings, and the epaxial musculature. Although the ossification may be extensive, the birds are normal, and the reasons for the changes are unknown.

peripubic t. the tendon of insertion of the two abdominal recti muscles on to the pubis.

t. sheath a fluid-filled sleeve that resembles a synovial bursa wrapped around the tendon so as to form a continuous sheath, except for the mesotendon.

t. of the horse, 2nd ed. Elsevier Health Sciences, 2013.
t. splitting a surgical technique in which the affected tendon (superficial or deep digital flexor tendon) or ligament (the suspensory or patellar ligaments) are split along their long axes using a needle, scalpel blade, or specialized instrument. The objective is to decompress an acute tendon injury with a central blood clot (core-lesion) and stimulate vascularization to hasten repair. Performed on the medial patella ligament of horses affected by upward fixation of the patella. This creates inflammation and scarring that ultimately shortens the ligament preventing the condition.

t. sprain see sprain.

t. strain the injury caused to flexor tendons in the horse during racing. Most commonly affected is the superficial flexor tendon in the front limb. See also bowed tendon (above). Called also sprained tendon.

t. symphysial t. a vertical median sheet that hangs from the pubic symphysis and provides an origin for the medial thigh muscles.

tendonectomy surgical severance of a tendon. Called also tenotomy.

tendonitis [ten-o-nil 'Itis] teniae' disease of tendons and tendon sheaths, usually accomplished by the use of a contrast agent; largely replaced by ultrasonography.

tendovaginal [ten'o-vaj 'I-nal] pertaining to a tendon and its synovial sheath.

tendovaginitis [ten'o-vaj 'I-nil 'Itis] inflammation of a tendon and its tendon sheath.

Tenebrio molitor 't. coli' a pest of stored grain that may attack the tendons. Called also yellow mealworm.

Teneba melior [t'a-neb'e-ə] a pest of newly hatched birds. Other mealworm species are known to have the same effect. Called also yellow mealworm.

tenia [te'n-e-ə] pl. teniae ['tI-ə] a flat band or strip of soft tissue. A concentration of external longitudinal muscle and elastic fibers, e.g., on the large intestine of horses, pigs, and some other species, dividing it into two to five longitudinal segments that are divided further into transient haustra or pockets. See tenia ceci and tenia coli (below).

t. ceci one of the several longitudinal muscular bands on the external surface of the cecum of some species, such as the horse, pig, and rabbit, that puckers the tract into haustra.

t. coli the bands on the surface of the colon of some species. In the horse the thickened bands (tenia libera, tenia mesocolica and tenia omentalis) formed by longitudinal fibers in the tunica muscularis of the colon, the number varying from one to four.

teniacide [te'n-'e-a-sid] 1. lethal to tapeworms. 2. an agent lethal to tapeworms.

teniafuge [te'n-e-a-fug'] a medicine for expelling tapeworms.

teniamyotomy [te'n-e-a-mı-o-tŏ-mı] a surgical technique in which a series of transverse incisions of the teniae coli are made.

teniasis [te'n-e-a-sis] infection with tapeworms of the genus Taenia. The adult tapeworms do not cause a clinically recognizable disease. The larval stages may cause clinical signs described under coenurosis or cysticercosis.

tenid pertaining to or emanating from cestodes in the family Taeniidae; also spelled ‘taenia’.

Tennessee walking horse a horse, originating in a Standardbred stallion, and bred for show and pleasure; the breed is characterized by its showy fast walk that can lapse into a pacing gait unless care is taken. It is a fast, four-beat gliding walk reputed to be the most comfortable of all the gaits for the rider. A robust, less elegant version of the American Saddle horse, about 15–15.2 hands high, usually black or chestnut with white markings.

tenessine (Ts) element 117 was officially given the name of tennesine in November 2016 by the International Union of Pure and Applied Chemistry (IUPAC).

tennis racket spore classical shape of Clostridium tetani bacterium containing a terminal spore. Called also drumstick spore.

ten(o)- word element. [Gr.] tendon.

tenodesis [ten-o-'đe-sıs] suture of the end of a tendon to a bone.

tenolysis [ten-o-'lisis] the operation of freeing a tendon from adhesions.

tenomyoplasty [ten-o-'mi-o-plas'te] plastic repair of a tendon and muscle, applied especially to an operation for inguinal hernia.

tenomyotomy [ten-o-'mi-o-ta-me] incision of a portion of a tendon and muscle.

tenonectomy [ten-o-'nek-'ta-me] excision of part of a tendon to shorten it.

tenonitis [ten-o-'nit-is] 1. tendinitis. 2. inflammation of Tenon's capsule, the episcleral connective tissue surrounding the sclera; episcleritis.

tenonometer [ten-o-'nom-a-ter] an apparatus for measuring intraocular pressure; tonometer.

Tenon's capsule [ten-o-'nav] condensation of connective tissue on the outer surface of the sclera from the limbus to where it becomes continuous with the extraocular muscle fascia.

tenon(t)- word element. [Gr.] relationship to tendon.

tenonography [ten-o-'gra-fı] a written description or delineation of the tendons.

tenontology [ten-o-'ton-a-je] the sum of what is known about the tendons.

tenonothecitis [ten-o-'the-sit-is] tenosynovitis.

tenophyte [ten-o-fit] a growth or concretion in a tendon.

tenoplasty [ten-o-'plas-te] plastic repair of a tendon.

tenoreceptor [ten-o-'se-ro-pı-tar] a nerve receptor in a tendon.

tenorrhaphy [ten-o-'ra-fı] suture of a tendon.

tenorrhaphy [ten-o-'ra-fı] suture of a tendon.

three-loop t. a technique used for the repair of avulsion injuries of tendons, particularly the gastrocnemius tendon. It involves multiple throws of suture material through the tendon and the site of attachment. Its advantages are better closure of gaps with minimal distortion of tendon ends and disruption of blood flow.

tenosis [ten-o-'sis] tendinitis.

tenostosis [ten-o-'stosis] osseous malaplasia of tendon.

tenosuspension surgical attachment of the head of the humerus to the scapula by a strip of tendon; carried out as a treatment for habitual dislocation of the shoulder.

tenosuture [ten-o-'soo-char] see tenorrhaphy.

tenosynovectomy [ten-o-'sin-o-vek-'ta-me] excision or resection of a tendon sheath.

tenosynovitis [ten-o-'sin-o-vı-'tis] inflammation of a tendon and its synovial sheath. Arthritis frequently involves tendon sheaths. A less common cause of tenosynovitis is injury to the tendon sheath and subsequent infection.

villonodular t. a condition marked by exaggerated proliferation of synovial membrane cells, producing a solid tumor-like mass, can occur in peritendinous soft tissues and less frequently in joints.

tenotomy [ten-o-'tom-ı] transection of a tendon.

tenotomized t. partial transection of a tendon.

tenovaginitis [ten-o-'va-gi-nil 'Itis] tenovaginitis.

tenrec an insect-eating mammal related to the hedgehogs and shrews, belonging to the family Tenrecidae, native to Africa, Madagascar, and nearby islands. They are unusual among mammals in that they have a cloaca.

TENS transcutaneous electrical nerve stimulator.

Tension [ten-'shan] 1. the act of stretching or the condition of being stretched or strained. 2. the partial pressure of a component of a gas mixture or of a gas dissolved in a fluid, e.g., of oxygen in blood. 3. voltage.

arterial t. blood pressure within an artery.
t. band wires heavy-gauge wire is inserted in fracture fragments and around pins placed in the fragments in order and adjusted to create compression on the fracture site. Suited for treatment of apophyseal or epiphyseal avulsion fractures. See also tension band plate.

intraocular t. see intraocular pressure.

t. line the direction of pull on the skin in any given region; usually corresponding with alignment of fibrous connective tissue. Called also Langer’s line, cleavage line. A map of the body, drawn to show the various lines of pull, or tension, is useful in planning surgical closure of skin incisions, particularly ones with defects, in order to minimize forces that might cause dehiscence.

surface t. tension or resistance that acts to preserve the integrity of a surface.

tissue t. a state of equilibrium between tissues and cells that prevents overaction of any part.

tension-time index [ten’ʃən] a measure of myocardial oxygen consumption that is the product of ejection pressure times ejection time or, graphically, the area under the pressure-time curve

tensor [ten’so-r] any muscle that stretches or makes tense.

t. veli palatini see Table 12.1C.

tent [tend] a conical, expandable plug of soft material for dilating an orifice or for keeping a wound open, so as to prevent its healing except at the bottom.

t. pegging equine sport invented in India. The horse is ridden at a canter, and the rider attempts to uproot a tent peg from the ground with a sharpened lance.

sponge t. a conical plug made of compressed sponge used to dilate the os uteri.

tentacle [ten’ta-kəl] a slender, whip-like appendage in some animals, especially invertebrates, that may function in prehension and feeding or as a sense organ.

tenting see skin tenting test.

tentorial (ten-to’r-e-əl) pertaining to the tentorium of the cerebellum.

t. hernia see tentorial herniation.

tentorium [ten’-tor-e-am] pl. tentoria [L.] a part resembling a tent or covering.

t. cerebelli the fold of meninges that separates the rostral or superior aspect of the cerebellum from the occipital lobes of the cerebral hemispheres. Ossifies early in life to become the osseous tentorium. Used especially in vertebrates, that may function in prehension and feeding or as a sense organ.

tenacious acid a beta-diketone mycotoxin produced by the fungi Alternaria spp.

tep in die [L.] three times a day; used in prescriptions and medical records to denote a treatment interval of every 8 hours; abbreviated i.e.d., TID, and q8h.

tera- (T) [Gr.] monster; a prefix used in the metric system of measurement to designate an amount 10⁻¹² (a million million or a trillion) times the unit, e.g., terabyte.

teras pl. terata [L., Gr.] a monster.

teratology [ter’a-tol’a-jə] an anomaly of formation or development.

terat(o)- word element. [Gr.] monster, monstrously.

terahloblastoma [ter’a-to-blás-to’-mə] a neoplasm containing embryonic elements, differing from a teratoma in that its tissue does not represent all germinal layers.

teratocarcinoma [ter’a-to-kahr’-sîn-ə-mə] a malignant neoplasm consisting of elements of teratoma with those of embryonal carcinoma or chorionic carcinoma, or both; occurring most often in the testis, occasionally in uterus.

teragen [ter’a-to-jen] an agent or influence that causes physical defects in the developing embryo.

teratogenesis [ter’a-to-jen’a-sis] the production of deformity in the developing embryo, or of a monster.

teratogenic [ter’a-to-jen’a-jik] pertaining to or emanating from teratogen.

teratogenicity the capacity to act as a teratogen.

heat t. occurs rarely as a result of high temperatures in early pregnancy. Observed defects are of the central nervous system, and of the limbs including arthrogryposis and selective shortening.

teratogenous [ter’a-to-jen’a-gəns] developed from fetal remains.

teratogeny [ter’a-to-jen’a-je] teratogenesis.

teratoid [ter’a-to’d] 1. resembling a monster. 2. Abnormal development.
terminatio pl. terminations [L.] an ending; the site of discontinuation of a structure, as the free nerve endings (terminations nervorum liberae), in which the peripheral fiber divides into fine branches that terminate freely in connective tissue or epithelium.

termination signal a specific sequence in DNA at which the RNA polymerase and the newly made RNA transcript are released from their DNA association.

Terminologia Embryologica (TE) the standardized list of words to be used in the description of prenatal human ontogeny, embryologic, and fetal structures; produced by the Federative International Committee on Anatomical Terminology.

termology [tur′mi-nol′a-jə] 1. the vocabulary of an art or science. In medical and veterinary sciences, accurate terminology is essential for proper data storage and retrieval and requires an internationally recognized nomenclature of diseases, pathology, clinical indicators, treatments, and surgical operations. 2. the science that deals with the investigation, arrangement, and construction of terms.

terminus [tur′mi-nas] pl. termini [L.] an ending.

tern a marine bird, distributed worldwide, in the family Laridae. together with gulls. They are effortless fliers, great divers, primarily fish feeders.

ternary [ter-nə-rē] 1. third in order. 2. made up of three elements or radicals.

Terndens [ter-nə-danz] a genus of strongylid worms in the family Chabertiidae.

T. deminutus found in the large intestine of primates and occasionally humans. They cause anemia and the development of nodules in the intestinal wall similar to those of Oesophagostomum spp.

terpin [tur′pin] a product obtained by the action of nitric acid on oil of turpentine and alcohol.

t. hydrate an expectorant.

terranova a genus of nematodes in the family Anisakidae that parasitize clasmobranch species.

terrapin freshwater, semiaquatic Chelonia; see also turtle.

terrarium an aquarium or cage that contains live plants, a higher humidity, and no swimming water. See also vivarium.

terniers a group of dog breeds, most were developed as farm dogs in the free range of dogs in those countries. Most have a hard, wiry coat for the purpose. Includes such breeds as the Airedale, Australian, English Toy, Chihuahua, Sable, Skye, Soft-coated Wheaten, Staffordshire, Tibetan, Welsh, West Highland white, and Yorkshire.

territoriality [ter-ter-ē-al-ə-tē] see territorial aggression.

tertian [tur′shon] recurring in 3-day cycles (every third day).

tertiary [tur′e-er-ē] third in order.

t. structure proteins unique structure made up of secondary structure (such as helices, β-sheets) folded in a specific way to determine the three-dimensional, biologically-active conformation of a protein.

tertigravida [ter-tī-grav′ī-də] a female pregnant for the third time; gravidia III.

tertipara [ter-tip′ə-rə] a female that has had three pregnancies that resulted birth; para III.

Tervuren, Tervueren see Belgian Tervuren.

Teschen disease [tesh̩an] see porcine viral encephalomyelitis.

Tescovirus a genus in the family Picornaviridae, associated with porcine viral encephalomyelitis.

Tesi (T) [te′sə] the SI unit of magnetic flux density, equal to one weber per square meter.

tesselated [tes′ə-lə-ted] relating to or like a mosaic, having covered a flat surface using a geometric shape with no overlaps or gaps.

test [tes] 1. an examination or trial; 2. a significant chemical reaction; 3. a reagent. See also under specific names of tests.

cis-trans t. used in microbial genetics to determine whether two mutations that have the same phenotypic effect are located in the same gene or in different genes; genetic material from one mutant may restore the wild-type phenotype in a mutant with a mutation in a different gene, but not in a mutant with a mutation in the same gene; also called a complementation test.

critical t. the titer of a test at which the patient is judged to have reacted positively to the test.

t. day day on which all lactating animals in a dairy herd have their milk weighed and sampled and data such as calving dates, dry-off dates, and breeding dates, is collected for analysis. Generally conducted once a month.

diato t. a group of tests for bilirubin conjugates in urine and therefore suitable for the detection of biliary and hepatic disease. Based on the combination of bilirubin with a stable diazonium compound.

t. efficiency the percentage of the time that the test gives the correct answer compared to the total number of tests.

t. exact t. a statistical test based on the exact distribution of the data under the null hypothesis, rather than on a normal approximation.

t. hypothesis t. the method by which a hypothesis is judged.

sulfanilate clearance t. see sulfanilate.

t. station set up by the government or a cooperative organization for the purpose of testing individual livestock provided by farmers for productivity in terms of egg production, milk yield, weight gain. The feeding and measurement are under the control of the station.

t. statistical t. used to decide between two hypotheses.

t. surrogate t. an indirect test, e.g., milk somatic cell count for evidence of mastitis.

t. tolerance t. 1. an exercise test to determine the efficiency of the circulation. 2. determines the body's ability to metabolize a substance or to endure administration of a drug, e.g., insulin tolerance test.

t. triglyceride absorption t. see fat absorption test.

t. urine concentration t. see water deprivation test.

V.-t. a dexamethasone suppression test followed by an ACTH response test; the name refers to the change in plasma cortisol concentrations, first depressed then elevated, which if plotted on a graph would form a V. The test is used to diagnose disease control program based on selective slaughter of animals selected on the basis of evidence of disease or infection, usually chosen by an immunological test but also by other methods such as microbiological culture, PCR testing of biopsy material, or genetic analysis. Used as a method to eradicate a disease from a herd or a country.

test mating the technique of mating a suspected heterozygote with a large population of animals with known genotypes for the gene in question, in order to test whether the suspect is in fact a carrier of the subject gene. The test needs an adequate number of test animals to achieve statistically significant results.

t. meal a portion of food or foods given for the purpose of determining the functioning of the digestive tract.

t. barium t. m. a meal containing barium sulfate as the opaque constituent. See also barium study.

testosterone t. m. food or drink whose progress through the stomach, pylorus and intestinal tract is observed fluoroscopically.

t. opaque t. m. a meal containing some substance opaque to x-rays, permitting visualization of the gastrointestinal tract.

t. tube a tube of thin glass, closed at one end; used in chemical tests and other laboratory procedures.

t. testectomy [tes-tek-te-om-ə] the removal of a testis. Called also orchectomy, orchidectomy.

testicular population in breeding programs it is often necessary to evaluate a strain or breed; the evaluation is carried out by mating the population to be tested with a tester herd.

t. estes [tes-ēz] [L.] plural of testis.

t. testicole [tes-tī-kōl] tests.

testicular [tes-tik′ə-lər] pertaining to the testis.

t. agenesis absence of one or both testes, usually part of a wider range of defects.

t. anomaly includes hypoplasia, cryptorchidism, agenesis, heterotopia, polychromatophilia, cystic rete testis, and heterotopic Leydig cells and accessory adrenal cortical tissue.

t. biopsy percutaneous sampling of tissue for laboratory examination.

t. calcinosus a sequela to chronic inflammation and concurrent with fibrosis; common in rams and often associated with Brucella ovis infection.

t. degeneration the most frequent cause of male infertility; many causes; regeneration and return to normal function possible provided some spermatogenesis survive the insult and the basement membrane of the tubules is undamaged.

t. descent includes the passive descent from the roof of the abdomen to the neck of the inguinal canal, followed by the shorter, also passive, descent through the inguinal canal into the scrotum.

feminization syndrome older term for androgen insensitivity syndrome, an extreme form of male pseudohermaphroditism, with female external genitalia, including secondary sex characteristics, but with the presence of testes and absence of uterus and tubes; it is due to end-organ resistance to the action of testosterone.

t. fibrosis a sequel to inflammation or degeneration; common in old bulls.
t. foreign body constriction malicious application of a constricting foreign body, usually an elastic band, around the base of the scrotum in dogs is an occasional cause of orchitis or necrosis of the testicles and scrotum, often necessitating castration with scrotal ablation.

t. hypoplasia occurs as an uncomplicated state, or as part of cryptorchidism or intersex anomaly; an inherited defect in Swedish Highland cattle.

t. inflammation see orchitis.

t. lobuli lobules created in the testis by connective tissue septa. Formally called lobuli testis.

t. mediastinum the central dividing plane of tissue that divides the testes and is continuous with its tunica albuginea.

t. septuli interlobular connective tissue partitions that extend from the mediastinum testis to the tunica albuginea and that divide the testes into lobules. Formally called septula testis.

t. torsion causes pain and swelling of the scrotum, abdominal pain and vomiting. In dogs, testicles with neoplasms are predisposed to torsion. Occurs occasionally in stallions (180°).

t. tumors includes interstitial cell and Sertoli cell tumors and seminomas.

The male gonad; either of the paired, egg-shaped glands normally situated in the scrotum; called also testicle. The testes produce the spermatozoa, the male reproductive cells, which are ejaculated into the female reproductive tract during coitus, and the male sex hormone, testosterone, which is responsible for the secondary sex characters of the male. There has been debate about whether the testes are responsible for the development of the male reproductive organs and the secondary sex characters, such as the crest. It is necessary for the appearance of normal male sexual behavior. It encourages growth of bone and muscle, and helps maintain muscle strength. It is occasionally secreted in large amounts also by granulosa–theca cell tumors of the ovary, especially in mares.

t. cyclopentylpropionate, t. cypionate, t. propionate esters with a long period of activity.

t.-responsive dermatosis some cases of alopecia X respond to supplement with testosterone, but luteinizing hormone analogs have been demonstrated.

Testudo genus of tortoises in the family Testudinidae, small to medium in size, native to North Africa, Asia, and Europe. Includes T. graeca (common tortoise or spur-thighed tortoise), T. hermanni (Hermann's tortoise). See also turtle.

tetanic [te-tan-ik] 1. tonic. 2. pertaining to tetanus.

t. convulsions convulsions characterized by prolonged muscle spasm without intervening periods of relaxation. The legs are extended, the neck is dorsiflexed. Seen in strychnine poisoning and tetanus.

tetaniform [te-tan-i-form] resembling tetanus.

tetanogenous producing tetanic spasms.

tetanization [te-tan-i-za-shun] the induction of tetanic convulsions or muscular spasms.

tetanize [te-tan-iz] to induce tetanic convulsions or muscular spasms.

tetanolepsin a toxin produced by Clostridium tetani that causes lysis of erythrocytes; it is not clinically significant.

tetanolsyn the hemolytic exotoxin produced by Clostridium tetani, the causative organism of tetanus; not known to play role in pathogenesis.

tetanospasmin [te-tan-o-spaz-min] the neurotoxic exotoxin produced by Clostridium tetani, which inhibits release of gamma amino butyric acid by inhibitory neurons, through its action on the neurotransmitter vesicle protein, synaptobrevin, resulting in tetanic spasms.

tetanus [te-tan-us] a highly fatal disease of all animal species caused by the neurotoxin of Clostridium tetani. The bacterial spores are deposited in tissue, usually by traumatic injury, retained placenta, or endometrial injury and, under anaerobic conditions, vegetate. Clinical features of the disease are remarkably similar in all species but there are differences in susceptibility to the disease. The muscle spasms cause a stiff gait, rigid posture (sometimes called ‘sawhorse stance’), extension or elevation of the tail, protrusion of the third eyelid and trismus (lockjaw). Horses show flaring of the nostrils. In dogs, spasms of facial muscles cause abnormally erect ears and retraction of the lips that resembles the ‘risus sardonicus’ seen in humans with tetanus. Stimulation precipitates generalized muscle contractions and tetanic spasms or convulsions.

The disease can be prevented by immunization with tetanus toxoid or the use of antitoxin, but this is done routinely only in humans and horses. Usually isolated cases, but outbreaks can follow management procedures to a group of animals, such as castration.

t. antitoxin see tetanus antitoxin.

idio pathic t. a loosely defined syndrome of outbreaks of tetanus in young cattle without a wound being found; current practice is to refer to such outbreaks as being caused by the ingestion of pre-formed tetanus toxin.

local ized t. tetany occurs predominantly in one limb, closest to the site of entry of the organism, but then usually spreads to the opposite limb and may progress to a more generalized form. Seen in dogs and particularly cats.

t. neonatorum tetanus resulting from infection of the umbilical cord.

t. toxin see tetanus toxin.

t. toxoid see toxoid.

Tetany [te-ta-nil] continuous tonic spasm of a muscle; steady contraction of a muscle without distinct twitching. It is manifested clinically by rigidity of limbs, pricking of ears, flaring of nostrils. In extreme tetany, as in tetanus, the rigidity is lead-pipe in nature in that the resistance to bending is constant. In less severe tetany, e.g., an upper motor neuron lesion, there is resistance at first, but as soon as this is overcome the limb flexes easily.

ggrass t. see lactation tetany (2).
hyperventilation t. tetany produced by forced inspiration and expiration continued for a considerable time.

hypocalcemic t. see lactation tetany, puerperal tetany (below).

hypomagnesemic t. a highly fatal disease of calves fed solely on a milk diet and therefore lacking in magnesium. Clinically, there is muscle tremor, hypersensitivity to touch and convulsions. In between fits the calves may appear relatively normal. Death is common. Called also milk tetany. An alternate name for lactation tetany.

lactation t. see lactation tetany.

lactational t. see lactation tetany.

magnesium-deficiency t. a product of experimental nutrition but see also lactation tetany.

milk t. see hypomagnesemic tetany (above).

parathyroid t., parathyroprival t. tetany due to removal or hypofunction of the parathyroid glands.

t. pastures lusher grass or cereal crop pastures, in the early spring when they have grown rapidly, and their magnesium content is low. The weather is also inclined to be inclement with a high wind-chill factor, and there is little or no shelter for the recently calved cows.

puerperal t. a syndrome of hypocalcemia in bitches, usually of small breeds, typically 2–3 weeks after whelping, caused by the loss of extracellular calcium in lactation. Affected bitches show restlessness, tremor, hypersensitivity to touch and convulsions. In between fits the bitches may appear relatively normal. Death is common. Called also milk tetany. An alternate name for lactation tetany.

recurrent t. see Scottie cramp.

transit t. of cows, see transit tetany; of mares, see lactation tetany.

tether to tie an animal up by the head or neck so that it can graze but not move away. See also Barton tether.

tetmosol a topical acaricide toxic to birds if used to excess. Called also monosulfiram.

tetra any one of a number of brightly colored tropical fish in the family Characidae, much favored for home aquariums. Includes neon tetra (Paracheirodon innesi).

tetra- word element. [Gr.] four.

tetrabrachius [tet’ra-brak’es] conjoined twins having four forelimbs.

tetrabromophenol test [tet’ra-brom’o-fe-nol] an impregnated paper dip test for protein in urine. A change of color from yellow to green or even blue is a positive reaction, and the concentration of protein can be estimated by the degree of color change.

tetracaine [tet’ra-kain] an ester local anesthetic used in the form of the hydrochloride salt. Can be administered by local injection but is also useful by topical application to conjunctiva, mucosa, and skin, or for spinal anesthesia. Called also amethocaine.

tetrachlorobenzodioxin [tet’ra-klor’o-di-ben’zo-di-ox’sin] a by-product in the manufacture of trichlorophenol that causes fatal cirrhotic fibrosis and veno-occlusive disease in animals and humans.

tetrachlorodifluoromethane a fasciocide, some samples of which cause interference with blood clotting and the development of extensive hemorrhages, myocarditis, and congestive heart failure. It is not recommended for general use. Also called Freon-112, difluorotetrachloro-ethane.

tetrachlorodifluoroethylene nondegradable insecticide; relatively non-toxic; cause in dogs causes adrenal cortical atrophy. Now seldom used.

tetrachloroethane [tet’ra-klor’o-eth’e-en] has had some usage as an anthelmintic; similar activity as carbon tetrachloride with less, but still significant risk of toxicity.

tetrachloroethylene [tet’ra-klor’o-eth’e-en] a colorless liquid used extensively at one time as an anthelmintic, particularly for Fasciola, but now superseded in all species by safer and more effective drugs. Overdosing causes incoordination immediately, hepatic insufficiency later.

tetrachlorvinphos an organophosphorus insecticide used to treat ectoparasites on cattle, goats, horses, and pigs, as well as being the active ingredient in some pet flea collars. Use banned in European Union.

tetraoctosacin cosynthropin.

tetracycline [tet’ra-si’klen] an antibiotic produced by cultures of Streptomyces aureofaciens and S. rimosus. It is effective against many different microorganisms, including rickettsiae, certain viruses, and both gram-negative and gram-positive bacteria. Administration is associated with pigmentation of developing teeth and bones, and in horses, colitis is an uncommon but serious side effect.

t. stain discoloration of dentin and enamel caused by systemic treatment with tetracycline during dental development; usually yellow to brown or green to gray.

tetrad [tet’rad] a group of four similar or related entities, as (1) any four-membered radical having a valence, or combining power, of four; (2) a group of four chromosomal elements formed in the pachytene stage of the first meiotic prophase; (3) a square of cells produced by division into two planes of certain cocci (sarcina).

tetradactyly a polypeptide that contains 14 amino acids.

tetradecapeptide a group of four similar or related entities, as (1) any four-membered radical having a valence, or combining power, of four; (2) a group of four chromosomal elements formed in the pachytene stage of the first meiotic prophase; (3) a square of cells produced by division into two planes of certain cocci (sarcina).

tetradecapeptide a polypeptide that contains 14 amino acids.

tetradifon an insecticide used in the form of the hydrochloride salt. Called also TEPP.

tetrahydrofolate [tet’ra-hi-dro-fol’at] an ed hepatotoxin that causes secondary photosensitization. Includes T. canescens (spineless horsebrush), T. glabrata (spring rabbitbrush, little leaf horsebrush, coal oil bush).

tetraethyl lead [tet’ra-et-il] the additive in leaded petrol. See also lead poisoning.

tetraethyl pyrophosphate [tet’ra-et-il’ pi’ro-fo-fos’fate] an insecticide used industrially and in agriculture and not to be used on animals. Accidental administration can cause death within an hour. Called also TEPP.

tetragonia tetratonioides plant in the family Aizoaceae; contains an unidentified hepatotoxin that causes secondary photosensitization. It is effective against many different microorganisms, including rickettsiae, certain viruses, and both gram-negative and gram-positive bacteria. Administration is associated with pigmentation of developing teeth and bones, and in horses, colitis is an uncommon but serious side effect.

tetrahydrobiopterin [tet’ra-hi’dro-bi-o-por’tan] pterin cofactor for the 3 mixed-function oxygenases that catalyze the hydroxylation of aromatic amino acids and for nitric oxide synthase. Hereditary deficiency of phenylalanine hydroxylase that catalyzes the conversion of phenylalanine to tyrosine is responsible for phenylketonuria (PKU) in humans. Such enzymes are also important for the biosynthesis of neurotransmitters such as serotonin and dopamine.

tetrahydrocannabinol (THC) [tet’ra-hi’dro-kan-ba-nol] the active principle of cannabis, occurring in two isomeric forms, both considered psychomotorically active.

tetrahydrofolic acid [tet’ra-hi’dro-fol’at] H4 folate; a coenzyme derived from the reduction of folic acid through dihydrofolate; involved in the metabolism of single carbon units in all redox states except CO2; an important cofactor in the synthesis of purines.

tetrahydroonarhamine toxic carboline found in Peganum spp. plants.

tetrahydroperergotamine [tet’ra-hi’dro-te’ra-kl-glo’te-ma-d] see tetrahydrofolic acid.

tetrahydropropiminides a group of broad-spectrum anthelmintics including pyrantel and morantel.

tetrahymena [tet’ra-hi-ma-nə] free-living, freshwater ciliate sometimes capable of infecting and causing disease in fish.

tetraiodophenolphthaaline [tet’ra-i’do-fe-do-nol’thal’-e-ni] a contrast agent used in radiography of the gallbladder and bile duct. Called also iodophthaline. No longer used.
tetraiodothyronine  thyroxine; see thyroid hormones. Called also T₄.

tetralogy [tɛ-tə-ˈrɑ-ˌjə] a group or series of four.

t. of Fallot  a congenital heart defect characterized by failure of conotruncal septal development. It includes pulmonic stenosis, a ventricular septal defect, overriding aorta, and right ventricular hypertrophy. Sometimes called trilogy of Fallot.

tetramastigote 1. having four flagella. e.g., Tetratrichomonas 2. a protozoan with four flagella.

Tetrameridae a genus of roundworms in the family Spiruridae. They inhabit the proventriculus of birds, primarily waterfowl.

Tetrameridae infestation with species of the genus Tetrameridae found in the cecum and colon of pigs; no evidence of pathogenicity. T. anatis found in the cecum of geese; not pathogenic. T. anseris found in the cecum of fowl, duck, guinea fowl, quail, pheasant, partridge, and probably Canada goose. Causes hepatic lesions similar to those caused by Histomonas meleagridis.

tetramisole a mixture of dextro- and levo isomers used as a non-narcotic analgesic, particularly Bedlington terrier copper-associated hepatopathy.

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thalamus /ˈθæləməs/ pl. thalami [L.] either of two large ovoid structures composed of gray matter and situated at the base of the cerebrum. The thalamus functions as a relay station in which sensory pathways from the spinal cord and brainstem form synapses on their way to the cerebral cortex. Specific locations in the thalamus are related to specific areas on the body surface and in the cerebral cortex. A sensory impulse from the body surface travels to the thalamus, where it is received as a primitive sensation and then sent on to the cerebral cortex for interpretation as to location, character, and duration. The thalamus has numerous connections to other areas of the brain as well, and these are thought to be important in the integration of cerebral, cerebellar, and brainstem activity.

thalassophobia the drinking of sea water.

Thalictrum European member of the plant family Ranunculaceae; contains the toxin protoanemonein; causes abdominal pain, diarrhea, salivation. Called also meadow rue.

thallium (Tl) /ˈθælɪəm/ a chemical element, atomic number 81, atomic weight 204.37. Its salts are active poisons. See thallotoxicosis.

t.-201 201Tl a radioactive isotope of thallium having a half-life of 73.5 hours; the principal emission is 71 keV x-rays.

t. poisoning see thallotoxicosis.

t. scan a scintillation scan involving the use of thallium-201 that localizes in the myocardium after intravenous injection. Areas of inadequate perfusion pinpoint the site of coronary artery occlusions.

thalix (Tl) /ˈθælɪks/ a chemical element, atomic number 81, atomic weight 204.37. Its salts are active poisons. See thallotoxicosis.

t. chloride (TlCl) a rodenticide. See thallotoxicosis.

t. scan a scintillation scan involving the use of thallium-201 that localizes in the myocardium after intravenous injection. Areas of inadequate perfusion pinpoint the site of coronary artery occlusions. Thallium-201 (Tc-201) or thallium chloride (TlCl) is used in the thallium scan to map myocardial perfusion. The thallium-201 is taken up by viable myocardium experiencing stress and is imaged using a thallium-201 scan.

thallotoxicosis thal.-o-tox-ic-o-sis /ˈθælələtəsəs/ a toxic condition caused by the presence of thallium; it resembles death.

thallus /ˈθæləs/ a case or sheath. See thalamus.

thalami /ˈθæləmi/ [L.] either of two large ovoid structures composed of gray matter and situated at the base of the cerebrum. The thalamus functions as a relay station in which sensory pathways from the spinal cord and brainstem form synapses on their way to the cerebral cortex. Specific locations in the thalamus are related to specific areas on the body surface and in the cerebral cortex. A sensory impulse from the body surface travels to the thalamus, where it is received as a primitive sensation and then sent on to the cerebral cortex for interpretation as to location, character, and duration. The thalamus has numerous connections to other areas of the brain as well, and these are thought to be important in the integration of cerebral, cerebellar, and brainstem activity.

thalamus [ˈθæləməs] pl. thalami [L.] either of two large ovoid structures composed of gray matter and situated at the base of the cerebrum. The thalamus functions as a relay station in which sensory pathways from the spinal cord and brainstem form synapses on their way to the cerebral cortex. Specific locations in the thalamus are related to specific areas on the body surface and in the cerebral cortex. A sensory impulse from the body surface travels to the thalamus, where it is received as a primitive sensation and then sent on to the cerebral cortex for interpretation as to location, character, and duration. The thalamus has numerous connections to other areas of the brain as well, and these are thought to be important in the integration of cerebral, cerebellar, and brainstem activity.

Thalidomide named after Adam Christian Thebesius (1686–1732), a German physician and anatomist.

t. foramina minute openings in the walls of the heart, especially the right atrium, through which the smallest cardiac veins empty into the heart.

t. valve the valve of the coronary sinus as it enters the right atrium.

thalamitis /ˈθæləmi-tɪs/ a condition of the thalamus resulting from infection with obligate intracellular protozoa in the genus Theileria. The diseases they cause result in huge economic loss in East African, Mediterranean, and Central and Southeast Asian countries. The two most important species in cattle are T. parva, causing East Coast fever, Corridor disease, and Zimbabwean theileriosis, and T. annulata, which causes tropical or Mediterranean theileriosis. In sheep, T. tenuis causes malignant ovine theileriosis. In general the diseases may be acute and severe or mild. Severe disease is characterized by high fever, nasal discharge, jaundice, petechiation of mucosae, enlargement of the spleen and lymph nodes, enlargement of the kidneys, and transient hemoglobinuria. Diagnosis is based on finding protozoa in the blood, lymph, or in the lymph node aspirates or biopsies. A feature, considered to be diagnostic is the presence of Koch's blue bodies or spots, lymphocytes containing macromesions, and detectable in smears stained with common blood-stain. Also molecular assays, based on conventional or real-time PCR technology, and indirect fluorescent antibody testing are used. The disease in cattle is notifiable to the OIE (see Table 21). See also East Coast fever, corridor disease, turning sickness.

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anemia may also occur. Common clinical signs include fever, enlarged lymph nodes, pale mucous membranes, a rapid loss of condition, and sometimes hemoglobinuria. Morbidity and mortality vary with the host's susceptibility. Called also tropical theileriosis.

**oriental t.** a mild form of East Coast fever caused by *Theileria orientalis.*

**tropical t.** Mediterranean coast fever.

**Theiler's disease** [ˈθiːlərz] an acute hepatopathy of horses, with high case fatality, associated with the administration of equine serum or tissue products. The disease is associated with infection by an equine parvovirus. Called also serum-associated hepatitis.

**Thelazia** a genus of spiruroid worms in the family Thelaziidae. Parasites *Thelazia* T. apodemi found in the brain of eld mice. *T. rhodesii* causes cutaneous abscesses in cyprinid and coregonid species known are from arthropods and shes. *T. alfortensis* (cattle), *T. bubalis* (dromedary), *T. erschowi* (horse). Called also Mediterranean coast fever.

**Thelaziasis** a genus of myxosporid protozoa in the class Myxosporea; parasites of freshwater fish. Includes *T. afororresis* (cattle), *T. bubalis* (water buffalo), *T. californiensis* (cat, dog, humans, sheep, and deer), *T. callipeda* (dog, rabbit, and humans), *T. eurchowii* (pig), *T. galula* (cattle), *T. lacrymalis* (horses), *T. leesi* (dromedary), *T. rhodesii* (cattle, sheep, goat, and buffalo), *T. skrabini* (cattle).

**Thelazia** [θɛləˈziə] infestation of the conjunctival sac with *Thelazia* spp. Causes conjunctivitis, lacrimation, blepharospasm, and keratitis.

**Theloplasty** [θɛləˈplæstɪ] a plastic operation on the nipple or teat.

**Thelitis** [θɛlɪtɪs] inflammation of a nipple or teat.

**Thelium** [θɛliəm] 1. a papilla. 2. a nipple.

**Thelohanellus** a genus of myxosporid protozoa in the class Myxospora; parasites of freshwater fish.

**Thelohania** a genus of parasitic protozoa in the phylum Microspora. Most species known are from arthropods and fish, with a few from mammals. May be zoonotic in immunocompromised humans.

**Thapsia** found in the brain of field mice.

**Th. boerii** found in the ovary of the stickleback fish.

**Th. contejeani, Th. cambri, Th. parastaci** cause ‘cotton-tail’, a whitening of the abdominal musculature in fresh water crayfish.

**Thelorrhagia** [θɛləˈrɔːrə] hemorrhage from the nipple.

**Thelygenic** [θɛləˈdʒɛnɪk] producing only female offsspring.

**Thelypodium lasiophyllum** North American plant of the family Brassicaceae; can cause nitrate–nitrite poisoning. Called also California mustard.

**Thienium closylate** [θiəˈniəm kloʊˈsə-lət] an older but effective anthelmintic against hookworms in dogs, commonly combined with piperazine to include control of ascarids.

**Theobalda** one of the genera of mosquitoes that are the definitive hosts for *Plasmodium* spp., the cause of avian malaria.

**Theobroma cacao** [θiəˈbroʊrə maˈkɔʊ] tree of South American origin of the family Sterculiaceae; seeds are the source of cocoa, chocolate; contains the toxic xanthine alkaloid theobromine that in excess causes diarrhea, sudden death in dogs and other animals. Commercial waste products from the plant may be fed to animals and cause theobromine poisoning.

**Theobromine** [θiəˈbroʊrə mɪn] an alkaloid prepared from dried ripe seed of the tropical tree *Theobroma cacao*; or made synthetically from xanthine; used as a diuretic, myocardial stimulant, vasodilator, and smooth muscle relaxant; available as theobromine calcium salicylate, sodium formate, sodium salicylate, and salicylate. See also chocolate toxicity.

**Theophylline** [θiəˈfiəlin] an alkaloid derived from tea or produced synthetically; it is a smooth muscle relaxant used chiefly for its bronchodilator effect in the treatment of bronchospasm. It also has myocardial stimulant, coronary vasodilator, diuretic, and respiratory center stimulant effects.

**Therapy** [θəˈripe] 1. the doctrine or the principles underlying an art as distinguished from the practice of that particular art. 2. a formulated hypothesis or, loosely speaking, any hypothesis or opinion not based upon actual knowledge.

**Therapeutic** pertaining to therapies, or treatment of disease; curative.

**Therapeutic decision making** the use of decision theory in making decisions about treatment of individual cases.

**Therapeutic incompatibility** the result of antagonistic pharmacological effects of several drugs in the one patient.

**Therapeutic plasma concentration** the blood concentration of a drug at which the desired therapeutic effect is obtained.

**Therapeutics** [θəˈræptɪks] 1. the science and art of healing. 2. a scientific account of the treatment of disease.

**Therapy** [θəˈripe] the treatment of disease; therapies. See also treatment.

**Animal-assisted therapy** the treatment of humans, usually for psychological issues, which incorporates familiarization with a companion animal. Called also pet-facilitated or pet-assisted therapy. See also animal facilitated therapy, emotional support animals.

**Anticoagulant** the use of drugs to alter blood clotting sufficiently to discourage thrombosis.

**Antiplatelet** treatment of all animals in the group used usually as a protective measure against infection, or because a large proportion of the animals are suspected to be infected, and it is more cost-effective to treat all of them than to test and treat selectively.

**Cryo t.** The use of a cryogen to freeze tissue.

**Electrothermal t.** The use of heat to destroy cells, particularly in tumors.

**Heat t.** see hyperthermia (2).

**Immunosuppressive t.** treatment with agents, such as x-rays, corticosteroids, and cytotoxic chemicals, which suppress the immune response to antigen(s); used in organ transplantation, autoimmune disease, allergy, multiple myeloma, etc.

**Inhalation t.** see aerosol.

**Neoadjuvant t.** given before the primary treatment, such as chemotherapy, hormone therapy, radiation therapy.

**Occupational t.** not a significant part of veterinary activity, but the term is applied to the teaching of behaviors and activity patterns to big cats in captivity to reduce boredom.

**Oxygen t.** supplemental oxygen administered for the purpose of relieving hypoxemia and thus tissue hypoxia. Companion animals are usually placed in a special cage with oxygen channeled into it. Alternatively, a mask may be used for short-term administration. Large animals can be
supplied with supplemental oxygen via a nasal tube taped to the head/ nose or the halter.

**physical** t. use of physical agents and methods in rehabilitation and restoration of normal bodily function after illness or injury; it includes massage and manipulation, therapeutic exercises, hydrotherapy, and various forms of energy (electrotherapy, actinotherapy, and ultrasound). See also physical therapist.

**radiation** t. treatment of disease by means of ionizing radiation. See also radiotherapy.

**replacement** t. treatment to replace deficient formation or loss of body products by administration of the natural body products or synthetic substitutes; for example, intravenous fluid replacement therapy for the treatment of dehydration or blood loss.

**serum** t. treatment of disease by injection of serum from animals with natural or acquired immunity to the disease; serotherapy.

**substitution** t. the administration of a hormone to compensate for glandular deficiency.

**swimming exercise** t. a form of physical therapy employed in veterinary medicine, usually horses or dogs.

**systemic** t. treatment with a drug that is absorbed into the bloodstream and distributed throughout the body except where there is a specific barrier (e.g., an intact blood-brain barrier).

**vacuum** t. see cupping.

**vaporization** t. see aerosol.

**theriogenologial** [ther`i-o-jen-o-log′-i-kəl] pertaining to or emanating from theriogenology.

**theriogenologist** [ther`i-o-jen-ol′-a-jist] a veterinarian skilled in theriogenology.

theriogenology [ther`i-o-jen-o-loj′-ə-je] the discipline of animal reproduction; that branch of veterinary science that comprises the study of the normal physiology and anatomy and the pathology and diseases of the male and female reproductive tracts of animals. It includes the subjects of obstetrics and gynecology, as dealt with in human medicine, reproduction on a herd and flock basis, and with artificial insemination and embryo transfer and, in some countries, with neonatology.

**theriotherapy** treatment of all diseases of animals.

**thrm** [tharm] the amount of heat input required to raise the temperature of 1000 kg of water by 1°C. One therm = 1000 kilocalories = 1 megacalor (Mcal) = 106 megajoule.

**thermaburn** thermal burn

**thermal** [thur′mal] pertaining to heat.

**t. death point** the state of heat content, as measured by temperature, at which the life of an organism ceases. Important in a consideration of sterilization procedures for certain organisms, especially those that produce spores.

**t. energy** the energy of heat.

**t. injury** see burn.

**t. processing** the preservation of food by the application of heat either in boiling water, by live steam, in an autoclave or by steam sterilization.

**t. sensation** the sense of temperature.

**t. stroke** fever.

**thermometer** [thur′mer-om′-ə-tər] an electric thermometer for measuring small temperature changes.

**thermic** [thur′mik] pertaining to heat.

**thermistor** [thur′mis-tər] a thermometer whose impedance varies with ambient temperature and so is able to measure extremely small temperature changes.

**thermo-** word element. [Gr.] relationship to heat.

**Thermactinomyces vulgaris** [thur′mo-ak′ti-nom-i-séz′] thermophilic antigens of this sporulating, gram-positive, rod-shaped species of bacteria within the family Thermactinomyxaceae, as well as of fungi, are thought to cause extrinsic allergic alveolitis (bovine farmer’s lung); serum antibodies against the antigens have been found in cattle affected with the disease.

**thermocautery** [thur′mo-kaw′tə-re] cauternization by the application of direct heat onto the tissues, usually via a heated wire or point.

**thermochemistry** [thur′mo-kem′is-te] the aspect of physical chemistry dealing with temperature changes that accompany chemical reactions.

**thermocoagulation** [thur′mo-kaw′gə-lə-shən] coagulation of tissue with heat, usually generated by high-frequency currents.

**thermocouple** [thur′mo-koup′-əl] a pair of dissimilar electric conductors so joined that with the application of heat an electromotive force is established; used for measuring small temperature differences.

**thermodiffusion** [thur′mo-di′fu-shən] diffusion influenced by a temperature gradient.

**thermodilution** [thur′mo-dil′u-shən] a technique for measuring size of a fluid-filled cavity by injecting a very cold sample of known volume and by measuring the change in temperature of the whole, assessing the degree of thermodilution, and hence the total volume of the cavity. Used to measure cardiac output.

**thermoduric** [thur′mo-dur′ik] able to endure high temperatures.

**thermodynamics** [thur′mo-di-nom′i-kəs] the branch of science dealing with heat and energy, their interconversion, and problems related thereto.

**first law of t.** the law dealing with the transformation of energy. States that energy can neither be created nor destroyed, only converted from one form to another.

**thermoexcoritory** [thur′mo-ex′kə-sor′i-ti] stimulating production of bodily heat.

**thermogenesis** [thur′mo-jen′i-səs] the production of heat, especially within the animal body.

**diet-induced t.** a portion of dietary calories in excess of those required for immediate energy requirements are converted to heat rather than stored as fat. Some types of obesity may be related to a defect in this mechanism.

**neonatal t.** thermogenesis is relatively inefficient in neonates, especially piglets and foals, so that it becomes very important to protect them from cold stress. Most of their heat gain comes from the metabolism of their stores of brown fat.

**nonshivering t.** increased heat production due to enhancement of normal calorigenic metabolic processes.

**shivering t.** much the fastest thermogenic process that the static body can use. Shivering is an involuntary function with a tremor rate of about 10 per second.

**thermogenin** [thur′mo-jen′i-n] see uncoupling protein-1 (UCP-1).

**thermogram** [thur′mo-gram′] 1. a graphic record of temperature variations. 2. the visual record obtained by thermography.

**thermography** [thur′mo-graf′i] 1. an instrument for recording temperature variations. 2. thermogram (2). 3. the apparatus used in thermography.

**thermophylography** [thur′mo-fi-lə-graf′i] a technique wherein an infrared camera photographically portrays the body’s surface temperature; used as a diagnostic aid in the detection of superficial tumors and the assessment of joint and tendon disease; also used in the study of pain; however, the validity of this technique as a diagnostic aid is questionable.

**thermohygrogram** an instrument that measures the environmental temperature and humidity at the same time, usually both continually.

**thermoinhibitory** [thur′mo-in-hi-bə-tər] retarding generation of bodily heat.

**thermolabile** [thur′mo-lə′bəl] easily affected by heat.

**thermolysis** [thur′mo-lis′is] 1. chemical dissociation by means of heat. 2. dissipation of bodily heat by radiation, evaporation, etc.

**thermometer** [thur′mo-mətər] an instrument for determining temperatures, in principle making use of a substance (such as alcohol or mercury) with a physical property that varies with temperature and is susceptible of measurement on some defined scale. See also Celsius thermometer, Fahrenheit thermometer.

**centigrade t.** one having the interval between two established reference points divided into 100 equal units, as the Celsius thermometer.

**clinical** t. one used to determine the temperature of the patient in clinical situations.

**electronic** t. a clinical thermometer using a sensor based on thermistors. Can be placed aurally or with other skin contact., kelvin t. one employing the kelvin scale.

**recording t.** a temperature-sensitive instrument by which the temperature to which it is exposed is continuously recorded.

**rectal** t. a clinical thermometer that is inserted in the rectum for determining body temperature.

**resistance** t. one that uses the electric resistance of metals for determining temperature (thermocouple).

**thermocouple** [thur′mo-koup′-əl] a pair of dissimilar electric conductors so joined that with the application of heat an electromotive force is established; used for measuring small temperature differences.

**thermometer** [thur′mo-mətər] measurement of temperature.

**thermophile** [thur′mo-fil′] a microorganism that grows best at elevated temperatures.

**thermophore** [thur′mo-fər] 1. a device or apparatus for retaining heat. 2. an instrument for estimating heat sensibility.

**thermoplallest** [thur′mo-plas′t] a number of thermocouples in series, used to increase sensitivity to change in temperature or for direct conversion of heat into electrical energy.

**thermoplacentalography** [thur′mo-plas′ten-o-graf′i] use of thermography for determination of the site of placental attachment.

**Thermoplasma** a genus of archaea that lack a cell wall; found in coal refuse piles.
thermoplastic materials [θərˈmo-plæs’tɪk] materials used in making casts for broken limbs. Malleable when warmed in hot water or heated with a hairdryer, very quick setting when cooled and very strong, e.g., Hexcelite.

thermoplegia heat stroke.

thermoplypnea increased breathing rate due to high body temperature or thermal stress such as a high ambient temperature.

Thermopysora polyposa a fungus growing on stored forage thought at one time to be involved in the etiology of atypical interstitial pneumonia of cattle.

Thermopsis genus of South African plants in family Santalaceae; contains Thesium Theromyzon tessulatum [θɛr-ə-mo-nəz’tə-sə-lət-um] a thermotonometer, or thermotheraton, a device interposed in a heating system by these materials are likely to be deficient in thiamine. Thiaminase activity by microbes in the rumen is thought to be one cause of polioencephalomalacia in cattle. See also Chastek paralysis.

Thiamine, thiamin [θi-ə-min] vitamin B1; a component of the B complex group of vitamins, found in various foodstuffs and present in the free state in blood plasma and cerebrospinal fluid. The pharmaceutical products are hydrochloride and thiamine pyrophosphate. Spelled also thiamin.

T. nutritional deficiency an unlikely event in food animals with two exceptions: the secondary deficiency caused in horses and pigs by thiaminase in bracken and the primary deficiency in horses fed a diet almost entirely of turnips. In companion animals, the deficiency is much more common. Dogs, and particularly cats, fed diets in which thiamine has been destroyed, usually by excessive heat in processing but also by the inclusion of raw fish of certain marine species or sulfur dioxide as a food preservative, will develop signs of deficiency that include ataxia, mydriasis, and convulsions. See also polioencephalomalacia, Chastek paralysis.

Thiamphenicol [θi-am-fen’i-kɔl] an analog of chloramphenicol with similar activity, but reportedly a lower incidence of aplastic anemia in humans.

Thiamyl [θi-am’-i-lɔl] an ultrashort-acting thiobarbiturate used as an intravenous anesthetic. The pharmaceutical product is thiamylal sodium. Known also as Surital.

thiazide [θi-a-zid] any of a group of benzothiazinonesulfonamide derivatives, typified by chlorothiazide, that act as diuretics by inhibiting the reabsorption of sodium in the proximal renal tubule and stimulating chloride excretion, with resultant increase in excretion of water. Includes bendrofluamide, chlorothiazide, and hydrochlorothiazide.

Thiazolidinediones [θi-a-zo-li-dee-nə-zi] a class of oral antidiabetic agents used in cats with diabetes.

thick forelegs see juvenile hyperostosis.

thick leg disease of poultry, see osteopetrosis.

thick stomach worms see Ascaris lumbricoides, Physcephalus sexualis.

Thidiazuron a defoliant in cotton crops. It is not actually poisonous for animals, but it may enter the human food chain via eggs and milk.

Thienamycin [θi-en’a-mi-sən] a broad spectrum, β-lactamase-resistant antibiotic in the carbenem class.
thienopyridines a class of drugs that inhibit ADP-induced platelet aggregation; used for their antplatelet activity in preventing thromboembolism.
thietyhraperazine [thi-'e-thər-pə-raz'-ən] a phenothiazine derivative useful as an antimetic.
thigh the portion of the leg above the stifle; the femur.
t. bone femur.
second t. in dogs, refers to the area from stifle to hock; in horses, refers to the middle part of the hind leg from the stifle to the hock; called also the gaskin.
thigmotaxis [thi-gm-o-tak'-sis] movement of an organism in response to a touch stimulus; also called stereotaxis.
thigmotropism [thi-gm-o-tróp-əm] the orientation of an organism in response to the stimulus of contact.
Thiola glaucocarpa South American plant in the family Combretaceae; contains nephrotoxic tamin producing signs of dehydration, ascites and subcutaneous edema, and coagulation necrosis of renal convoluted tubules; called also sipauba, vaqueta.
thimble weed see Rudbeckia.
thimbling [thim-blems] the condition produced by the partial shedding of the horn on a claw of a pig. The horn separates from its laminae and a new claw’s horn grows, gradually pushing the old horn off giving the effect that the pig is wearing a thimble. A good indication that the pigs have had a recent attack of foot-and-mouth disease.

thin 1. the body state in which the animal’s weight is below normal but the eyes are bright and the coat good, and the animal is physiologically and clinically normal. see also body condition score. 2. the state of tissue in which the volume of connective tissue is diminished and other tissues lacking in size.
t. tubules renal tubules; includes thin ascending and thin descending tubules.
thin ewe syndrome a debilitating disease of adult ewes probably of mixed etiology but often associated with multiple internal abscesses containing Corynebacterium pseudotuberculosis, sometimes Moraxella spp.
thin-shelled egg thin eggs can be caused by a nutritional deficiency of calcium, phosphorus, vitamin D, copper, or manganese. Other causes are sulfonamides in the diet, end of the laying season, a diet contaminated by DDT and diseases at a chronic or subclinical level, e.g., infectious bronchitis. See also thin-shelled egg.
thin sow syndrome loss of weight to the point of inanition particularly in first and second litter gilts. Multiple etiology but often the result of heavy feeding during pregnancy because of poor understanding of the inverse relation between the voluntary intake of food during pregnancy and that in lactation. Can also result from parasitic disease, particularly that associated with infestation with Oesophagostomum spp. and Hydrostrongylus spp. or from chronic infectious disease. There are no identifiable clinical signs. A bad environment and bullying of timid sows can also be important.
thinness the state of being thin. Called also light condition.
thi(o)- word element. [Gr.] relationship to sulfur.
thioarsenites [thi-'ō-ar-sen-āt-ēz] salts of the hypothetical orthoarsoneric acid, e.g., arsenamide (Caparsolate), once used as anthelmintics, herbicides, insecticides, wood preservatives. They are organic arsenicals and potentially toxic.
thiobarbiturate [thi-'ō-bar-bi-trat-ūr] an ultrashort-acting, intravenous anesthetic; a derivative of barbituric acid in which a sulfur atom is retained on the barbituric acid ring. See thiopental, methodical.
thiobarbituric acid reactive substances (TBARS) [thi-'ō-bahr-bi-'tar-nəl] low-molecular-weight end products formed during the decomposition of lipid peroxidation products. They react with thiobarbituric acid to form a fluorescent red adduct. Used as a measure of oxidative stress.
thiocarbamates [thi-'ō-kahr-ba-māt] used extensively in agriculture as insecticides, herbicides, and fungicides. When used correctly, of low toxicity.
thiolic acid see lipoic acid.
thiocyanate [thi-'ō-sī-nāt] a salt analogous in composition to a cyanate, but containing sulfur instead of oxygen and relatively nontoxic. It is one of the compounds produced in the body as a detoxicating mechanism. Continued ingestion can cause goiter.
thioesterase enzyme that catalyzes the hydrolytic cleavage of energy-rich thioester bonds as in acetyl CoA.
thiogluicoside, thioglycoside a glucosinolate goitrogen found in plants, acts by inhibiting thyroid hormonal synthesis; its effects are only marginally reversible, if at all.
thioglucolate broth one used for culturing anaerobic bacteria.
thioguanine [thi-'ō-gwān-īn] an antineoplastic (2-aminopurine-6-thiol); inhibits DNA synthesis in cancer cells.
thiophanate forms insoluble complexes in the rumen with copper, contributing to the development of nutritional deficiency of copper.
thionamides see thiureylines.
thiones goitrogens produced by the hydrolysis of glucosinolates present in the seeds of cruciferous plants.
thionine [thi-'ō-nīn] a dark green powder, purple in solution, used as a metachromatic stain in microscopy.
thiophentone [thi-'ō-pen-'tōn] see thiopental.
thiophenate a benzimidazole anhithemintic that was withdrawn from sale.
thiopronine mercaptropropionylglycine.
thiosemicarbamide a rodenticide with the capacity to cause pulmonary edema. Has an action similar to α-naphthyli thiourea.
thiostrepton [thi-'ō-stre-p'ton] a polypeptide antibiotic produced in cultures of Streptomycetes. Is not absorbed from the alimentary tract and is used for topical application, especially mastitis preparations.
thiosulfate [thi-'ō-sulf-āt] any salt of thiosulfuric acid. See also sodium thiocyanate.
thiouracil [thi-'ō-u-rāsəl] a triethylthiophosphoramidate; a cytotoxic alkylating agent used as an antineoplastic agent, particularly in the urinary bladder and body cavities.
thiouracil [thi-'ō-u-rā-sil] a thyroxotrophic agent that inhibits the oxidation of iodine thus preventing the formation of thyroxine. Used to treat hyperthyroidism, and has been used as a fattening agent in cattle.
thioureia [thi-'ō-wir-ē-ə] a goitrogenic agent used in industry as a photographic fixative and in agriculture as a plant growth regulator. Mode of action is as for thiouracil.
thioureylines a group of antithyroid agents used in the treatment of hyperthyroidism; includes methimazole, carbimazole and propylthiouracil.
thiram see tetramethylthiruram disulfide.
thioconazole see thiophanate methyl.
thiridotomy [thi-'ō-di-tōm-ə-tō-sēz] a polypeptide antibiotic produced in Streptomyces. Is not absorbed from the alimentary tract and is used for topical application, especially mastitis preparations.
thiopental [thi-'ō-pent-əl] a thiobarbiturate used as an ultrashort-acting general anesthetic, administered by intravenous injection. Called also thiopentone; known also as Pentothal.
thiopentone [thi-'ō-pent-ən] see thiopental.

T-25: Everted cartilage of the third eyelid in a Great Dane.
Johnston, S.A., Tobias, K. Veterinary Surgery: Small Animal Expert Consult: 2-Volume Set, 2nd ed. Saunders, 2017.
thirst [θɜːrst] a sensation, often referred to the mouth and throat, associated with a craving for drink; ordinarily interpreted as a desire for water. Cellular dehydration also influences thirst and therefore water intake. Other factors can influence the role of the hypothalamus in maintaining water balance. See also polydipsia.

psychogenic t. see psychogenic polydipsia.

thistle any of a large number of plants in the family Asteraceae. Some poisonous ones are variegated thistle (Silybum marianum), yellow star thistle (Centaurea solstitialis), Canada t. see Cirsium arvense. Kansas t. Solanum rostratum.
milk t. Sillymum marianum, Onchus.
plumeless t. see Carduus.
Russian t. Salsola australae.
St. Barnaby’s t. Centaurea solstitialis.
shore t. see Carduus.
slender t. see Carduus.
sow t. Sonchus.
Texas t. Solanum rostratum.
variegated t. Sillymum marianum.
winged t. see Carduus.
yellow star t. Centaurea solstitialis.
thixotropism, thixotropy the property of certain gels of becoming fluid when shaken and then becoming solid again. This property is used in American annual weed of cultivation in the plant family Brassicaceae. It contains allyl isothiocyanate and causes hemolysis and gastric distress; also photosensitization. Called also mithridate mustard, field penny-cress, fanweed, stinkweed.

Thomas splint see Schroeder–Thomas splint.
thoracotomy [θɔːrəˈsekt əˈmeɪ] thoracotomy with resection of part of a rib.
thoracentesis [θɔːrəˈsen-te əˈseɪ] surgical puncture and drainage of the thoracic cavity. The procedure may be done as an aid to the diagnosis of inflammatory or neoplastic diseases of the lung or pleura, or it may be used as a therapeutic measure to remove accumulations of fluid from the thoracic cavity.
thoracic [θɔːrəˈsɪk] pertaining to the chest. See also thoracolumbar.
t. asymmetry if obviously distorted can mean that the flatter side has a collapsed lung. Not a helpful sign in cattle because of the normal asymmetry caused by the rumen.
t. breath sounds breath sounds produced in the bronchi and bronchioles by the passage of air; contrast with tracheal breath sounds.
t. cage the bony structure enclosing the thorax, consisting of the ribs, vertebral column, and sternum.
t. cavity see thorax; called also chest.
t. duct ligation a surgical procedure used in the treatment of chylothorax where medical management is unsuccessful.
t. girdle the incomplete ring of bones that support the thoracic limb, made up of the scapula, clavicle, coracoid, and occasionally other elements. See pectoral girdle.
t. inlet the entrance of the chest between the two first ribs, the manubrium, and the first thoracic vertebra.
t. limb forelimb.
t. pain such as that caused by broken ribs, torn intercostal muscles, pleurisy can cause a grunt at the end of each inspiration.
t. periarticular sounds can be of assistance in diagnosing diaphragmatic hernia in a dog or cat, but they occur commonly in normal horses and cattle.
t. positioner a sterilizable M-shaped metal trough that can be laid on an operating table and an animal propped up in it for surgery.
t. respiration the diaphragm and abdominal muscles remain immobilized and play little part in respiration, as in peritonitis with diaphragmatic hernia.
t. segmental spinal cord degeneration characteristic lesion in the inherited disease Merino degenerative axonopathy.
t. surgery surgical procedures involving entrance into the chest cavity. Until techniques for endotracheal anesthesia were perfected, this type of surgery was extremely dangerous because of the possibility of lung collapse. By administering anesthesia under pressure through an endotracheal tube, it is now possible to keep one or both lungs expanded, even when they are subjected to atmospheric pressure.
t. symmetry lack of symmetry between the two sides, viewed from above, can suggest lung collapse or a space-occupying lesion on the smaller side; in ruminants the presence of the rumen always enhances the size of the left side.
t. tube see chest tube.

t. vertebræ the vertebræ between the cervical and lumbar vertebrae, giving attachment to the ribs and forming part of the dorsal wall of the thorax.
t. wall includes the ribs, sternum, and thoracic vertebrae, the intercostal, superficial, and deep, muscles, and the external respiratory muscles (transverse thoracic, rectus thoracis, serratus dorsalis, and scalenus), and the costal pleura.
t. wall flap a surgical approach to the thoracic cavity that combines an intercostal incision and sternotomy. It allows great exposure to structures of the cranial mediastinum and caudal cervical region.
t. wall wound penetration through to the pleural cavity results in pneumothorax and collapse of the lung on that side.
thoraco[...] word element. [Gr.] relationship to the thorax.
thoracocomial [θɔːrəˈkoʊˌkoʊmɪəl] pertaining to the thorax and acromion.
thoracocolichi... [θɔːrəˈkoʊˌkolɪkəʊˈstoʊsi] thoracocolichi...[...]
thoracocytosis [θɔːrəˈkoʊˌsɪtoʊˈstoʊsi] abnormal curvature of the chest wall.
thoracodelphus [θɔːrəˈkoʊˌdɛlˈfʌs] joined twins with one head, two forelimbs, and four hindlimbs, the bodies being joined above the navel.
thoracicdymus [θɔːrəˈsekˈtəˌmeɪ] thoracodipus.
thoracodynia [θɔːrəˈkoʊ̊ˌdɪnˈiə] pain in the thorax.
thoracogastrochisis [θɔːrəˈkoʊˌgɑsˈtrɒsɪsɪs] a developmental anomaly resulting from faulty closure of the body wall along the midventral line, involving both thorax and abdomen.
thoracolumbar [θɔːrəˈkoʊˌlaʊmˈbær] pertaining to the thoracic and lumbar vertebrae or the spinal cord in that region.
t. disk intervertebral disk between vertebrae in the thoracolumbar segment of the vertebral column.
t. outflow sympathetic nervous system.
t. spinal cord lesion associated with proprioceptive deficits, paresis, or paralysis in the hindlimbs with the normal or increased segmental reflexes. Depending on the severity of the lesion, a panniculus reflex cutoff, urinary incontinence and overflow, and absent deep pain sensation may be present. No abnormalities are seen in the front limbs.
t. syndrome spinal cord lesions between the T3 and L3 segments cause spastic paresis to paralysis in the hindlegs and sensory loss caudal to the level of the lesion depending on the severity of the lesion. Most commonly seen in dogs with intervertebral disk protrusions.
thoracolysis [θɔːrəˈkoʊˌlɪsɪs] the freeing of adhesions of the chest wall.
thoracomes [θɔːrəˈkəmˈəˌlɪs] a fetus with a supernumerary limb attached to the thorax.
thoracopagus [θɔːrəˌkoʊˌˌgɑsˈgəs] conjoined twins united at the thorax, facing each other, often with partly fused or compromised hearts.
thoracopathy [θɔːrəˈkoʊˌˈpeɪθi] any disease of the thoracic organs or tissues.
thoracoplasty [θɔːrəˌkoʊˌˈplʌstɪ] surgical removal of ribs, allowing the chest wall to collapse a diseased lung.
thoracochisis [θɔːrəˌkoʊˌˈkɪsɪs] congenital fissure of the thoracic wall.
thoracoscope [θɔːrəˌkoʊˌˈskɒp] an endoscope for examining the pleural cavity through an intercostal space.
thoracoscopy [θɔːrəˌkoʊˌˈskɒpi] endoscopic examination of the pleural cavity.
thoracostenosis [θɔːrəˌkoʊˌˈstənəˈsɪs] abnormal contraction of the thorax.
thoracotomy [θɔːrəˌkoʊˌˈtəm] incision of the chest wall, with maintenance of the opening for drainage.
thoracotomy [θɔːrəˌkoʊˌˈtəm] incision of the chest wall; may be intercostal, by rib resection or trans-sternal.
thorax [θɔːrəks] the part of the body between the neck and abdomen; the chest. It is separated from the abdomen by the diaphragm. The walls of the thorax are formed by pairs of ribs, attached to the sides of the spine and curving toward the sternum. The cranial pairs of ribs are attached to the sternum, the next few connect with cartilage connected to the sternum, and often the last one or two (the floating ribs) are unattached distally. The cavity of the thorax is divided by a thick partition, the mediastinum. The principal organs in the thoracic cavity are the heart with its major blood vessels, and the lungs with the bronchi. The trachea enters the thorax to connect with the lungs, and the esophagus passes through it to connect with the stomach caudal to the diaphragm. See also thoracic.
thorium (Th) [θɔːrəˈeɪən] a chemical element, atomic number 90, atomic weight 232.038. Formerly used as a radiographic positive contrast medium, but discontinued due to its carcinogenicity.
thorn apple, thornapple plants in the genus *Datura*. Includes entire-leaved or hairy thorn apple (*D. metel*), fierce, long-spined, or long-spurred thorn apple (*D. ferox*), native (Australia) thorn apple (*D. leichhardtii*), and the common thorn apple (*D. stramonium*).

**thorn-headed worm** see **thorny-headed worm**.

**Thorn test** ([thorn]) a test of adrenal cortical function that originally measured the glands’ response to ACTH by the change in the eosinophil count of blood samples taken before and after the injection. The modern version of the test measures the response by estimating plasma cortisol concentrations.

**thorny-headed worm** member of the phylum Acanthocephala, a group of parasitic worms. See *Corynosoma*, *Filicollis*, *Macracanthorhynchus*, *Oncicola*, and *Polymorphus*.

**Thoroughbred** an English lightweight racing horse, incorporated into many breeds to improve speed and elegance. Black, brown, bay, chestnut, or gray, usually 16–16.2 hands high.

**thoroughfare channel** central channel in the arteriolar system; flow through the channel is controlled by the sphincter effect of the branch of the arteriole, the metarteriole.

**thoroughpin** tenosynovitis of the deep flexor tendon sheath of the hindlimb of the horse manifested by soft, nonpainful swellings just above the point of the hock and on the medial and lateral aspects of the hock. There is no lameness.

**Thr** threonine.

**thread iris** see *Moraea setifolia*.

**threadworm** ([thred]’wərm) any nematode worm; sometimes specifically used to denote the human pinworm *Enterobius vermicularis*.

**abdominal t.** *Setaria equina*.

**three-day event** a competition in the pleasure horse sport comprising usually one day each for dressage, cross country, and show jumping.

**three-day sickness** see *ephemeral fever*.

**three-in-one technique** an extra-articular technique for the treatment of cranial cruciate ligament rupture using medial and lateral imbrication sutures.

**three-way cross** one in which a crossbred animal is mated with an animal from another population, e.g., AB × C.

**3X rule** in normal blood samples, hemoglobin × 3 = hematocrit (±2%); a rapid check on the accuracy of laboratory results.

**Threlkeldia** see *Neobassia proceriflora*.

**threonine** ([thrē’o-nēn]) a naturally occurring, hydroxy amino acid, an important structural component of collagen, elastin, and tooth enamel. It is also important for production of neurotransmitters. An essential amino acid in all species.

**threshold** ([thresh’o-lēd] the level that must be reached for an effect to be produced, as the degree of intensity of stimulus that just produces a sensation.
pruritic t. a theory explaining pruritus that states that some degree of pruritus is tolerated by a patient, but a small increase from an additional source raises the patient above their threshold and causes clinical signs.

renal t. that concentration of a substance in plasma at which it begins to be excreted in the urine; varies between species.

t. traits heritable traits that have specific thresholds, e.g., four rather than three toes on a guinea pig’s hindfeet, alive or dead at a specific age.

unit the distance between two thresholds when an inherited abnormality can occur at a number of levels, e.g., completely patent ductus arteriosus, through partial closure (ductus diverticulum) and complete closure. See also threshold traits (above).

t. erythema dose the single skin dose of radiation that will produce, in 80% of those tested, erythema within 30 days, and no visible erythema in the other 20%.

thirty said of livestock that put on body weight or produce in other ways with a minimum of feed. The opposite of illthirty.

thril [thril] a vibration caused by the movement of fluid felt by the examiner on palpation. Created by turbulent flow of fluid, such as through an incompetent valve or a stenotic valve.

diastolic t. one felt over the precordium during diastole, such as in aortic insufficiency.

presystolic t. one felt just before systole over the apex of the heart.

systolic t. one felt over the precordium during systole in aortic stenosis, pulmonary stenosis, and ventricular septal defect.

thyroid t. palpable over a colloid goiter because of the large blood supply to the active gland.

thrix [thrxs] hair.

t. annulata a condition in which a hair appears to be marked by alternating bands of white; called also ringed hair.

-thrix word element. [Gr.] relationship to hair.

throat [throt] the part of the body that includes the larynx and pharynx, where the passages that link the nose and mouth with the respiratory and digestive systems of the body cross over. Called also the faucets.

abscess 1. in the retropharyngeal lymph node causes partial obstruction to swallowing, dysphagia, and palpable through the pharynx and mouth in cattle. 2. an abscess in the parotid area just below the ear and behind the mandible. Usually ascribed to grass seed penetration.

t. cellulitis see pharyngeal phlegmon.

t. lachrymal t. 1. the strap on a horse’s bridle that goes under the throat and buckles just below the left ear. 2. the area under the throat where the head and neck are joined and where the harness throat latch fits.

throb [throb] a pulsating movement or sensation.

thrombophagoresis thrombocytophagoresis.

thrombosthenia [thrombo-sis] a platelet abnormality characterized by defective clot retraction and impaired ADP-induced platelet aggregation. There are mild bleeding tendencies. Inherited as an autosomal recessive disorder in dogs (Otterhounds, Great Pyrenees) and horses. Called also Glanzmann disease, Glanzmann–Naegele syndrome.

thrombectomy [throm-bek-tom-ee] surgical removal of a clot from a blood vessel.

medical t. enzymatic dissolution of a blood clot in situ, such as by streptokinase or plasminogen activating factor.

thrombin [throm bn] an enzyme resulting from activation of prothrombin, which catalyzes the conversion of fibrinogen to fibrin. It is also a potent stimulus to the aggregation of platelets. A preparation from prothrombin of bovine origin is used as a topical hemostatic.

t.-antithrombin complexes (TAT) formed when thrombin is generated in the presence of antithrombin; assays are used to detect activation of coagulation.

t.-thrombomodulin complex thrombomodulin, a specific endothelial cell surface receptor, converts thrombin, a very weak activator of protein C in the anticoagulant pathway, to the status of a very active protein C activator.

t. time the time required for a standardized solution of thrombin to clot plasma. It is a measure of the rate of conversion of fibrinogen to fibrin. Called also thrombin clotting time.

thrombo(-) word element. [Gr.] relationship to a clot, thrombus.

thromboangitis [thrombo-an-je-tis] inflammation of a blood vessel, with thrombosis.

thrombocytopenia [thrombo-sis, thrombo-sis] a sac formed around a clot or thrombus.

thrombocytopenia (thrombo-sis) the selective separation and removal of thrombocytes (platelets) from withdrawn blood, the remainder of the blood then being retransfused into the donor. Called also platelepheresis and thrombapheresis.

thrombocyte [throm bo-sit] a blood platelet.

thrombocythemia [thrombo-si-the-mee-a] an increase in the number of circulating blood platelets.

essential t. see primary thrombocythemia (below).

primary t. a clinical syndrome with repeated spontaneous hemorrhages, either external or into the tissues, and greatly increased number of circulating platelets. Called also essential thrombocythemia.

reactive t. see secondary thrombocythemia (below).

secondary t. nonneoplastic causes; includes inflammation, iron deficiency, exercise, blood loss. Called also reactive thrombocythemia.

thrombocytopoietic 1. the volume of packed blood platelets in a given quantity of blood. 2. the instrument used to measure platelet volume.

thrombocytolysis [thrombo-sis-tol-isis] destruction of blood platelets (thrombocytes).

thrombocytopathy [thrombo-si-top-a-the] any qualitative disorder of blood platelets.

hereditary t. calcium-diacylglycerol guanine nucleotide exchange factor 1 gene mutations are associated with loss of function in platelets in Landseer Newfoundlands, Spitz, and Basset hound dogs and Simmental cattle, causing epistaxis, gingival bleeding, and petchichiation on mucosal membranes and skin. Platelet numbers are normal. It is an autosomal recessive trait. See also Chediak-Higashi syndrome, canine cyclic hematopoiesis, thrombasthenia.

thrombocytopenia [thrombo-si-to-pe-ne-a] decrease in number of platelets in circulating blood. See also purpura.

alloimmune t. due to alloantibodies generated in response to blood transfusions or to maternal alloimmunization. Caused by the exposure of the platelets of a newborn animal to platelet alloantibodies that are present in the colostrum of the dam. Occurs in pigs as a syndrome of spontaneous hemorrhage at a few days of age. See also immune-mediated thrombocytopenia (below).

consumption t. excessive utilization of thrombocytes at hemorrhage sites causes significant reduction in circulating platelets.

drug-induced t. that associated with a drug being administered. Some drugs named as causing thrombocytopenia are phenylbutazone, diphenylhydantoin, sulfonamides, digitoxin, and phenothiazine tranquilizers.

essential t. see megakaryocytic leukemia.

idiopathic t. (ITP) see immune-mediated thrombocytopenia (below).

immune-mediated t. (IMT) a loss of platelets caused by the presence of antplatelet antibodies that can be demonstrated by the platelet factor-3 (PF-3) release test and immunofluorescence of megakaryocytes. Platelet production may be normal or impaired, also caused by antibodies directed against megakaryocytes. Includes alloimmune, autoimmune, and some drug-induced thrombocytopenias.

infectious cyclic t. recurring cycles of parasitemia and reduced numbers of thrombocytes in the peripheral blood are seen in dogs infected with Anaplasma platys. Clinical signs are rarely observed, but coinfection may potentiate clinical disease caused by E. canis.

isoimmune t. see alloimmune thrombocytopenia (above).

myelophthisic t. that due to neoplastic invasion or some other crowding out phenomenon of the bone marrow.

pseudo-t. erroneously low numbers of thrombocytes reported, particularly in automated counting techniques, because of clumping.

secondary t. one part of another disease, such as a multi-system immune-mediated disorder.

surface-induced t. a form of nonimmune-mediated platelet destruction caused by exposure of platelets to a damaged or artificial surface.
thrombocytopenia

- **thrombin-induced t.** thrombin stimulates platelet aggregation and reduces circulating numbers.
- **vaccine-induced t.** live-virus vaccines may be associated with a transient, nonimmunogenic aggregation and reduction in numbers of platelets.

**thrombocytopenic** of the nature of or pertaining to thrombocytopenia.

thrombocytopoiesis the production of blood platelets (thrombocytes); occurs primarily in the bone marrow, but also in other sites of hematopoiesis, such as the spleen and lung.

**thrombosis** increase in the number of platelets in the circulating blood. See also thrombocytopenia.

**thromboembolic** pertaining to or emanating from thromboembolism.

- **t. meningencephalitis** see histoplasmosis septicaemia of cattle
- **t. parasitism** see thromboembolic colic.

thromboembolism [throm’bo-em-’bo-liz] the lesion created by a thromboembolus. The exact form of the disease depends on the location of the thromboembolism, e.g., aortic, iliac, intestinal, pulmonary. See also thrombus.

thromboembolus [throm’bo-em-’bo-lus] solid or semisolid thrombotic material that travels with the blood flow until it is impacted in a blood vessel as it narrows. Most commonly affects arteries but may block the portal vein or its branches.

t. colic see thromboembolic colic.

t. meningencephalitis see histoplasmosis septicaemia of cattle.

thromboendarterectomy [throm’bo-en-dar’ter-ek’to-me] excision of a portion of the lining of the obstructed artery.

thromboendarteritis [throm’bo-en-dar’ter-i-tis] inflammation of the innermost coat of an artery, with thrombus formation.

thromboendarctitis [throm’bo-en-dar’k-ti-tis] formation of a thrombus on a heart valve. Also called thrombotic endocarditis. Nonbacterial thrombotic endocarditis specifically describes thrombus on a previously unaffected valve.

thrombogenesis [throm’bo-je-n’-o-sis] clot formation.

thrombogram [throm’bo-gram] results of the counts and evaluation of thrombocytes (platelets).

thrombohemorrhagic [throm’bo-hem’-o-raj’ik] the state of being hemorrhagic due to thrombocyte deficiency or malfunction.

consumption t. disorder hemorrhagic state due to excessive consumption of platelets.

thromboid [throm’bo-id] resembling a thrombus.

thrombokinase [throm’bo-ki-nas] activated clotting factor X.

thrombokinetics [throm’bo-ki-nek’tiks] the dynamics of blood coagulation.

thrombolympangitis [throm’bo-lim’-pan-jis’tis] inflammation of a lymph vessel due to a thrombus.

thrombolysis [throm’bo-lis’is] dissolution of a thrombus.

thrombotic [throm’bo-lit’ik] 1. dissolving or splitting up a thrombus. 2. an agent that dissolves or splits up a thrombus.

thrombomodulin [throm’bo-mo-dud’-u-lin] an antithrombotic substance contained in the apical membrane of endothelial cells. See also thrombin-thrombomodulin complex.

thrombomodulin [throm’bo-mod’u-lin] the circulating blood platelets and their precursors.

thrombopathia thrombocytopenia.

thrombopathy [throm’bo-pa’thi-a-thrombocytopenia] hereditary t. an inherited bleeding tendency in which the platelets do not function properly. See also thrombopathy.

thrombopenia [throm’bo-pe-ne-a] thrombocytopenia.

thrombophilia [throm’bo-fil’e-a] a tendency to the occurrence of thrombosis.

thrombophlebitis [throm’bo-flae-be’tis] inflammation of a vein associated with thrombus formation. See also thrombosis.

thromboplast [throm’bo-plaz’-tik] causing or accelerating clot formation in the blood.

thromboplastid [throm’bo-plas’tid] a blood platelet.

thromboplastin [throm’bo-plas’tin] a substance in blood and tissues that, in the presence of ionized calcium, aids in the conversion of prothrombin to thrombin. Extrinsic and intrinsic thromboplastin are formed as the result of the interaction of different clotting factors; the factors that combine to form extrinsic thromboplastin are not all derived from intravascular sources, whereas those that form intrinsic thromboplastin are. Called also clotting factor III.

- **t. time (APTT, aPTT)** a test of intrinsic and common coagulation pathways. An intrinsic pathway activator (such as kaolin, silica, ellagic acid), phospholipid and calcium are added to plasma, and the time taken for clot formation is measured. Prolonged times are observed in acquired and hereditary factor deficiencies and in the presence of specific coagulation inhibitors.

- **differential t. time** used in differentiating the cause of hemophilia. Reagents containing either factor VIII or factor IX are added in the partial thromboplastin time test to demonstrate that factor corrects the prolonged clotting time.

- **extrinsic t.** the prothrombin activator formed as a result of interaction of coagulation factors III, VII, and X that, with factor IV, aids in the formation of thrombin.

- **t. generation time (TGT)** evaluates the first stage in blood coagulation by measuring the efficiency of prothrombinase formation.

- **intrinsic t.** the prothrombin activator formed as a result of interaction of coagulation factors V, VII, IX, X, XI, and XII and platelet factor 3 (PF-3), which, with factor IV, aids in the conversion of prothrombin to thrombin.

- **plasma t. antecedent (PTA)** deficiency occurs in cattle and Springer spaniels, Kerry blue terriers, and cats; see also hemophilia C. Called also factor XI.

- **plasma t. component (PTC) clotting factor IX; deficiency causes Christmas disease. Called also Christmas factor, antihemophilic factor B, autoprophrombin II.

- **t. time** see activated partial thromboplastin time (above).

- **tissue t.** factor III, a material derived from several sources in the body (e.g., brain, lung), and is important in the formation of extrinsic prothrombin converting principle in the extrinsic pathway of blood coagulation. Called also tissue factor.

- **thrombopoiesis** 1. thrombogenesis. 2. thrombopoietic tissue.

- **thrombopoietic cell** cells in the normal thrombopoietic production line; are in two classes, proliferative phase and maturation phase.

- **thrombopoietin (TPPO)** a specific thrombopoiesis-stimulating cytokine produced primarily in the liver, kidneys, and bone marrow; causes proliferation and maturation of megakaryocytes, and delivery of platelets to the circulation.

- **thrombophrophylaxis** the prevention of thrombus formation. Treatment given in the management of animals predisposed to thromboembolism, such as cats with cardiace disease and horses with endotoxemia; usually utilizes aspirin (except in cats), heparin, warfarin, or antiplatelet drugs, such as the thienopyridines.

- **thromboreistance** a function of intact endothelium contributed to by the production of a prostaglandin, prostacyclin, which is a potent inhibitor of platelet aggregation.
thrombosis (throm-bo'sis) formation, development, or presence of a thrombus. A thrombus may form whenever the flow of blood in the arteries or the veins is impeded. Vascular endothelial injury and hypercoagulability also promote thrombus formation. If the thrombus detaches itself from the wall and is carried along by the bloodstream, the clot is called an embolus. The condition is known as embolism. Because blood normally flows more slowly through the veins than through the arteries, thrombosis is more common in the veins than in the arteries. The effect of a thrombosis is engorgement of the obstructed vein, usually further aggravation of the thrombosis formation, and edema of the local area drained by the vein. The clinical signs will depend on the location of the vessel, e.g., cerebrovascular, pulmonary.

caudal vena cava t. see vena caval thrombosis.

iliac t. see iliac artery thrombosis.

thromboplastin (throm-bo-plas'tin) an osteoclast product that binds to connective tissues and serum proteins and binds calcium to hydroxyapatite and to osteocitin.

thrombostasis (throm-bos'ta-sis) stasis of blood in a vessel with subsequent formation of thrombus.

thrombosthenin (throm-bo-sthe'nin) a contractile protein present in platelets and instrumental in producing retraction of a blood clot.

thrombogenic (throm-bo-jen'ik) pertaining to or emanating from thrombosis.

t. meningoccephalitis see hemophagocytosis.

thrombocytosis (throm-bo-si'to-sis) an intermediate in the metabolic pathway of arachidonic acid formed from prostaglandin endoperoxides, and released from suitably stimulated platelets; the unstable form, thromboxane A2, is a potent inducer of platelet aggregation and constrictor of arterial smooth muscle.

thrombus (throm'bəs) the final product of blood coagulation: a coagulum of platelets, fibrin, and entrapped blood cells. Healthy response to vascular injury. Pathology can result if thrombus occludes the lumen of the blood vessel either at the site of formation (thrombosis) or a distant occluding t. meningoencephalitis is the central lesion in combined immune deficiency syndrome of Arab foals and inherited parakeratosis of cattle, both inherited diseases.

thrombin see thrombosis.

t. lymphocyte see T lymphocyte.

thrombiculymphatic (throm-bik-ú-lim-fat'ik) pertaining to the thymus and lymphatic nodes.

thymidine (Thy) (thi-mi'dén) a nucleoside of DNA.

thymidine kinase (tk) gene a gene coding for thymidine kinase that is expressed in most mammalian cells and some viruses (herpes-, pox-viruses). Used as a selectable marker in that tk minus (tk−) cells and viruses do not survive in medium containing hypoxanthine, aminopterin, and thymidine (HAT medium); such cells cotransfected with a vector carrying a tk gene (tk+) can be rescued.

thymin (thi'min) former name for thymopentin.

thymine (thi'mén) a pyrimidine base in deoxyribonucleic acid (DNA).

thymis (thi'mis) inflammation of the thymus.

thymocyte (thi'mo-sit) a lymphocyte arising in the thymus; a T lymphocyte.

thymokinetic (thi-mo-ki-net'ik) tending to stimulate the thymus.

thymol (thi'mol) a phenol obtained from thyme oil and other volatile oils or produced synthetically: used as a topical antifungal and antibacterial agent, and as an antimicrobial agent in trichloroethylene.

thymoma (thi-mó'ma) tumor originating from the thymic epithelium. Cranial mediastinal mass in middle aged to older dogs; rare in cats. Paraneoplastic syndromes can include myasthenia gravis, polymyositis, and exfoliative dermatitis in cats. See also thymic lymphoma.

thymopathy (thi-mó-path'é) any disease of the thymus.

thymopoietin (thi-mó-poi'é-tin) a polypeptide hormone secreted by the thymus, which increases the proliferation of lymphocyte precursors and their differentiation into T lymphocytes.

thymopivric, thymoprivous (thi-mó-priv'ik, thi-mó-priv'o-üs) pertaining to or resulting from removal or atrophy of the thymus.

thymosins (thi-mó-sin) a group of polypeptides originally isolated from calf thymus. Participate in the control of the immune system and are important in tissue repair and regeneration. See also thymus.

thymus (thi'mus) a primary lymphoid organ lying in the cranial mediastinum or in the neck or throat (depending on the species), which reaches its maximum development during puberty and continues to play an immunological role throughout life, even though its function declines with age. Called also sweetbread. During the last stages of fetal life and the early neonatal period, the reticular structure of the thymus entraps immature lymphoid cells arising from the bone marrow and circulating in the blood. The thymus preprocesses these cells, causing them to become antigen-specific and therefore capable of maturing into a type of lymphocyte that is essential to the regulation of immune responses generally and the development of cell-mediated immunity. More than 90% of T lymphocytes produced in the thymus are destroyed there in a process sometimes referred to as clonal purging, which is conceptually associated with the removal of self-reactive cells, i.e., only non-self-reactive cells leave the thymus. After development in the thymus, these lymphocytes re-enter the blood and are transported to developing secondary lymphoid tissues, such as lymph nodes and spleen, where they seed the cells that eventually become thymus-dependent or T lymphocytes. If the thymus is removed or becomes nonfunctional during fetal life, the secondary lymphoid tissue and blood fail to become seeded...
with the T lymphocytes and the body’s cell-mediated arm of immunity fails to develop. It is this arm of immunity that is mainly responsible for rejection of organ transplants and resistance to microbial infection, and plays a role in the elimination of cells potentially able to give rise to cancer.

t. atrophy leading to failure of the cell-mediated arm of the body’s immunity.

thymus-derived originating in the thymus.

t.-d. lymphocytes see T lymphocyte.

Thynnascaris a genus of nematodes in the family Anasakidae. The adults parasitize fish. Currently a synonym of Hysterodrilus.

thyro- word element. [Gr.] relationship to the thyroid.

thyroadenitis [θī’rō-ə’dē-ni-tis] inflammation of the thyroid.

thyropoiesis [θī’rō-ˈpō-ə-sis] defective development of the thyroid with deficient activity of its secretion.

thyroarytenoid pertaining to the thyroid and arytenoid cartilages.

thyrocilacin [θī’rō-kal’si-trō-nin] calcitonin.

thyrococcardiac [θī’rō-kō-kăr’dē-ək] pertaining to the thyroid and heart.

thyrococcardiac disease see thyrotoxic heart disease.

thyrochondrotomy [θī’rō-kon-drōt’-ə-mē] surgical incision of the thyroid cartilage.

thyrococricotomy [θī’rō-kō-kri-kāt’-ə-mē] incision of the cricothyroid cartilage, the lower part of the fibroelastic membrane of the larynx.

thyroepiglottic [θī’rō-ˈep-ii-głô’tik] pertaining to the thyroid and epiglottis.

t. ligament connects the epiglottis to the thyroid cartilage of the larynx.

thyrogenic, thyrogenous originating in the thyroid.

thyroglubin [θī’rō-gläb’-ə-lēn] 1. an iodine-containing glycoprotein of high molecular weight, occurring in the colloid of the follicles of the thyroid gland; the iodinated tyrosine moieties of thyroglobulin form the active hormones thyroxine and triiodothyronine. 2. a substance obtained by fractionation of thyroid glands from the pig, administered orally as a thyroid supplement in the treatment of hypothyroidism.

t. autoantibody (TgAA) used as a screening test to detect dogs with lymphocytic thyroiditis and at risk of developing hypothyroidism; the predictive value is debated.

thyroglossal [θī’rō-glas’-əl] pertaining to the thyroid and tongue.

t. cyst developmental abnormality near the site of the thyroid diverticulum; may exist as a subepiglottic cyst, surrounded by thyroid follicular cells, embedded in the root of tongue; may cause inspirational dyspnea and exercise intolerance.

t. duct vestigial canal of the epithelial outgrowth from the floor of the pharynx that develops into the thyroid gland. Parts of the duct and accessory thyroid tissue derived from it may become cystic or undergo neoplastic transformation.

thyrotatin switch [θī’rō-trāt’n] a gas-filled triode used as a switch on an x-ray machine.

thyrohyal [θī’rō-hē’-əl] 1. pertaining to the thyroid cartilage and the hyoid bone. 2. the thyrohyoid bone.

thyrohyoid [θī’rō-hē’-oid] 1. pertaining to the thyroid gland or cartilage and the hyoid bone. 2. the member of the chain of hyoid bones that articulates with both the thyroid cartilage and the basilicah.

t. membrane the membrane connecting the thyroid cartilage to the hyoid bone.

thyroid [θī’rō-id] 1. resembling a shield. 2. the thyroid gland (see below) secreting thyroid hormones (see below). 3. a pharmaceutical preparation of cleaned, dried, powdered thyroid gland, obtained from those domesticated animals used for food by humans.

accessory t. an additional isolated thyroid gland, often small, or several such places, located anywhere from the larynx to the diaphragm; it may be sufficient to supply the patient’s need of thyroid hormone. Most common in dogs.

t. C cell see C cell.

t. cartilage the shield-shaped cartilage of the larynx.

t. diverticulum primordium of the thyroid gland; appears as an outgrowth of the foregut between the first two pharyngeal pouches. This tube of epithelial cells grows ventrally into mesenchyme; the tube becomes the thyroglossal duct, the tip divides into two lobes, the thyroid glands.

t. dysfunction see hypothyroidism, hyperthyroidism.

t. ectopic t. migration of thyroid diverticulum tissue to aberrant sites such as the thymus. These cause no apparent abnormality.

D. extract a pharmaceutical substance derived from thyroid glands, used in the treatment of hypothyroidism. See thyroid (3) (above).

t. function tests used to assess the functional capacity of the thyroid glands; most commonly employed in dogs and cats. Include total T₄, total T₃, free T₄, TSH, TgAA, radioiodine uptake, and TSH response tests.

t. gland the largest of the endocrine glands, situated in the neck caudal to the larynx. It produces hormones (see below) that are vital in maintaining normal growth and metabolism. It also serves as a storehouse for iodine.

t. hormones iodothyronines secreted by the thyroid gland, principally thyroxine (tetraiodothyronine, T₄) and triiodothyronine (T₃); derived from iodination of tyrosyl residues in thyroglobulin. The pharmaceutical names for T₄ and T₃ are levothyroxine and liothyronine, respectively. Regulate basal metabolic rate.

nodular t. hyperplasia see nodular goiter.

t. parafollicular cell see C cell.

t. peroxidase enzyme catalyzing the process of organification in the thyroid gland.

radioiodine uptake see C cell.

t. nodular goiter.

t. peroxidase enzyme catalyzing the process of organification in the thyroid gland.

radioiodine uptake used as a thyroid function test but superseded these days by estimates of T₄ (thyroxine).

TSH-stimulating hormone (TSH) see thyrotopin.

t. tumor mostly follicular adenomas in old-aged dogs, cats, and horses; papillary adenomas are rare.

thyroidectomy [θī’rōid-ekt’-ə-mē] surgical excision of the thyroid gland; indicated in the treatment of neoplasia or hyperfunction of the gland, although hyperthyroidism in cats is more often treated medically.

thyroidism hyperthyroidism.

thyroiditis [θī’rōid-i-tis] inflammation of the thyroid gland.

autoimmune t. see lymphocytic thyroiditis (below).

Hashimoto’s t. see also Hashimoto’s disease, lymphocytic thyroiditis (below).

immune-mediated t. see lymphocytic thyroiditis (below).

lymphocytic t. progressive cellular infiltration of the thyroid gland, predominantly by lymphocytes, and replacement by fibrous tissue, resulting in hypothyroidism, associated with the presence of autoantibodies against thyroglobulin, follicular cell microsomes, and a second collagen antigen. It occurs in dogs, particularly Beagles, obese (OS) chickens, buffalo rats, and primates. The disease has some similarity to Hashimoto’s disease of humans.

thyroidization [θī’rōid-i-zā’shən] in renal disease that is characterized by severe proteinuria, the hyaline tubular casts may histologically resemble thyroid follicular colloid.

thyroidotome [θī’rōid-ōt’-ə-mē] incision of the thyroid.

thyromegaly [θī’rō-mēg’-ə-li] goiter.

thyromimetic [θī’rō-mi-met’-ik] producing effects similar to those of thyroid hormones or the thyroid gland.

thyroparathyroidectomy [θī’rō-par’-ə-thî’rō-dek’t-ə-mē] excision of the thyroid and parathyroids.

thyroprival, thyroprivic [θī’rō-prī’-vəl] pertaining to, marked by, or due to deprivation or loss of thyroid function.

thyroxin see iodinated casein.

thyroptosis [θī’rō-tōp’sis] caudal displacement of a goitrous thyroid.

thyrosis any disease based on disordered thyroid action.

thyrotherapy [θī’rō-ther’-ə-pe] treatment with preparations of thyroid hormone.

thyrotoxic [θī’rō-tōk’sik] clinical signs caused by abnormally high activity of the thyroid.

From Guyton, A.C., Hall, J.E., Textbook of Medical Physiology, 10th ed, Saunders, 2000.
t. crisis a fulminating increase in all the clinical signs of thyrotoxicosis.
t. heart disease heart disease associated with hyperthyroidism, marked by atrial fibrillation, cardiac enlargement, and congestive heart failure. Most commonly seen in association with hyperthyroidism in aged cats. Called also thyrocardiac disease.
t. storm thyrotoxic crisis.
thyrotoxicosis [ˈθɜːrə-tɔkˈsɪ-səs] clinical disease caused by excessive activity of the thyroid gland.
thyroglossal cyst one of the basophilic (beta) cells of the adenohypophysis, the granules of which secrete thyrotropin.
thyrotrrophic thyrotrrophic.
thyrotropic thyroid-stimulating hormone; TSH). Called also TSH-releasing factor or hormone.
thyrotrophin [ˈθɜːrətəˌrɒfən] thyrotropin.
thiamulin a semi-synthetic derivative of a cyclophyllidean cestode in the family Thysanosomatidae found in the small intestine and biliary and pancreatic ducts of sheep, cattle, and deer. Causes condemnation of livers and may cause unthriftiness. Called also fringed tapeworm.
T. giardi a genus of cyclophyllidean cestodes in the family Thysanosomatidae found in the small intestine and biliary and pancreatic ducts of sheep, goat, and cattle. Appears to be of little pathogenic significance. Called also Thysanosia ovilla and Helicometra giardi. Commonly referred to as the “fringed tapeworm”.
T. sp. see Mycoplasma.
T. sp. see Dermacentor variabilis.
American dog t. see Dermacentor variabilis.
Argentine t. Margaropus canisuga, argasid t. soft-bodied ticks of the family Argasidae. 
brown winter t. see Dermacentor nigrolineatus.
California black-legged t. see Ixodes pacificus.
castor bean t. see Ixodes ricinus.
cattle t. any one of a large variety of tick species, the title being used locally to designate the preponderant species. Includes New Zealand cattle tick (Haemaphysalis longicornis), North American cattle tick (Rhipicephalus (Boophilus) annulatus), tropical cattle tick (R. (B.) microplus).
cayenne t. see Amblyomma cajennense.
collar a neck collar made of a PVC resin that releases particles of insecticide over a period of several months and aids in the control of tick infestations in companion animals.
Tibetan mastiff a very large (180 lb), powerful dog with a broad head, pendulous ears, and thick, medium-length coat that forms a ruff around the neck and shoulders and is profuse on the long tail. The breed is affected by an inherited neuropathy.
Tibetan spaniel a small (9–15 lb), active dog with short muzzle and slightly undershot jaw, short legs, and a thick, silky coat that is short on the face, but flat and of medium length on the body with feathering on the legs, buttocks, and tail, which is carried over the back.
Tibetan terrier a medium-sized (18–30 lb), muscular dog with a profuse, shaggy coat that covers the face and body. The ears are pendulous, and the thickly haired tail is carried over the back. Resembles a small Old English sheepdog. The breed is affected by ceroid lipofuscinosis.
tibia (tib) the inner and larger bone of the hindlimb between the stifle and the hock; it articulates with the femur and head of the fibula above and with the talarus below. See also Table 9.
rotated t. a disease of young turkeys characterized by rotation of the shaft of the tibiotarsus of one leg causing the metatarsus to point laterally and the bird to assume a spraddle leg posture. Up to 15% of a flock may be affected.
t. valga a bowing of the leg in which the angulation is away from the midline of the body. t. vara a bowing of the leg in which the angulation is toward the midline of the body; bowleg.
tibial [ˈtɪb-əl] pertaining to the tibia.
t. compression test a test of cruciate ligament damage; with the femur fixed and stifle flexion prevented, force is applied to the tibia through pressure on the metatarsus.
t. crest a longitudinal prominence on the cranial border of the proximal tibia. Its proximal end (tibial tuberosity) has a growth plate separate from the proximal tibia; hyperflexion injuries to the stifle may result in avulsion of this growth plate in dogs, seen in radiographs as a dorsal displacement of the tibial tubercle and patella.
t. dyschondroplasia a disease of broiler chickens and turkeys caused by a combination of dietary and genetic factors and characterized by dyschondroplasia in the proximal end of the tibiotarsal bone. In badly affected birds the leg is bowed and pathological fractures occur.
th. hemimelica see inherited tibial hemimelica.
t. nerve block see tibial block.
t. nerve injury results in overflexion of the hock (dropped hock).
t. rotation see rotated tibia.
t. tarsal bone see talus.
tibialis [ˈtɪb-ə-lɪs] tibial.
tibiofemoral [ˈtɪb-ə-fər-mərəl] pertaining to the tibia and femur.
tibiofemoral t. joint see Table 10.
tibiotarsal [ˈtɪb-ə-tɑːr-tɑːrəl] pertaining to the tibia and tarsus.
t. joint see Table 10.
t. varus see Ixodes.
tic [ˈtɪk] a spasmodic twitching movement made involuntarily by muscles that are ordinarily under voluntary control. In dogs, the myoclonus associated with infection by distemper virus is sometimes called a tic or chorea.
tic word element. [Gr.] meaning pertaining to.
ticarcellin a semisynthetic penicillin with an extended spectrum of activity; effective against Pseudomonas aeruginosa.
tick [ˈtɪk] a blood-sucking arachnid parasite in the superfamily Ixodoidea. There are two types, hard ticks (family Ixodidae) and soft ticks (family Argasidae).
dog t. varies with the country: American d. tick, see Dermacentor variabilis; Australian d. tick, see *Ixodes* holocyclus; British d. tick, see *Ixodes canisuga*; brown d. tick, see *Rhipicephalus sanguineus*; yellow d. tick, see *Haemaphysalis leachi leachi*.

t. fever see babesiosis, anaplasmosis.
fowl t. see *Argas persicus*.

Gulf Coast t. see *Amblyomma maculatum*.

hard t. ticks of the family Ixodidae and members of *Ixodes*, *Margaropus*, *Hyalomma*, *Rhipicephalus*, *Haemaphysalis*, *Dermacentor*, *Amblyomma* (syn) *Aponomma*, *Rhipicentor*, and *Bothriocroton*. They have a hard chitinous shield on the dorsal surface of the body, on the entire back of the male but only the anterior portion of the female.
hedgehog t. see *Ixodes hexagonus*.

Lone Star t. see *Amblyomma americanum*.
moose t. see *Dermacentor albipictus*.
mouse t. *Ixodes muris*.
New Zealand cattle t. see *Haemaphysalis longicornis*.
nonscutate t. see soft ticks.
North American cattle t. see *Rhipicephalus* (*Boophilus*) *annulatus*.

Pacific Coast t. see *Dermacentor occidentalis*.
Pajarillo t. see *Ornithodoros coriaceus*.
t. paralysis the female of several species of ticks but most commonly *Ixodes* or *Dermacentor* spp. elaborates a salivary neurotoxin that typically causes an ascending flaccid paralysis in many animal species and humans but particularly in companion animals and young food animals. Affected dogs first develop weakness and paralysis of the hindlimbs, then forelimbs, and ultimately respiratory paralysis. There is reversible myocardial depression leading to pulmonary edema and death unless the tick is removed, and, in some cases, treatment with hyperimmune serum is given.
t. pyemia an infection of lambs caused by *Staphylococcus aureus*, predisposed by infection with *Anaplasma phagocytophilia*, and transmitted by the bites of ticks. Newborn lambs die of septicemia or develop signs of arthritis, meningitis, or dermatitis. Called also staphylococcal pyemia.
rabbit t. *Haemaphysalis leporispalustris*.
red-legged t. see *Rhipicephalus evertsi*.
Rocky Mountain wood t. see *Dermacentor andersoni*.
rotund t. see *Ixodes kingi*.
scrub t. see *Ixodes* holocyclus.
seed t. larval form, the stage prior to the nymph.
sheep t. sheep ked. See *Melophagus ovinus*.
shingle t. see *Dermacentor albipictus*.
shoulder t. see *Ixodes scapularis*.
soft t., soft-bodied t. ticks lacking a dorsal shield or scutum; members of the family Argasidae, e.g., *Argas persicus*. Called also nonscutate.
spinoso ear t. see *Otobius megnini*.
spotted fever t. *Dermacentor andersoni*.
t.-stained said of wool or fleece that is heavily discolored by the feces of sheep ked (*Melophagus ovinus*).
t. toxicity see *sweating* sickness.
tropical bont t. *Amblyomma variegatum*.
tropical cattle t. *Rhipicephalus* (*Boophilus*) *microplus*.
tropical horse t. *Dermacentor nitens*.
variegated t. see *Amblyomma* variegatum.
t. vectors ticks act as vectors of protozoa, bacteria, viruses, rickettsia.
wallowy t. see *Haemaphysalis bancrofti*.
winter t. see *Dermacentor albipictus*.
wood t. see *Dermacentor andersoni*.
worry an all-embracing term to describe the debilitating effects of heavy tick infestations. Includes anemia, irritation by the ticks, local infection as a result of bites, secondary blowfly, and screw-worm infestation.
yellow dog t. see *Haemaphysalis leachi*.
tick-berry *Lantana*.
tick-bite fever bacterial or rickettsial disease contracted through the bite of a tick.
tickborne fever an infectious disease of cattle and sheep in the temperate regions of Europe, caused by *Anaplasma phagocytophilum* (called previously *Rickettsia bovina* and *R. ovina* or *Cytocetes phagocytophila*), and transmitted by the tick *Ixodes ricinus*. The organism is a parasite of white blood cells, and the disease is characterized by fever, polyneuropathy, and abortion. Infection impairs the immune system and predisposes tick pyemia, pneumonic pasteurellosis, and lunging ill.
central European t. fever a meningonecrophalitis of humans caused by a flavivirus that is present in the milk of ruminants, although the principal reservoir is the tick *Ixodes ricinus*.
ticking a coat color pigmentation pattern in which hairs of one color are distributed in small groups throughout the background color, e.g., Australian cattle dog. Called also speckling.
ticlopidine *ti-klo* an antiplatelet drug used in thrombotic diseases such as heartworm disease in dogs.
ticyrynafen a diuretic, similar to the thiazide diuretics, but with greater uricosuric activity in humans. Called also tenilic acid. Withdrawn from the market because of health risks.
t.i.d., TID [L.] *ter in die* (three times a day).
tidal volume *ti’dul* the volume of gas passing into and out of the lungs in each respiratory cycle participating in gas exchange.
tide *tīd* a physiological variation or increase of a certain constituent in body fluids.
acid t. a temporary increase in the acidity of the urine that is sometimes associated with feed withholding or fasting.
fat t. the increase of fat in the lymph and blood following a meal.
postprandial alkaline t. the metabolic alkalosis that accompanies the active secretion of gastric acid following a meal.
tidemark undulating basophilic line that forms in the deep layer of the articular plate when growth of the bone ceases. It mineralizes but does not ossify. Called also blue line.
tie see genital lock.
tie and ride an event that combines trail running and endurance riding with the object to get all three team members (two humans and one horse) across a 20 to 100-mile cross-country course by alternating riding and running. The horse is tied to a tree or fence post while it waits for a runner to catch up.
tie-bush see *Wikstroemia indica*.
tie-stall a stall just large enough to accommodate one animal that is usually tied in by a neckchain if it is a cow, or by a halter if it is a horse. Stall design can influence the incidence of foot injury, lameness, cow cleanliness, and mastitis. See also stall.
tienilic acid ticyrynafen.
Tiedmann’s glands see Bartholin’s glands.
tied-in a conformation defect in an animal in which a limb is perceptibly thinner at one point, e.g., tied-in below the knee, or below the hock.
*Timafie, Tiffany* a semi-long-haired breed of cats recognized in the UK; derived from the Burmese, but in a wide range of coat colors or patterns. See Asian cat.
tigecycline *ti-gē-sik’slēn* an antimicrobial in the glycyclcline class of antibiotics, similar in structure to tetracyclines.
tigemonam a monobactam antibiotic used orally.
tiger (*Panthera tigris*) the large and powerful, yellow and black vertically striped cat, native to India, the Himalayas, East and Southeast Asia. Continental Asian species are *P. t. tigris* (Bengal, Siberian, Caspian, Indochinese, Malayan, and South China tigers) and those from the Sunda Islands, in the Malay archipelago, are *P. t. sondaica* (Javan, Bali, and sumatran tigers). All are endangered species; they are illegally hunted for trophy skins and for body parts, which are used in traditional medicines.
t. heart the striped and mottled myocardium of young cattle affected by a malignant form of foot-and-mouth disease.
t. stripe see reticulated *leukotrichia*.
t. stripe colon the striking lesion of parallel lines of hemorrhages and congestion in the colon of cattle with rinderpest, acute mucosal disease, and bovine malignant catarrhal fever. Called also zebra marks.
tight junction close focal contacts between plasma membranes of neighboring cells that are formed by a meshwork of fibrils that consist of rows of transmembrane particles. They form a semipermeable, paracellular diffusion barrier that is size- and charge-selective. See also cell junction.
tight-lip syndrome a congenital defect seen almost exclusively in Shar pei dogs in which there is inadequate development of the lower lip anterior vestibule. The lower lip curls over and may catch between the upper and lower incisors, canines, or premolars and may entrap the mandible, thereby limiting normal growth and resulting in malocclusion unless surgically corrected at an early stage.
TIL tumor-infiltrating lymphocytes.
*Tiliapa* freshwater, tropical fish of the family Cichlidae; important in aquaculture.
*T. macrocephala* see *African* mouth brooder.
*T. nilotica* Nile *tiliapia*; see *Oreochromis niloticus*.
tilapia a common name for the large numbers of cichlid fish; important in aquaculture, particularly in Africa and Asia. Includes fish in the genera *Tilapia*, *Oreochromis*, and *Sarotherodon*.
tiltemate [ti-l‘em-it] s-a dissociative anesthetic agent used in combination with zalezepam.
*Tilletia tritici* [ti-le‘she-ze] the fungus of wheat grain, called also wheat smut; a member of the phylum Basidiomycota; the smut is thought to contain an unidentified toxin believed to cause glomerulonephritis and poor weight gain in pigs.
tilmicosin [ti-lik‘mo-sin] a macrolide with antibacterial and antitymoc-plasma activity.
timbo de Palmeira see *Ateliea glazioviana*.
time *tiim* a measure of duration. See under adjectives for specific times, e.g., *bleeding* time.
t. horizon the period until which the economic analysis under consideration applies.
t. series a distribution of data according to occurrence.
t.–space series a distribution of data according to the time and the place of occurrence.
timer *tiim‘ar* the device on the x-ray machine that controls the period of exposure to the beam. Only electronic timers are allowed on modern machines.
timolo [ti-mō-lo] a β-adrenergic blocking agent with antihypertensive and antiarrhythmic properties. Also used topically to decrease aqueous humor production in the management of glaucoma.
timor pony dark-colored pony, about 12 hands high, tough, wiry, agile. Originated in the island of Timor.
timothy grass see *Phleum pratense*.
tin (Sn) a chemical element, atomic number 50, atomic weight 118.69.
dibutyrl t. dilaurate a pesticide once used in poultry and cage birds; toxic if fed accidentally to calves. Causes tremor, diarrhea, and convulsions.
tint. tinture.
tinture [tintchar] an alcoholic or hydroalcoholic solution prepared from an animal or vegetable drug or a chemical substance.
benzoin t., compound a mixture of iodine and sodium iodide in alcohol and water; used as an anti-infective agent for the skin.
jiodine t. a mixture of iodine and sodium iodide in a menstruum of alcohol and water; used as an anti-infective for the skin.
tine [tiin] one of the branches of the antlers of so-called cervine deer such as red deer, wapiti, whitetail, and sika. In contrast, deer with small or short branches have palmate antlers (moose, elk, fallow deer). Individual
tines have been given special names, such as the brow tine, over the forehead, then bez and trez, to be followed by a cluster of three or more brances called the royals. ‘Monarchs’ are red deer stags with a total of a dozen tines, ‘Imperials’ with 14 or more. See also antler.

tinea [tnˈiːə] a human term for dermatophytosis; not usually used in veterinary medicine.

ting point therapy a modern variant of classic acupuncture, based on symptomatic point selection plus classic meridian concepts of traditional Chinese medicine, and used in the treatment of diseases of the lower limbs of horses.

tingible [tnˈɪdʒəbl] stainable.

thinadazole [tnˈɪdədʒəzəl] an analog of metronidazole with a longer half-life but similar antimicrobial activity and uses.

тинутис [tnˈɪtəs] a noise in the ears, as ringing, buzzing, or roaring.

objective t. one heard by others than the patient; reported in dogs and horses.

subjective t. one heard only by the patient; difficult to determine in animals.

-tion word element. [L.] resulting from or related to an act, process, or state of.

tiopronin [tiˈɔprənən] a drug with properties similar to penicilamine; used in treatment of cystine urolithiasis. Called also 2-mercaptopropionylglycine, thiopronine. TIP translation-inhibitory protein.

tip translation-inhibitory protein.

tip t. 1. removal of the terminal 1–2 in. of horns in rams or cattles where they represent a risk to the animal from being caught in fences and the like, or to the people handling them. The horn at this point is insensitive, and the operation can be performed without anesthetic. 2. outer extremity of a staple of wool.

hairy t. long, hairy fibers protrude beyond the tip of the wool staple; usually an example of nonselective breeding programs.

spraying t. spraying of an insecticide on the tip of the fleece anticipating its migration to deeper layers.

tipping [ˈtipɪŋ] an orthodontic procedure that alters the angulation of the long axis of a tooth so that its crown is moved in a more favorable position.

tippay said of wool that has an open loose tip so that weather stain goes a long way down the staple. May be a natural defect or be the result of a long period of heavy rain.

tirefond [tirˈfɔ̃] an instrument like a corkscrew for raising depressed portions of bone.

tissue [tɪʃuˈɑ] a group or layer of similarly specialized cells that together perform certain special functions. For anatomically specific tissues, see under their identifying titles, e.g., adipose, connective.

t. death see necrosis.

t. density the penetrability of tissue by x-rays, bone and tooth being most dense, blood and soft tissue the next, fat the next, and gas and air least.

t. edema an abnormal accumulation of tissue fluid.

factor t. see tissue thromboplastin.

fluid t. the extracellular fluid that constitutes the environment of the body cells. It is low in protein, is formed by filtration through the capillaries, and the excess drains away as lymph. See also interstitial fluid.

inhibitors t. inhibitors of fibrinolysis; present in placenta.

indifferent t. undifferentiated embryonic tissue.

necrosis t. fever caused by pyrogens released by necrotic pyrogens.

plasminogen activator see plasminogen activator.

reacting agent substances that have a poorly defined but advantageous local effect on tissues.

receptor t. a cell receptor common to cells of a particular tissue.

residue t. residues of chemical substances that are unacceptable to local pure food legislation especially sulfonamides, estrogens, chlorinated hydrocarbons, heavy metals. These are thought or known to have a deleterious effect on people eating or drinking the relevant animal product. See also chemical food residue.

sensitivity t. the susceptibility of individual tissues to injury by x-ray. The injury may be by way of inflammation, necrosis or cessation of cell growth. Fast-growing tissues in which the cells have a high mitotic index are the most sensitive, especially gonads, germinative layer of skin, and erythropoietic tissues.

soft t. muscle, fat, fibrous tissue, blood vessels, or other supporting tissue of the body; other than the hard tissue, bone, and cartilage.

supportive t. cartilaginous, connective tissue, and bone.

therapy t. see glandular therapy.

typing identification of tissue types for purposes of predicting acceptance or rejection of grafts and organ transplants. The process and purposes of tissue typing are essentially the same as for blood typing.

TLC 1. thin-layer chromatography. 2. total lung capacity. 3. ‘tender loving care’.

TLL trypsin-like immunoreactivity.

TME transmissible mink encephalopathy.

TMJ syndrome temporomandibular joint syndrome.

TMR total mixed ration.

TMTD tetramethylthiuram disulfide.

TNF tumor necrosis factor.

TNM tumor, nodes, and metastases; a system of cancer staging (see TNM staging).

TNS transcureaneous neural stimulation.

TNTC abbreviation for ‘too numerous to count’, as in examination of a blood smear.

to-and-fro system a closed-circuit rebreathing system used in inhalation anesthesia. A canister of carbon dioxide absorbent is interposed between the endotracheal tube and the rebreathing bag. Fresh gas enters the system as close as possible to the animal.

toad [təd] amphibians in the order Anura; they have thick, rough skin and produce venom in the parotid glands that is a deterrent to predators. True toads are in the genus Bufo; fire bellied t’s. (Bombina spp.) very small, brightly colored toads; popular as aquarium or terrarium pets.

toadfish see Diodontidae, Tetraodontidae.

toados colloquial for toadfish.

toadstool a fungus within the division Basidiomycota. Typically refers to inedible or poisonous species. The name may derive from German todstuhl (for death seat); for poisonous toadstools see Ramaria and Clavaria.

tobacco [təˈbækə] the dried prepared leaves of Nicotiana tabacum, an annual plant widely cultivated that is the source of various pyridine alkaloids, the principal one being nicotine, a potent poison. Small animals and chickens ingesting cigarettes can be poisoned. Nicotiana tabacum plants, fed to sows and cows in early pregnancy, produce congenital arthropygynosis, in their offspring.
tobacco-chewers sheep that have had their tongues bitten off or pulled out by foxes or crows when they were lambs. Difficulty in controlling the regurgitated cud causes the juices to run out through the commissures of the lips and stain the chin. They resemble humans who chew tobacco.

tobiano a color pattern of American Paint horses controlled by a dominant gene. White extends from the dorsal midline in a ventral direction; the limbs are usually white and the distal half of the tail black. One or both eyes may be blue or partially blue. Most of the head, and always the poll and ears, are black. See also overo.

tobosa grass Hillaria mutica, may cause poisoning when it is infested with Claviceps cinerea. Called also Pleurophus mutica, tobasagrass.

tobramycin [to′bra-m′sın] an aminoglycoside antibiotic, similar to kanamycin and neomycin, produced by cultures of Streptomyces tenebrarius. Less nephrotoxic than gentamicin.

tocainide [to-ka′nīd] a class Ib antiarrhythmic, which is a Na-channel blocker that is similar to lidocaine and used in treating ventricular arrhythmias.

toceranib a tyrosine kinase inhibitor used to treat mast cell tumors in dogs.

toco-(word element. [Gr.] parturition, labor. See also words beginning toko-.

tocodynamometer [to′ko-di′na-mō′tər] an external monitoring device strapped around the abdomen to detect and record uterine activity and fetal heart rates. Has been used to manage parturition in bitches.

tocodynamometry use of an external monitoring device strapped around the abdomen to detect and record uterine activity and fetal heart rates. Has been used to manage parturition in bitches.

tocology the science and art of obstetrics.

tocolysis [to-ko-ly′sis] relaxation of the contracting pregnant uterus or undilated cervix to facilitate delivery in a dystocia or to briefly postpone parturition to ensure that surveillance is available.

tocolytic [to-ko-li′tik] pertaining to tocolysis; medication suppressing uterine contractions.

tocometer [to-kō-mē′tər] tocodynamometer.

tocopherol [to-kōf′ər-ol] an alcohol isolated from wheat germ oil or produced synthetically; it has the properties of vitamin E.

tocotrienol [to-ko-trē′ə-nol] one of the eight structurally related compounds that are grouped together as vitamin E; tocotrienol indicates a compound with an unsaturated side chain.

toe [tō] a digit of the foot.

t. abscess see foot abscess.

t. crack see sandcrack.

t. curled see curled toe paralysis.

t. kicked-up a common injury in dogs, particularly racing Greyhounds, in which the deep flexor tendon is ruptured causing the affected claw to be elevated above others on the foot. Called also knocked-up toe.

t. out the limb is rotated slightly so that the toe points a little outward.

t. picking a habit, acquired by birds, characterized by pecking, plucking, or eating their own plumage or pecking at their or the toes of others. The habit may develop into cannibalism.

t. sand see sand toe.

t. seedy see seedy toe.

t. splayed see splayed digits.

t. sprung a problem of racing Greyhounds characterized by dislocation of the proximal interphalangeal joint through rupture of the medial collateral ligament. The toe is displaced laterally, usually overriding the next toe.

t. toe-dragging stiff or weak gait in which inadequate flexing of the limbs causes dragging of the toes.

t. toe-pieces bars welded across the sole of a horsehoe behind the toe to give a draft horse grip on icy ground.

toelit, tölt a symmetric four-beat gait typical of the Icelandic horse; similar to the rack. Seen also in Faroe and Nordic ponies.

toenail [to′nāl] occur in some animals, e.g., elephants, instead of the more conventional claws.

Togaviridae [to′gā-vir′ī-de] a large family of viruses; presently two genera are defined: Alphavirus, which contains arthropod-borne viruses that cause eastern, western and Venezuelan encephalitis, and some human diseases, and Rubivirus, which contains rubella virus of humans and is not arthropod-borne. Members of both genera have similar physico-chemical properties. They are enveloped (toga = cloak) about 60 nm diameter, contain a single-stranded, plus sense RNA genome, replicate in the cytoplasm of cells and mature by budding through cytoplasmic membranes. Flaviviruses, which are also arthropod-borne, were once included in the family, but are now a separate family, Flaviridae.

Toggenburg a polled dairy goat, brown to mouse-gray in color, with white facial stripes and extremities.

toilet [Fr. toilette] the cleansing and dressing of a wound.

tok(o)- word element. [Gr.] parturition, labor. See also words beginning toko-.

TOLAzamide [tol-az′ə-mīd] a first-generation sulfonylurea derivative, used as a hypoglycemic agent in the treatment of diabetes mellitus in cats.

tolazoline [tol-az′ə-līn] an α-adrenergic receptor antagonist; a smooth muscle relaxant and peripheral vasodilator; used to reverse the effects of xylazine.

tolbutamide [tol-bu′tō-mīd] a first-generation sulfonylurea derivative, used infrequently as an oral hypoglycemic agent in the treatment of diabetes mellitus in people; second-generation agents are usually preferred and are also used in cats.
tolerance test the blood glucose curve after an intravenous injection of tolbutamide is used to assess pancreatic β-cell insulin release after drug stimulation. Used to evaluate for preclinical diabetes mellitus and, when paired with serum insulin measurement, to assess for insulinoma, but has more diagnostic value in humans than in small animals.
tolerance [to'lə-rəns] the ability to endure without effect or injury.
drug t. 1. decreased susceptibility to the effects of a drug due to its continued administration. 2. the maximum permissible concentration of a drug in or on animal feed or food at any particular time relative to slaughter.
high-dose t. in immunology, that induced by the intravenous administration of high doses of aqueous proteins.
immunological t. specific nonreactivity of the immune system to a particular antigen, which is capable under other conditions of inducing an immune response. There is, under normal circumstances, tolerance to self-antigens; identical (monozygotic) twins and dizygotic cattle or sheep twins where there has been placental fusion and exchange of bone marrow stem cells are also tolerant of each other's tissues. The administration of antigens either at high or low dose and infection with certain viruses during critical early stages of immunological development may also induce tolerance.
t. level the highest concentration of a drug or chemical permitted by law to be present in human food.
t. limits the numerical limits within which a previously identified proportion of values of a variable, or observations in a population, can be expected to occur.
low-dose t. that induced by repeated administration of low doses of the antigen.
oral t. that induced by oral administration of the antigen.
self-t. the nonreactivity of the immune system to self-antigens.
zero t. when no detectable amount of a chemical substance is permitted in human food.
tolerization the induction of tolerance, including the use of allergens, rendered nonimmunogenic, to stimulate formation of allergen-specific suppressor T lymphocytes that will suppress IgE synthesis; used in the treatment of atopy.
tolerogen [to'lə-rop-ən] an antigen that induces a state of specific immunologic unresponsiveness to subsequent challenging doses of the antigen.
tolerogenesis [to'lə-roy-ə-jə-sis] induction of immunological tolerance.
tolmetin [to'lmə-tin] a nonsteroidal anti-inflammatory drug used for management of acute and chronic pain in dogs and cats. Also used in other species.
Tollwut [Ger.] rabies. Called also wyt.
tolmetin [to'lmə-tin] a nonsteroidal anti-inflammatory drug; causes gastrointestinal ulceration and hemorrhage in dogs.
tolnaftate [to'lnaf-tit] a topical antifungal agent.
tolonium chloride [to-lo-'ne-mən] see toluidine blue.
toltrazuril a triazinon drug with anticoccidial and antiprotozoal activity.
tolu balsam see balsam.
togavirus [to'ga-və′rəs] a virus in the family Togaviridae.
toluene [to'lu-en] the hydrocarbon C₇H₈ used in the past as an anthelmintic against roundworms and hookworms in dogs. Vomiting occurs in some animals even at therapeutic dose rates. Overdosing causes incoordination and tremor soon after treatment, followed by diarrhea.
toluidine blue [to-lo-'yd-nən] an antiheparin compound, used also as a biological stain. It has a strong affinity for granules in mast cells. Called also tolonium chloride.
t. b. test a screening test for mucopolysaccharidosis, e.g., Hurler's syndrome; filter paper impregnated with toluidine blue turns blue when moistened with urine containing excessive amounts of chondroitin sulfurous acid.
positron emission t. (PET) an imaging technique using CT and nuclear medicine technology to evaluate metabolic processes. Used in oncology for staging of disease.

ultrasonic t. the ultrasonographic visualization of a cross-section of a predetermined plane of the body; see B-mode ultrasonography.

tomy word element. [Gr.] incision, cutting.
ton a measure of weight or mass. Includes short (or US) ton = 2000 lb; long (or UK) ton = 2240 lb; and metric ton = 10^3 kilograms = 2,205 lbs. See also tonne.
tone [ton] 1. normal degree of vigor and tension; in muscle, the resistance to passive elongation or stretch. 2. a healthy state of a part; tonus. 3. a particular quality of sound or voice.
tongs [tongs] long-handled, about 3 feet, shaped like pincers with knobs on the ends of the grasping blades. Applied by standing behind the subject in a confined space and closing the jaws to grasp the animal's head just below the ears. Used for restraint of pigs and similarly built animals up to about 100 lb body weight. See also nose tong.

snake t. snake t. a tool of variable length, with closing pinchers on one end, used to handle and manipulate venomous species of snakes

tongue [tung] a muscular organ on the floor of the mouth; it aids in chewing, swallowing, and is the location of organs of taste. The taste buds are located in the papillae that project from the upper surface of the tongue.
t. abscess as well as true abscesses there are pseudo-abscesses, common in companion birds, which are accumulations of inspissated, keratinized, epithelial debris, caused usually by a nutritional deficiency of vitamin A.
bifid t. a tongue with a lengthwise cleft.
bird t. see microglossia.
black t. see blacktongue.
burr t. physical injury to tongue by foreign bodies especially plant awns and burs.
cleft t. bifid tongue.
coated t. one covered with a whitish or yellowish layer consisting of desquamated epithelium, debris, bacteria, fungi, etc.
curled t. a deformity of the tongue in young turkey poults caused by a ration composed of finely ground feed fed as a dry powder. Feeding the same ration as a mash prevents the disease.
t. cyst see thyroglossal cyst.
t. deformity the tongue may be shrunken because of prior inflammation, the tip may have been torn off, e.g., in lambs by predators. There is difficulty in prehending food and in managing in the mouth so that saliva and ruminal juices drool down the chin staining skin. Called tobacco chewers.
t. edema caused by local obstruction to venous blood flow, most dramatically displayed in a fetus presented anteriorly but delayed in parturition because of incompatibility in size between it and the birth canal, or bee or other hymenoptera sting.
t. frenulum see lingual frenulum.
furrowed t. a tongue with numerous furrows or grooves on the dorsal surface, often radiating from a groove on the midline.

geographic t. a tongue with denuded patches, surrounded by thickened epithelium.

hairy t. one with the papillae elongated and hair-like.
th. hypertrophy an occasional congenital anomaly in pigs.
t. inflammation see glossitis.
inherited smooth t. a congenital defect in cattle characterized by the absence of papillae on the dorsum of the tongue, hypersalivation, poor haircoat, and illthrift. Called also epitheliogenesis imperfecta lingua bovis.
lolling t. one that protrudes from the mouth, usually to one side. Seen in some short-nosed dogs and as a vice in horses.
t. lyssa see lyssa (2).
t. paralysis see glossoplegia.
t. protrusion caused by paralysis (hypoglossal nerve dysfunction), Phalaris spp. poisoning, swelling, e.g., edema, laceration.
t. rolling a vice in housed cattle. The animal rolls its tongue around in its half-opened mouth and may partially swallow it.
short t. syndrome squamous metaplasia of the mucus glands of the tongue in frogs, together with similar changes in the urinary bladder and kidney; caused by vitamin A deficiency.

split t. may be congenital or the result of injury to the tongue.
t. timber t. wooden tongue.
t. vice see tongue rolling (above).
t. wooden t. see actinobacillosis.
t. worm see Linguatula serrata.

tongue-tie [tung’ti] congenital abnormality of a short, thick frenulum of the tongue, resulting in limitation of its motion; called also ankyloglossia. Appears to be familial in Turkish Kangal dogs (Kangal shepherds).
tonic [ton’ik] 1. producing and restoring normal tone. 2. characterized by continuous tension. 3. a term formerly used to describe a patent medicine claimed to restore normal ‘tone’ to bodily functions generally. Usually a combination of stimulants, aromatics and alcohol.
t.-clonic see clonic–tone.
t. convulsion see tonic seizure.
t. neck response a postural reaction in which extension of the head and neck causes extension of the forelimbs in a normal dog or cat.
t. seizure see tonic seizure.
tonicity [to-nis’ti-te] the state of tissue tone or tension; in body fluid physiology, the effective osmotic pressure equivalent.
tonification to support the general health of the patient; in traditional Chinese medicine, therapeutic treatment that nourishes and replenishes the qui, blood, yin and yang. Various methods may be used, including diet, herbal preparations, acupuncture, and massage.
tonin an enzyme found in many tissues that converts angiotensinogen to angiotensin II.

Tonkinese a cat breed derived from crossing the Burmese and Siamese; the build is intermediate between the two. They have the points of Siamese and coat color of Burmese. The eyes are aqua color.
tonne measure of weight or mass; 1 tonne = 1000 kg. Called also metric ton. See also ton.
ton(o)- word element. [Gr.] tone, tension.
tonoconic [ton’o-kon’ik] both tonic and clonic; said of muscular spasms. See also tonic–clonic seizure.
tonofibril [ton’o-fi’bril] one of the fine fibrils present in certain cells especially epithelial cells, thought to give a supporting framework to the cell.
tonomogram [to-no-gra-m] the record produced by tonography.
tonograph [to-no-graf] a tonometer that measures change in intraocular pressure over time.
tonography [to-nog’ra-fe] the recording of changes in intraocular pressure due to sustained pressure on the eye, and thereby an estimate of the facility of outflow of aqueous humor.
carotid compression t. a test for occlusion of the carotid artery by measuring ocular pressure and pulse before, during, and after the proximal portion of the carotid artery is compressed by the fingers.
tonometer [to-nom’ə-tar] an instrument for measuring tension or pressure, especially intraocular pressure.

applanation t. instrument for estimating intraocular pressure based upon the force required to flatten or applanate an area of cornea. Includes the MacKay–Marg, Halberg, Dräger, Tono-Pen, and Goldmann tonometers.

indentation t. instrument for estimating intraocular pressure based upon the pressure required to indent the cornea; an example is the Schiotz tonometer.
rebound t. instrument for estimating intraocular pressure based upon the force with which a small object propelled onto the cornea rebounds from it; an example is the TonoVet.
tonometry [ˈtɒnəmətri] measurement of tension or pressure, e.g., intraocular pressure. See also tonometer.
digital t. estimation of the degree of intraocular pressure by pressure exerted on the eye by the finger of the examiner. Too inaccurate to be clinically useful.
tonoplast the membrane encompassing an intracellular vacuole in a plant cell, the vacuole membrane.
tonsil [ˈtɒnsɪl] lymphoid tissue, especially that found in close association with the mucous membrane of the throat; generally used alone to designate the palatine tonsil. Other structures referred to as tonsils are the cecal, lingual, esophageal, paraepiglottic, pharyngeal, and tubal lymphoid aggregations.
cecal t. the accumulated mass of lymphoid tissue in the wall of cecum especially the proximal segment of the avian cecum.
cerebellar t. a rounded mass forming part of the cerebellum on its inferior surface.
esophageal t. large volume of lymphoid tissue in the caudal segment of the duck's esophagus.
fOLLICULAR t. a tonsil bearing numerous invaginations of its surface epithelium (fossulae) each surrounded by lymphoid tissue to form a follicle, as in the palatine tonsils of cattle or the lingual tonsils of the horse.
lingual t. diffuse collection of lymphoid tissue near the tongue root of most mammals.
palatine t. tonsils found on the ventrolateral border of the soft palate, between the palatoglossal arches and the glossopharyngeal arches, which are large and housed in a tonsillar sinus in dogs and cats, are absent from the pig and are follicular in ruminants and the horse.
paraepiglottic t. a collection of lymphoid tissue cranialateral to the epiglottic base.
pharyngeal t. a collection of lymphoid tissue in the roof of the nasopharynx in pigs.
soft palate t. lymphoid tissue within the soft palate; principal tonsils in pigs in which it forms thin smooth patches of mucosa.
tubal t. the lymphoid tissue clustered close to the pharyngeal orifice of the auditory tube.
tonsillar [ˈtɒnələr] pertaining to or emanating from tonsil (1). t. inflammation see tonsillits.
tonsillecToMy [ˈtɒnəliːsəkˈmeɪti] excision of tonsils, most commonly performed in dogs.
tonsillitis [ˈtɒnəlɪlɪtɪs] inflammation and enlargement of a tonsil, especially the palatine tonsils.
fOLLICULAR t. tonsillitis especially affecting the crypts.
parenchymatosus t. that affecting the whole substance of the tonsil.
pustular t. a variety characterized by formation of pustules.
tonsilloID t. [ˈtɒnəlɪd] a calculus in a tonsil.
tonsillopAMY [ˈtɒnəlɪpərəˈmeɪ] incision of a tonsil.
tonus [ˈtɒnəs] tone or tonicity; the slight, continuous contraction of a muscle, which in skeletal muscles aids in the maintenance of posture and in the return of blood to the heart.
tooth [ˈtoʊθ] pl. teeth; one of the small, bonelike structures of the jaws for the biting and mastication of food. See also dental, teeth, enamel, crown.
dilated t. tooth with a distorted or malformed crown and/or root(s).
embedded t. unerupted tooth covered by soft tissue or bone whose eruption is compromised by lack of eruptive force.
t. fracture fracture of the crown and/or root of a tooth, involving enamel, dentin, and/or cementum. See also enamel fracture.
fusion t. combining of adjacent tooth germs and resulting in partial or complete union of the developing teeth. Called also synodontia.
gemini t. formed from a single tooth bud with incomplete division. X-ray shows a single tooth root with twin crowns.
impacted t. unerupted or partially erupted tooth whose eruption is prevented by contact with a physical barrier, such as another tooth.
t. mobility an indicator of dental health; a measurement included in dental charting.
peg t. abnormally formed supernumerary tooth; found most often in the incisor region of dogs.
radicular t. tooth with root(s).
t. resorption the resorption of dental tissue by odontoclasts; classified by type and area with overlapping common. May be external (originating at the surface of the tooth), replacement (resorbed tooth tissue gradually replaced by bone), or internal (surface facing the pulp). See also odontoclastic resorptive lesions.
toothbrush fungal culture technique technique in which a new, unopened toothbrush is combed over skin lesions to acquire samples for superficial fungal culture; specimens are inoculated onto a fungal culture plate by gently stabbing the bristles onto the surface of the fungal culture technique. Called also Mackenzie brush technique.
top continuous band of combed parallel wool fibers that have not yet been twisted.
topcoat the coarse, outer layer in the typical haircut of dogs, composed mainly of guard hairs. This may predominate to the exclusion of the finer, soft undercoat in some breeds.
topcross progeny resulting from the mating of animals belonging to different families within a breed.
topcrossbred progeny resulting from the mating of inbred males to noninbred females of another breed.
tophaceous [ˈtɑːfəs] gritty or sandy; pertaining to tophi.
tophus [ˈtoʊfəs] pl. tophi [L.] a chalky deposit of sodium urate occurring in gout; tophi form most often around the joints in cartilage, bone, bursae and subcutaneous tissue. Reptiles overfed in cool weather are particularly prone.
topi (Damaliscus lunatus jimbela) medium-sized, short-horned, sub-Saharan African antelope with a hump at the neck base and purple patches on the upper legs.
topical [ˈtɒpɪkəl] pertaining to a particular area, as a topical anti-infective applied to a certain area of the skin and affecting only the area to which it is applied.
t. agent a pharmaceutical preparation for topical application, on the skin or on mucous membranes. See also transdermal.
**topincross** progeny resulting from the mating of inbred males to non-inbred females of the same breed.

**topiramate** an anticonvulsant drug.

**topline** the top line of the animal as seen from the side at a distance of 10 feet or more. The general predilection is for the neat and tidy, straight topline.

**topknot** in dogs, a distinctive tuft or growth of hair on top of the head; characteristic of Dandie Dinmont terriers and Irish water spaniels.

**top(o)-** word element. [Gr.] particular place or area.

**topmaker** a commercial wool processor specializing in the manufacture of tops for sale to spinners.

**topminnow** name used to refer to killifish or live bearers in the families Cyprinodontidae and Poeciliidae, respectively.

**topography** a description of a region or a special part of the body, especially of the mutual relationships of adjacent structures. See also topographic anatomy.

**topoisomerase** an enzyme involved in DNA replication that introduces a single-strand nick in the DNA enabling it to swivel and thereby relieve the accumulated winding strain generated during unwinding of the double helix.

**toponarcosis** cutaneous local anesthesia.

**topping** mowing the top, rank growth on an overgrown pasture to provide a more palatable and nutritious supply of feed.

**Tora dog** see Kai Ken.

**Tornjak** a large, powerful dog with a long, thick, coarse coat, except on the face; usually predominantly white. Called also Bosnian and Herzegovinian and Croatian shepherd dog.

**toro de lidia** [Span.] fighting bull breed of beef cattle.

**torocyte** a bowl-shaped erythrocyte with sharply defined central pallor (‘punched out’) and densely staining periphery. Easily confused with codocytes, but an artifactual change. Called also a doughnut cell.

**Torovirus** a genus in the Coronaviridae family that includes Berne virus, recovered from horses in Switzerland, and Breda virus, recovered from diarrheic calf feces in the US and porcine torovirus. Virions are enveloped and contain an elongated helical nucleocapsid with a single-stranded negative sense RNA genome. The capsid is bent into an open torus or doughnut-shaped structure.

**torpedo** fusiform swellings of proximal axonal segments of cerebellar Purkinje cells in cases of perennial ryegrass mycotoxicosis and some forms of storage disease.

**torpid** [tor pid] not acting with normal vigor and accuracy.
torus [tor-'as] pl. tori [L.] a swelling or bulging projection; a pad.
torus digitalis digital pads on the feet of dogs, cats and other species with paws.
torus corneus bulb of the heel in ungulates.
torus linguae the eminence on the dorsal of the tongue in ruminants.
torus metacarpal, t. metatarsal metacarpal pads, metatarsal pads.
torus pyloricus a fleshy protuberance at the pylorus of some species such as ruminants and pigs, that projects into the lumen of the pyloric canal.
torax t. chestnut on the leg of a horse. Called also tarsal pad.
total t. the pad of the hoof that in horses is made up of the frog (cuneus ungulare) and the digital cushion (pulvinus digitalis).
Tosa largest (130–200 lb) of the native Japanese dog breeds. It has a dense, short haircoat of red, brindle, fawn, or black. Because of its aggressive nature, many countries prohibit importation. Called also Japanese fighting dog.
tosylate [to-sa-lit] USAN contraction for p-toluenesulfonate.
total body water all the water contained within the body and includes the intracellular water and the extracellular water, the latter consisting of the interstitial or tissue fluid and the intravascular fluid or plasma. The extracellular fluids also contain the transcellular fluids that are formed by active transport processes and include saliva, cerebrospinal fluid, and the fluids of the eye and the secretory glands and so on. It may be ingested by water or water produced by the body’s metabolic processes (metabolic water). Usually approximates 60% of body mass and varies with a number of factors that influence body composition, decreasing as a percentage in obese individuals. Measured using deuterium or tritium dilution techniques or bioelectrical impedance analysis.
total digestible nutrients (TDN) an outdated method of expressing the energy value of a feed. Estimated as follows: %TDN = DCP + DCF + DNFE (DEE x 2.25) feed consumed x 100, where DCP = digestible crude protein, DCF = digestible crude fat, DNFE = digestible nitrogen-free extract, DEE = digestible ether extract. One pound of TDN = 2000 kcal of digestible energy.
total frequency the number of observations in a set of data.
total intravenous feeding all nutritional requirements are met by infusing them in solution form via an intravenous device. See also parenteral nutrition.
total milk solids butter fat, casein, lactose, minerals.
total parenteral nutrition see parenteral nutrition.
total peripheral resistance a measure of the total resistance to blood flow provided by the entire vascular system. Preferred term is systemic vascular resistance. See also pulmonary vascular resistance.
total regional flow flow rate for a local area, e.g., a specific organ.
total solids meter refractometer.
total worm count see worm count.
totalizator, totalisator a computer-driven, machine-operated betting system that eliminates the bookmaker in the betting industry that surrounds horse and dog racing. Called also parimutuel.
totipotential [to-'ti-pa-'ten-shal] exhibiting totipotency; characterized by the ability to develop in any direction; said of single cells that can give rise to an entire organism, as seen in the zygote.
toucan Neotropical birds of the family Ramphastidae related to the woodpeckers (Picidae within the order Piciformes). Toucans are opportunistic omnivores, primarily frugivorous, and easily recognized due to their large beaks and colorful plumage, consisting of over 40 species.
touch [tuch] 1. the sense by which contact of an object with the skin is recognized. 2. palpation with the finger. Touch is actually not a single sense, but several. There are separate nerves in the skin to register heat, cold, pressure, pain and touch. These thousands of nerves are distributed unevenly over the body, so that some areas are more responsive to cold, others to pain, and others to heat or pressure. Each of these types of nerves has a different structure at the receiving end. A touch nerve has an elongated bulb-shaped end, and a nerve responsive to cold a squat bulb; the nerve that registers warmth has what looks like twisted threads, and the nerve for deep pressure has an egg-shaped end. Pain receptors have no protective sheath.
tactile receptors see sense.
toulouse a gray goose, with white underparts and orange legs and beak.
tourniquet [toor-ni-ket] a device for compression of an artery or vein, most commonly used in companion animals to facilitate obtaining blood samples or giving intravenous injections.
Rumel t. one constructed of ligature doubled back through a tube, with the exposed loop used to temporarily occlude large vascular structures.
touting the making of personal representations by a veterinarian to persons who are not clients in an attempt to solicit their business; see also solicitation.

**Touton giant cell** [to’ton] large multinucleated cells characteristic of xanthomatous lesions. The cells are usually filled with lipid and have a characteristic circular arrangement of nuclei.

tovero a coat color pattern of the American Paint horse. There is dark pigmentation around the ears, poll region, around the mouth, and spots on the chest, neck, flanks, and base of tail. One or both eyes are blue.

towel sterilizable piece of cloth with good water-absorbing capacity used to mop up, as a temporary instrument store at a surgical site, as a local drape.

t. clamps see towel forceps.

toxemia see toxemia.

toxalbumin a class of directly cytotoxic proteins (lectins) found in plants and snakes; plant toxalbumins, concentrated in seeds, occur in *Abrus precatorius* (abrin), *Adenia digita* (modecun), *Ricinus communis* (ricin), *Robinia pseudoacacia* (robin), and other plants.

toxaphene [tok’a-fen] an insecticide. See chlorinated hydrocarbons.

toxascariosis disease caused by infection with *Toxascaris* spp.

**Toxascaris** a genus of roundworms in the family Ascarididae.

*T. leonina* found in the small intestine of dog, cat, fox, and wild carnivora. Causes toxascariosis.

toxemia [tok-se-ma] 1. the condition resulting from the spread of bacterial products (toxins) by the bloodstream. 2. a condition resulting from metabolic disturbances. Clinically there is depression, lethargy, separation from the group, reduced appetite, slow growth, poor pigmentation around the ears, poll region, around the mouth, and spots.

toxemia, toxemia due to absorption from the alimentary canal of toxic amines absorbed from damaged intestine, ketones, lactic acid from metabolic disturbances. Clinically there is depression, lethargy, separation from the group, reduced appetite, slow growth, poor pigmentation around the ears, poll region, around the mouth, and spots.

toxemia 1. jaundice, toxemia, and possibly severe anemia.

toxemic [tok-se-mik] emanating from or pertaining to toxemia.

t. jaundice a complex of diseases in sheep including phylogenous chronic copper poisoning in which copper accumulation is fostered by plants with a high copper to molybdenum ratio, and hepatogenous chronic copper poisoning resulting from ingestion of plants that cause hepatic damage that results in copper accumulation in the liver. The clinical signs include jaundice, toxemia, and possibly severe anemia.

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**Toxocara** a genus of nematode parasites in the family Ascarididae. *T. canis* the adults are found in the small intestine of the dog and fox; infection is via oral, transmammary, and transplacental routes; the larvae migrate through tissues, including to the fetus where they establish a pulmonary migration of larvae in neonatal puppies may cause respiratory dysfunction. See also toxocariosis, toxoplasmosis.

**Toxocariasis** the condition resulting from the spread of bacterial products (toxins) by the bloodstream. 2. a condition resulting from metabolic disturbances. Clinically there is depression, lethargy, separation from the group, reduced appetite, slow growth, poor pigmentation around the ears, poll region, around the mouth, and spots.

**Toxoplasma** a genus of apicomplexan parasite in the family Sarcocystidae, with a single species, *Toxoplasma gondii*.

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**Toxoplasma** a genus of apicomplexan parasite in the family Sarcocystidae, with a single species, *Toxoplasma gondii*.

toxicodynamics the physiological mechanisms by which toxins are absorbed, distributed, metabolized, and excreted.

**Toxicogenic** [tok’si-ko-jen’ik] producing or elaborating toxins.

**Toxicoid** [tok’si-koid] resembling a poison.

**Toxinfectious botulism** see wound botulism.

**Toxicologist** [tok’si-kol’ist] a specialist in toxicology.

**Toxology** [tok’si-kol’je] the science or study of poisons.

**Developmental t.** abnormalities of development caused by exposure to deleterious agents; embryotoxicity.

**Genetic t.** errors in the transmission of genetic information induced by a toxic agent; mutagenesis.

**Toxicopathy** [tok’si-kop’ə-the] the fixation or neutralization of a poison in the body.

**Toxopexy** [tok’si-pek’si] the fixation or neutralization of a poison in the body.

**Toxicophilia** [tok’si-fil’ik] easily susceptible to poison; having affinity for toxins.

**Toxophore** [tok’so-for] the group of atoms in a toxin molecule that produces the toxic effect.

**Toxophobic** [tok-sof’ik] bearing poison; producing the toxic effect.

**Toxoplasma** a genus of apicomplexan parasite in the family Sarcocystidae, with a single species, *Toxoplasma gondii*.
**T. gondii** a coccidian parasite of the intestine of all felids, including especially the domestic cat, jaguarundi, ocelot, mountain lion, leopard cat, and bobcat, which are all definitive hosts. Most vertebrates, including humans and birds, can be infected with different stages and experience one or other forms of the disease toxoplasmosis. Oocysts are the infective stage of importance in farm animals, and the environmental infective stage for herbivores. Oocysts excreted in the feces of cats can survive in soil for many months and are ingested by the intermediate (e.g., livestock) host, and the parasite invades tissues to produce tissue cysts. The invasion can include the fetus. Tissue cysts in the intermediate host can cause damage to the nervous system, myocardium, lung tissue, and placenta. The parasite is an important causative agent of abortion in sheep and humans. Bradyzoites or tachyzoites in animal tissues are a source for toxoplasmosis in humans, dogs, and pigs.

**toxoplasmmin** an antigen prepared from mouse peritoneal fluids rich with *Toxoplasma gondii*; injected intracutaneously as a test for toxoplasmosis.

**toxoplasmosis** [Tok-so-plaz-mo-za's] a contagious disease of all species caused by the sporozoan parasite *Toxoplasma gondii*. A principal manifestation in animals is as abortion in ewes. It is also a cause of sporadic cases of pneumonia, central nervous system disease, and less often retinocochoritis, and hepatitis in dogs and cats. Clinical signs include fever, malaise, lymphadenitis, abortion, fetal malformation. Major importance as a zoonosis from bradyzoites in raw or undercooked meat and oocytes in cat feces. Infection in humans is common but disease is uncommon. Immunocompromised humans and pregnant women are at higher risk.

**toy breeds** the very small, decorative breeds of dogs, generally less than 20 lb weight, developed mainly for companionship and as novelties. Includes Affenpinscher, Bichon frise, Cavalier King Charles spaniel, Chihuahua, Chinese crested, English toy terrier, Brussels griffon, Italian greyhound, Japanese chin, King Charles spaniel, Lowchen, Maltese, Miniature pinscher, Papillon, Pekingese, Pomeranian, Pug, Silky terrier, Toy Poodle.

**t. b. hypoglycemia** see juvenile hypoglycemia.

**Toy fox terrier** a small (3.5–9 lb) dog with a short, glossy predominantly white coat, but the head is predominantly colored. The ears are large and erect. The upright tail may be docked to a short length. Descended from the Fox terrier, but recognized as a separate breed in North America. Called also American fox terrier, AmerToy.

**Toyger** a medium-sized, muscular cat bred to resemble a tiger. It has random, dark vertical stripes on a bright orange coat.

**toyon** *Heteromels salicifolia*, *Heteromels arbutifolia*.

**TPA** total parenteral alimentation.

**TPO** tibial plateau leveling *osteotomy*. Used in the management of cranial cruciate ligament deficits in dogs.

**TPN** abbreviation for total parenteral nutrition.

**TPP** 1. triple pelvic *osteotomy*, 2. thiamine pyrophosphate.

**TPR** 1. abbreviation for temperature, pulse, respiration. Used in medical records; 2. total peripheral resistance.

**tr.** tincture.

**trabecula** [tra-bek'ə-lə] pl. *trabeculae* [L.] a small beam or supporting structure; various fibromuscular bands or cords providing support in various organs, such as heart, penis, and spleen.

**bone t.** anastomosing bony spicules in cancellous bone that form a meshwork of intercommunicating spaces that are filled with bone marrow.

**septomarginal t.** *t. septomarginalis* the bundles of cardiac muscle that pass from the interventricular septum to the peripheral ventricular wall of the heart and that serve mainly to support Purkinje fibers that convey electrical impulses rapidly to the more remote parts of the heart in order to synchronize systole. Formerly called moderator bands.

**trabecular meshwork** solid trabeculae and interspersed spaces within the iridocorneal angle and through which the aqueous humor exits the eye. Called also iridocorneal meshwork.

**trabeculäre** [tra-bek'ə-lār] marked with crossbars or trabeculae.

**trabeculation** [tra-bek'ə-lā-shən] the formation of trabeculae in a part.

**traberkrankheit** scarpie.

**trace element** [tras'ē] essential ingredients of the diet of a particular species of animals but the amount required is very small. Includes copper, cobalt, iron, iodine, manganese, molybdenum, selenium, and zinc. Chromium, fluorine, and silicon are also necessary in some experimental diets, but their addition to livestock diets is not considered to be essential. See also macroelement. Called also trace minerals.

**traceback** an epidemiological strategy of locating the origin of an outbreak. The usual tactic is to enforce the use of identifying markers such as brands, tailtags, electronic sensing of implanted responders, or ear-tags with codes identifying the vendors.

**tracer** [tras'ər] 1. a means by which something may be followed. 2. a mechanical device by which the outline or movements of an object can be graphically recorded. 3. a material by which the progress of a compound through the body may be observed.

**radioactive t.** a radioactive isotope replacing a stable chemical element in a compound introduced into the body, enabling its metabolism, distribution, and elimination to be followed in the living animal.

**traces** long leather straps that run from the collar of a cart harness to the cart and provide the traction for moving it.

**trachea** [tra'ke-ə] the air passage extending from the larynx to the main bronchi; called also the windpipe. This tube is reinforced by a series of C-shaped rings of cartilage that keep the passage uniformly open. The gaps between the rings are bridged by strong fibroelastic membranes. The arms of the C are bridged by the tracheal muscle that can vary the luminal diameter. The trachea is lined with mucous membrane bearing cilia that continuously sweep foreign material out of the breathing passages toward the mouth.

**tracheal** [tra'ke-əl] pertaining to, or emanating from, the trachea.

**t. band sign** seen when the esophagus contains are resulting in the ventral wall of the esophagus superimposing over the dorsal wall of the trachea. Also known as the tracheal stripe sign.

**t. collapse, collapsing trachea** a disorder of the tracheal membrane (tracheal muscle) or chondrogenesis of tracheal rings that results in a progressive functional tracheal stenosis. Affected dogs, usually of miniature or toy breeds, have a cough and reduced exercise intolerance. See also goose honk cough.

**t. compression** reduction in the diameter of the trachea due to a mass effect, seen on imaging.

**t. cough** a nonproductive, or only slightly productive, resonant cough, often occurring in paroxysms and easily elicited by pressure on the cervical trachea. Typically associated with tracheitis.

**t. duct** paired lymphatic ducts running down the side of the trachea, commencing at the retropharyngeal lymph nodes, receiving tributaries from other nodes of the head and neck and terminating in either the thoracic duct or the jugular or other vein at the entrance to the chest.

**t. edema syndrome** occurs in feedlot cattle in the latter part of the feeding period, caused by edema of the dorsal tracheal mucosa from the midcervical region to the thoracic inlet. Characterized by a loud sound like a goose honking at each inspiration. Unknown etiology.

**t. hypoplasia** a congenital defect in brachycephalic dogs in which the tracheal lumen is greatly reduced in size, typically as part of the brachycephalic obstructive airway syndrome, contributing to respiratory difficulties and predisposing to secondary bronchopneumonia. Most common in bulldog breeds.

**t. inflammation** see tracheitis.

**t. intubation** refers usually to the passage of an endotracheal tube for the purposes of anesthesia, resuscitation, or external control of respiration for any other reason. See also tracheal tube (below).

**t. percussion** a sharp percussion stroke on the trachea creates a sound that can be auscultated over the lung area.

**t. rupture** due usually to blunt trauma. There is escape of air into surrounding tissues that results in subcutaneous and mediastinal emphysema with, or without, an associated bacterial infection.
t. stenosis may be congenital or acquired, resulting from trauma or surgical procedures on the trachea. Causes respiratory distress, coughing, and secondary infections of the upper respiratory tract.

t. stent a device placed either into the lumen of the trachea or external to the tracheal rings to support the trachea in maintaining lumen integrity lost as a result of tracheal collapse.

t. transection occurs as a result of trauma, in cats particularly from hyperextension of the head and neck, causing dyspnea.

t. tube see tracheotomy tube

tracheitis [traˈke-i-tis] inflammation of the trachea; characterized by cough, pain, and coughing on compression of the trachea and, in severe cases with obstruction of the airway, dyspnea.

trachelectomy [traˈke-let-ə-mə] excision of the uterine cervix.

tracheleoma [traˈke-lo-mə] a hematoma on the sternocleidomastoid muscle.

trachelitis [traˈke-o-lik-tis] spondylitic spasm of the neck muscles; spasmodic retraction of the head as may occur during an epileptic seizure.

tracheoaerocele [traˈke-o-ər-o-sēl] true tracheal hernia containing air.

t. bronchial [traˈke-o-brong-ki-o] pertaining to the trachea and bronchi.

tracheolaryngectomy [traˈke-o-lar-i-niŋ-ke-o-ti] by excision of the larynx and trachea.

tracheolaryngectomy [traˈke-o-lar-i-niŋ-ke-o-ti] pertaining to or arising from the trachea and esophagus.

t. fistula a communication between the trachea and esophagus; can occur during fetal life due to faulty separation of the laryngotracheal groove from the foregut; often associated with esophageal stenosis or atresia, aspiration pneumonia.

tracheomalacia [traˈke-o-ma-lə-ˈsha] softening of the tracheal cartilages.

tracheopathy [traˈke-o-pa-thi] the disease of the trachea.

tracheoplasty [traˈke-o-plasˈti] plastic repair of the trachea.

tracheopathy purulent tracheitis.

tracheorrhagia [traˈke-o-ra-gi-a] hemorrhage from the trachea.

tracheosis [traˈke-o-sis] fissure of the trachea.

tracheoscopy [traˈke-o-sko-pi] endoscopic examination of the lumen of the trachea.

tracheostomia [traˈke-o-sto-ˈma] constriction of the trachea.

tracheostoma [traˈke-o-sto-ˈma] an opening through the neck and into the trachea.

tracheostomy [traˈke-o-sto-ˈmi] creation of an opening into the trachea through the neck, with insertion of an indwelling tube to facilitate passage of air or evacuation of secretions. The procedure may be an emergency measure or an elective one.

t. tube a tube primarily used in horses that have a long-term obstruction of the upper respiratory system. Generally two types: self-retaining and ‘J’ type. ‘J’ type is a flattened tube fixed to a broad flange with suture holes at its edge and a bend of 90° at 0.5 in. from the flange. J type tubes can incorporate a cuff to allow sealing of the airway. Self-retaining tubes are comprised of two interlocking curved metal pieces, each attached to a broad, flat flange. The flange sits flush with the skin of the neck, while the interlocking pieces rest on the inside of the tracheal wall nearest the tracheostomy incision. See also endotracheal tube.

trachyphoniasis [traˈkhi-fon-ə-si] a graphic record produced by copying another, or scribed by an instrument capable of making a visual record of movements.

trachyphonia [traˈkhi-fon-i-a] roughness of the voice.

tracheography [traˈkhi-e-graf-i] radiography of the trachea preferably after the intratracheal injection of an oily contrast agent. Replaced by other imaging techniques such as computed tomography (CT).

tracheolaryngeal [traˈke-o-lar-i-nin] pertaining to the trachea and larynx.

tracheolaryngotomy [traˈke-o-lar-i-nin-ˈto-mi] incision of the larynx and the trachea.

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tracheopathy purulent tracheitis.
tractotomy  [trak-tot′-ə-mə]  see olfactory tractotomy.
tractus  [trak′-əs]  pl. tractus  [L.] tract; certain collections of nerve fibers in the central nervous system.

Tradescantia  garden and house plant genus in the family Commelinaceae; suspected to cause allergic contact dermatitis in dogs. Called also WANDERING JEW.

traditional Chinese medicine  an ancient health care system based on the concept of vital energy (Qi) and the balance of opposing forces of yin (cooling energy) and yang (warming energy). It incorporates acupuncture, herbal medicine. Tui-na massage, food therapy, and Qigong.

trafficking  see homing.

tragacanth  [trag′-ə-kanth]  the dried gummy exudation from Astragalus gummifer or other species of Astragalus; used as a suspending agent for drugs. Called also gum tragacanth.

Tragelaphus  a genus of medium to large African antelopes in the Bovidae family; includes T. angasii (nyala), T. oryx (eland), T. scriptus (kwele), T. sylvaticus (bushbuck), T. spekei (sitatunga), T. strepsiceros (greater kudu).

tragus  [tra′gəs]  pl. tragi  [L., Gr.] the knob-like projection at the base of the external ear supported by a plate of cartilage, part of the auricular cartilage.

trail drive  see trailing.

trail herding  movement of livestock by men on horses or, particularly trailing movement of livestock by men on horses or, particularly trail drive.

trail ride  a cross-country, noncompetitive, group saunter on horseback, principally with a view to seeing the sights.

trailer-table  a mobile operating table for large animals, moved from farm to farm behind a vehicle.

trailing  movement of a group of livestock from one place to another along a trail, usually by men on horseback. Historically, in North America the principal method in the 19th century of getting cattle from southern ranges or markets in the north or to northern rangelands for fattening. Usually involved trailing a herd of several thousand cattle over long distances travelling about 15 miles per day.

train of four  [trān av′fər]  a method of monitoring neuromuscular blockade in which four twitch responses are used to demonstrate depletion of acetylcholine.

trained-off  pertaining to Greyhounds or racehorses that lose racing form during training or a racing program in the absence of any apparent physical or raculous disease.

training  [tran′ing]  1. in racing horses and Greyhounds, a program of exercise to improve the animal’s physical performance in a particular task. The effects of training include enlargement of spleen with greater erythrocyte storage and mobilization, increased heart size and stroke volume, and increased hemoglobin content of blood. A performance trial is the only satisfactory way of measuring the gains achieved. 2. in behavior involves breaking-in and obedience training in dogs or behavioral training in other species, and produces a distinctive behavior pattern. 3. t. acting quiet an anxious patient.

trait  1. any genetically determined condition; also, the condition prevailing in the heterozygous state of a recessive disorder. 2. a distinctive behavior pattern.

T.  A-46  see inherited parakeratosis.

qualitative t.  a characteristic that is expressed only in descriptive terms, e.g., fine bone, deep chest.

quantitative t.  a characteristic that is expressed mathematically, e.g., an annual yield of milk of 22,000 lb.

sex-linked t.  the gene for the trait is located on the chromosomes that determine the sex of the individual.

Trakehner horse  Russian and German light horse produced by crossing Thoroughbred and Arab, chestnut, bay or gray.

tramadol  [tra′mə-dəl]  an analgesic with partial µ agonist opioid, SHT inhibition, and norepinephrine re-uptake inhibition activity.

tramlines  nonvascular, parallel linear markings on radiographs that represent thickened bronchial walls.

tranexamic acid  [tran′ək-sam′ık]  an antifibrinolytic agent, used orally or intravenously to control hemorrhage.

trandolapril  [tran′do-lap′rəl]  an angiotensin converting enzyme (ACE) inhibitor used to treat hypertension and to lower peripheral vascular resistance in patients with cardiac disease.

tranquilizer  [trən′kwil′izər]  any of a group of compounds that calm or quiet an anxious patient.

t. gun  see blow dart.

trans  [trans]  1. in organic chemistry, having certain atoms or radicals on opposite sides of a nonrotatable parent structure.

transabdominal  [trans′a-bəm′ə-nəl]  across the abdominal wall or through the abdomen.

transcancern  insertion of a biopsy needle, such as Menghini or Tru-Cut, through the abdominal wall, for the purpose of obtaining a tissue sample from an organ, most commonly liver or kidney.

transacylase  [trans′ə-sīl′ās]  an enzyme that catalyzes the transfer of acyl groups.

transaldolase  [trans′al-dəl′əs]  key enzyme of the nonoxidative pentose phosphate pathway that transfers the dihydroxyacetone group from sedoheptulose 7-phosphate to glyceraldehyde 3-phosphate to form fructose 6-phosphate.

transaminase  [trans′ə-mə-nəs]  an enzyme that catalyzes the transfer of an amide group from one molecule to another.

transamidase  the process of transferring an amide group from one molecule to another.

transaminase  [trans′am-i-nəs]  an enzyme that catalyzes the transfer of an amino group from one molecule to another.

glutamic–oxaloacetic t. (GOT) see aspartate aminotransferase (AST).

transamination  [trans′ə-mə-nə-sən]  the reversible exchange of amino groups between different amino acids and α-keto acids.

transanimation  resuscitation of an asphyxiated person or animal by mouth-to-mouth breathing. See also artificial respiration.

transaortic  [trans′a-ɔr′ık]  performed through the aorta.

transarterial  across an articulation.

transcatheter placement of external skeletal fixation devices above and below a joint and connected by rigid bars. Useful where soft tissues are damaged, requiring immobilization of the joint.

transatrial  [trans′a-trē-əl]  performed through the atrium.

transaudient  [trans′au-dənt]  penetrable by sound waves.

transaxial  [trans′aks′ē-al]  the transverse plane (also called the horizontal plane, axial plane or transaxial plane) is an imaginary plane that divides the body into superior and inferior parts. It is perpendicular to the coronal and sagittal planes.

transcalcialferin  an alpha globulin, synthesized in the liver; carries 1,25 vitamin D in the plasma. Called also vitamin D binding protein.

transcose  [trans′ka-so]  penetrable by heat rays.

transcalvarial  [trans′kal′vər-əl]  through or across the calvaria.
transcatheter [trans-kath′ə-ter] performed through the lumen of a catheter. Includes the delivery of intravascular devices such as balloon, coils and stents to dilate or close cardiovascular defects. See also balloon valvuloplasty.

transcellular fluids [trans-sel-u′lar] cerebrospinal fluid, aqueous humor of the eye, synovial fluids, urine, bile, pancreatic juice and so on.

transcervical [trans-sur-vik′əl] 1. performed through the cervical opening of the uterus. 2. across or through the neck of a structure.

transcobalamin [trans-ko-bal′ə-min] a group of proteins (of intestinal cells) that bind to cyanocobalamin (vitamin B12) and transport it to other tissues.

transcortin [trans-kor′tən] an α-globulin that binds and transports biologically active, unconjugated cortisol in plasma.

transcript [trans-krīp′tən] an RNA molecule, formed during transcription, from a DNA template. Primary t. the RNA molecule produced by transcription prior to processing, including splicing.

transcriptase [trans-krīp′təs] RNA polymerase; an enzyme that catalyzes the synthesis (polymerization) of RNA from ribonucleoside triphosphates, with DNA serving as a template.

reverse t. RNA-dependent DNA polymerase; an enzyme of retroviruses and hepadnaviruses that catalyzes the transcription of RNA to DNA. Viral see reverse transcriptase (above).

transcription [trans-krīp′shən] the synthesis of an RNA copy from a nucleotide sequence in a limited region of DNA. See also deoxyribonucleic acid and transcriptase.

t. factor (TF) a general term for any protein, other than RNA polymerase, required to initiate or regulate transcription in eukaryotic cells. General TFs are involved in the formation of the transcription-preinitiation complexes near the start site and are required for transcription of all genes; specific TFs stimulate (activators) or inhibit (suppressors) transcription of particular genes by binding to their regulatory sequences.

nested set t. a hallmark of the replication strategy of viruses in the order Nidovirales that includes coronaviruses, toroviruses, and arteriviruses, in which a so-called nested set of subgenomic mRNAs are produced that have identical 5′-termini, but because of discontinuous mRNA transcription has a unique coding sequence and is transcribed into a unique viral protein.

reverse t. the synthesis of a DNA copy from a RNA template, catalyzed by reverse transcriptase.

t. unit see operon.

transcriptome [trans-krīp′təm] the entire set of RNA transcripts made by a single organism; includes mRNA, rRNA, tRNA, and a still not completely defined set of small RNAs that include microRNAs (miRNA), small interfering RNAs (siRNA), and small nuclear RNAs (snRNA).

transcutaneous [trans-ku-ta-ne′əs] transdermal; across the skin.

t. electrical nerve stimulator (TENS) a topically applied electrical device used in physical therapy and pain management; provides pain relief by exciting sensory nerves and stimulating the pain gate mechanisms and/or endogenous opioid systems.

transdermal [trans-duhr mahl] across the skin, particularly with reference to the absorption of drugs applied topically for regional or systemic effect; examples include transdermal diolcolfen for synovitis in horses and transdermal methimazole for hyperthyroidism in cats.

t. patch a drug-impregnated adhesive patch applied to the skin for controlled and sustained release of the active compound. See also fentanyl.

transdifferentiation see alveolar metaplasia.

transducer [trans-doo′sər] a device that translates one physical quantity to another, e.g., pressure or temperature to an electrical signal. In ultrasonography, the device that emits sound waves.

annular array t. an ultrasound transducer with crystals arranged in concentric rings with different frequencies of sound produced. It allows for a greater depth of focus.

linear array t. an ultrasound transducer with piezoelectric crystals arranged in a line. It gives a rectangular field of view.

neuroendocrine t. a neuron, such as a neurohypophyseal neuron, that on stimulation secretes a hormone, thereby translating neural information into hormonal information.

sector t. an ultrasound transducer that produces a fan-shaped field of view.

transducin [trans-doo′sin] GDP/GTP-regulated protein, composed of three subunits designated α, β, and γ, involved in vertebrate phototransduction, naturally expressed in retina rods and cones. It is a type of heterotrimetric G-protein with different α subunits in rod and cone photoreceptors.

transducent a bacterial cell that has acquired new genetic material through the process of transduction.

transduction [trans-duk′shan] the transfer of DNA from one bacterium to another by bacteriophage.

transduhal [trans-duh′ral] through or across the dura mater.

transsection [trans-sek′shan] a cross-section; division by cutting transversely.

transepidermal occurring through or across the epidermis.

t. water loss (TEWL) the evaporation of water from the skin surface; balance with hydration is critical in maintaining the normal functions of the stratum corneum.

transepithelial occurring through or across an epithelium.

transfaunation [trans-faw-nə-shən] see cud transfer.

transfection [trans-fek′shan] an introduction of free DNA into a cell.

transfer factor (TF) [trans-fər] see transfer factor.

transfer RNA; see ribonucleic acid.

transferase [trans-fər′əs] an enzyme that catalyzes the transfer, from one molecule to another, of a chemical group that does not exist in free state during the transfer.

glucuronyl t. an enzyme that converts bilirubin to a soluble glucuronide.

glutathione S-t’s widely distributed enzymes catalyzing the detoxification of many compounds but particularly xenobiotics and peroxidized lipids by linkage of the cysteine moiety of glutathione with the compound.

ornithine carbamoyl t. (OCT) catalyzes the transfer of carbamoyl, as from carbamoylphosphate to l-ornithine to form orthophosphate and citrulline in the synthesis of urea. Found almost exclusively in the liver. Determination of serum concentration is used as an indicator of hepatocellular damage, particularly in cattle, sheep, and pigs.

peptidyl t. a ribosomal enzyme that transfers the growing peptide from its carrier tRNA to the α-amino group of the amino acid residue of the amminoacyl-tRNA specified by the next codon of the mRNA.

transfection see transfection.

transferrin [trans-fər′ən] a complex of iron and apotransferrin; the major iron transport protein in plasma. Usually measured indirectly by total iron-binding capacity.

t. saturation a calculation used to assess iron status by estimating the percentage of iron binding sites on apotransferrin occupied by iron; (serum iron concentration × 100) divided by total iron-binding capacity, expressed as a percentage.

transfix [trans-fiks] to pierce through or impale.

transfixation [trans-fi-kə′shən] the process of transfixing.

t. ligature the suture material is passed through the stump to be ligatured, tied around a half of the stump, then around the entire stump.

pin used in orthopedic surgery in young animals, or where a medullary t. or plates are not applicable. The pin passes completely through the bone and is fixed by attachment to external bar splints. A series of them enable the surgeon to immobilize a number of fragments of a comminuted fracture.

transfixion a method of amputation in which the knife is passed directly through the soft parts, the cutting being done from within outward.

transformation [trans-fər-ma′shən] change of form or structure; conversion from one form to another. In oncology, the change that a normal cell undergoes as it becomes malignant. In statistics a functional change to the variable.
bacterial t. the process of intercellular transfer of genetic information in which a small portion of the total DNA of a lysed bacterium enters a related bacterium and is incorporated into the genome of the recipient. In some cases an intact plasmid can enter and become established in the new bacterial cell.
cell t. the changes in types of proteins expressed and growth characteristics that take place in cells infected by some viruses, including tumor formation by retroviruses.
transformer an induction apparatus for changing electrical energy at one voltage and current to electrical energy at another voltage and current, through the medium of magnetic energy, without mechanical motion.
t. fluid may cause poisoning due to its polychlorinated biphenyl content.
transforming growth factor a family of extracellular signaling molecules important in the transformation of cells and in growth and development.
transfusion [trans-fyu′shən] the introduction of whole blood or blood components into the bloodstream. Among the elements transfused, in addition to whole blood, are packed red blood cells, plasma, platelets, granulocytes, and cryoprecipitate, a plasma protein rich in antihemophilic factor VIII. See also autotransfusion.
autologous blood t. transfusion of the animal's own blood.
blood t. infusion of whole blood to maintain or replace blood volume, to provide deficient blood elements and improve coagulation, and to maintain or improve transport of oxygen.
direct t. transfer of whole blood from the donor through a tube, directly to the recipient.
exchange t. blood is removed from the recipient at the same time and in the same amount as blood is being administered from the donor.
incompatible t. see transfusion reaction (below).
t. reaction a group of clinical signs due to antibody in the recipient's blood reacting with the transfused red blood cells when blood for transfusion is incorrectly matched, or when the recipient has an adverse reaction to some element of the donor blood. Most commonly, there is an immune-mediated hemolysis involving alloantibodies, which might be naturally occurring or the result of an earlier transfusion, in the recipient's serum and the donor's erythrocytes. Nonimmunological transfusion reactions include cardiovascular overload, hypocalcemic tetany from citrate (used as the anticoagulant) overload, and disease transmission.
t. therapy the administration of whole blood or blood components, usually in the context of bleeding disorders.
transgene [trans-jen] a gene that has been incorporated into the genome of another organism.
transgenesis transfer of genes from one individual into the genome of another who transmits it to successive generations.
transgenic [trans-jen′ık] the product of transgenesis.
t. animal an animal that carries a foreign (could be human) gene that has been deliberately inserted into their genome. One use is in research where the cause of a disease can be attributed to one or a small number of genes.
transglutaminase [trans′gloo-tam′nə-zə] the activated form of protransglutaminase, which forms stabilizing covalent bonds within fibrin strands; called also coagulation factor XIIIa. Used in food production to bind meat proteins together.
transhumance a husbandry procedure in which livestock are moved to another climatic region at particular seasons, e.g. mountain grazing in summer.
transilience [trans-i-le-ə] across the two ilia.
transillumination [trans′lu′i-ˈni-nən] the passage of bright light through a body structure, to permit inspection by an observer at an angle different from the angle of illumination.
dental t. used to assess the vitality of a tooth; light transmits well through healthy teeth, while those with diseased pulp are more opaque.
ocular t. intense light directed through the sclera is transmitted to the interior of the eye, producing a tapetal reflex or light visible within the pupil. Useful in differentiating staphylomas from intraocular masses.
transit [trans′sit] being conveyed from one place to another; in animal husbandry parlance used to mean being transported, usually with the qualification that the journey is undertaken over long distances. Untoward sequelae are heat stroke and transit tetany, especially in overweight and late pregnant animals.
t. erythema the carcasses of pigs that have been transported long distances before slaughter develop large patches of superficial erythema where they have lain for long periods. The stained areas have to be trimmed.
t. fever see bovine respiratory disease.
t. tetany, t. recumbency of mares, see lactation tetany. Of ruminants it is a syndrome of recumbency, complete anorexia, rumen stasis, and a gradual onset of coma and death after a course of 2–3 days. There may be tetany and excitement in the early stages. Occurs in ruminants transported long distances or forced to take too much exercise when in advanced pregnancy. Called also railroad disease, railroad sickness.
transit animals animals in sale yards, staging on a long move, e.g., to agistment, on dealer's premises, in veterinary hospital, holding yards at abattoirs.
transit time the time required for a substance or structure to pass through an organ such as ingesta to pass through the gastrointestinal tract or red blood cells to pass through the pulmonary capillaries.
transition [tran-zhən] 1. changing from one state to another; see also metamorphosis. 2. in molecular biology, a point mutation in which one purine base replaces another purine. See base substitution mutation.
t. cow a dairy cow in the period 2–3 weeks prepartum until 2–3 weeks postpartum. Management, especially nutrition, during this period is a determinant of clinical and subclinical postpartum diseases that can significantly affect productivity and profitability.
t. matrix see transition matrix (3).
t. period see transition cow (above).
t. state intermediate, higher free energy stage than initial stage in the reaction, often one in which the reacting molecule is strained or distorted or has an unfavorable electronic structure.
Transition Cow Index™ (TCI) a patented tool to evaluate the effectiveness of transition cow management. It uses Dairy Herd Improvement Association (DHIA) data from the previous lactation in an equation to predict performance at the first test day of the new lactation. The index is the difference between actual performance to that predicted. The cumulative value of all individual TCIs for cows calving within a defined period allows herd trends in transition cow management to be measured. Used to benchmark current programs and monitor the effectiveness of interventions.
translocation the practice of commencing to feed extra rations, especially of grain and concentrates, to late pregnant cows in an attempt to promote maximum milk production from the very beginning of the lactation. Feeding usually commences about 3 weeks before the due date. Believed to reduce the incidence of milk fever, ketosis, and fatty liver, udder edema, abomasal displacement, mastitis. Called also lead feeding, challenge feeding, steaming up.
transitional cell cells that make up an epithelium, consisting of several layers of soft cuboidal cells that flatten out when stretched. Best seen lining the lower urinary tract.
t. c. tumors 1. adenomas, papillomas and carcinomas of transitional epithelium in the urinary tract; they are the most common tumors of the urinary bladder in dogs. 2. carcinoma of the upper respiratory tract.
transketolase [trans′kə-tə′lās] an enzyme that participates in the transfer of ketol groups in the pentose phosphate pathway. Determination of activity in the red blood cell is an indirect indicator of thiamine deficiency.
trans underground the synthesis of a polypeptide using messenger RNA as a template, a complex process involving ribosomes and transfer RNAs; every three bases (a codon) along the mRNA beginning with the start codon specifies one amino acid in the polypeptide chain. See also deoxyribonucleic acid.
nick t. an in vitro procedure for introducing radiolabeled nucleotides into DNA. A method for preparing labeled probes for use in a wide variety of hybridization techniques both in vitro and in vivo. The DNA fragment to be labeled is nicked (single-strand breaks are produced) using DNase, and the nicked DNA is mixed with DNA polymerase I and NTPs, one or more of which are labeled. Labels may be antigenic, fluorophore, or radioactive (32P at the alpha phosphate position). The polymerase elongates the 3' strand end while simultaneously removing nucleotides from the 5' strand end at the nick.
translocation [trans′lu-ka′shən] 1. change in location; the movement (of a molecule) from one place to another. 2. in genetics, the attachment of a chromosome to an autosome (a homologous chromosome). See also chromosomal abnormality. The translocations recorded include adjacent section, alternate segregation, centric fusion, distal segment, eye color, heterozygote, interstitial segment, reciprocal, Robertsonian.
Robertsonian t. that in which the breaks occur at the centromeres and entire chromosome arms are exchanged, usually involving two acrocentric chromosomes.
translocute [trans-lok′ət] slightly penetrable by light rays.
transmembrane [trans-mem′brən] across a membrane; usually referring to a cell membrane.
transmethyrase [trans-mē-thə-lāz] an enzyme that catalyzes the transfer of a methyl group from a donor to an acceptor.
transmethylation [transˈmɛθ-əl-ə-tʃən] the transfer of a methyl group (CH₃) from a donor to an acceptor.

transmigration [transˈmi-grəʃən] 1. diapedesis. 2. change of place from one side of the body to the other.

transmissible [trans-misˈtə-bal] said of a disease capable of being transmitted from one animal to another. There are very many such diseases but most are not included below because the word ‘transmissible’ is not a part of the disease’s name in common usage.

canine t. venereal tumor (TVT) see canine transmissible venereal tumor.

t. gastroenteritis 1. a highly infectious disease of baby pigs caused by a coronavirus. It is manifested by vomiting and diarrhea, severe dehydration, and a high case fatality rate in piglets under 10 days of age. In older pigs the syndrome is similar but less severe, and many pigs survive—others are infected but show no clinical signs. A disease notifiable to the OIE (see Table 21). Called also TGE. 2. a disease of turkeys caused by a coronavirus. It affects birds of all ages and is characterized by wet droppings and weight loss. See turkey coronaviral enteritis. Called also bluecomb.

t. lymphosarcoma, t. reticulum cell tumor see canine transmissible venereal tumor.

t. murine colonic hyperplasia caused by Citrobacter rodentium and characterized by diarrhea, weight loss, rectal prolapse, and a high mortality rate in young mice.

t. porcine genital papillomatisis see papillomatosis.

t. serositis see sporadic bovine encephalomyelitis.

transmission [transˈmɪʃən] 1. transfer, as of an infection from one patient to another. 2. of nervous impulses. See neuromuscular transmission. 3. heredity.

airborne t. spread of infection by droplet nuclei or dust through the air. Without the intervention of winds or drafts the distance over which airborne infection takes place is usually short, say 3—6 m.

arthropod t. by insect or arachnid, either mechanically via a contaminated proboscis or feet, or biologically when there is growth or replication of the organism in the arthropod. See also trans-stadial.

biological t. involving a biological process, e.g., passing a stage of development of the infective agent in an intermediate host. Opposite to mechanical transmission.

colostral t. a form of vertical transmission, by ingestion of contaminated colostrum, between successive generations.

colonic t. the disease agent is transferred directly by biting, sucking, chewing or indirectly by inhalation of droplets, drinking of contaminated water, traveling in contaminated vehicles.

cyclopropagative t. the agent undergoes both development and multiplication in the transmitting vehicle.

developmental t. the agent undergoes some development in the transmission vehicle.

fecal-oral t. the infectious agent is shed by the infected host in feces and acquired by the susceptible host through ingestion of contaminated material.

horizontal t. lateral spread to others in the same group and at the same time; spread to contemporaries.

indirect t. spread via another medium, such as housing or bedding, without the animals ever being close to each other.

mechanical t. the transmitter is not infected, in that tissues are not invaded and the agent does not multiply.

propagative t. the agent multiplies in the transmission vehicle.

vector t. see vector.

vertical t. spread from one generation to the next, transovarial, via intrauterine infection of the fetus, or via colostrum. Some retroviruses are transmitted in the germ line, i.e., their genetic material is integrated into the DNA of either the ovum or sperm.

transmural [transˈmɜːr-əl] through the wall of an organ; extending through or affecting the entire thickness of the wall of an organ or cavity.

t. pressure gradient pressure difference across a wall, as of a capillary. See also Starling’s hypothesis.

transmutation [transˈmu-tə-ʃən] 1. evolutionary change of one species into another. 2. the change of one chemical element into another.

transorbitalf [transˈər-bər-təl] performed through the bony socket of the eye.

transovarial [transˈər-ə-vər-əl] via the ovary. Usually refers to transmission of an infectious organism from maternal insect to progeny insect, the female insect becomes infected with a pathogen via a blood meal and transmits the pathogen to the developing eggs within the female. Transovarial transmitted organisms include Rickettsia spp. in fleas, protozoans such as Anaplasma spp., and bacterial species such as Borrelia burgdorferi in ticks, and mosquito-borne viruses including Rift Valley fever virus.

transport [transˈpɔrt] 1. movement of materials in biological systems, particularly into and out of cells and across epithelial layers. 2. transport of animals, see transit, transportation. 3. movement of ions or molecules assisted by a carrier protein across the cell membranes and epithelial layers, usually against a concentration gradient, resulting directly from the expenditure of metabolic energy. For example, under normal circumstances, more potassium ions are present within the cell and more sodium ions extracellularly. The process of maintaining these normal differences in electrolytic composition between the intracellular fluids is active transport. The process differs from simple diffusion or osmosis in that it requires the expenditure of metabolic energy.

transparent [transˈpɑr-ənt] permitting the passage of rays of light so that objects may be seen through the substance.

t. overlay technique imposing different sets of data on a basic map by a succession of transparent acetate overlays.

transpeptidase an enzyme that catalyzes the transfer of an amino or peptide group from one molecule to another.

transperitoneal [transˈpər-tə-on-e-əl] see rectal tear.

transphosphorylase an enzyme that catalyzes the transfer of a phosphate group from one molecule to another.

transphosphorylation [transˈfoz-for-a-əl] the exchange of phosphate groups between organic phosphates, without their going through the stage of inorganic phosphates.

transpiration [transˈpre-sər-ən] discharge of air, vapor, or sweat through the skin.

transplacental [transˈple-sər-təl] through the placenta.

transplant [transˈplant] 1. an organ or tissue taken from the body and grafted into another area of the same individual or another individual. 2. to transfer tissue from one part to another or from one individual to another.

ovum t. see ovum transplant.

t. rejection see rejection.

bone marrow t. see bone marrow.

transplantation [transˈplant-ə-shən] the transfer of living organs and tissue from one part of the body to another or from one individual to another. Transplantation and grafting mean the same thing, although the term grafting is more commonly used to refer to the transfer of skin. See grafting (1). Occasionally an organ is transplanted from one place to another within the body (autotransplants). Kidneys, for example, have been relocated to enable them to continue functioning after the ureters have been damaged. See also graft rejection.

t. antigen see histocompatibility antigen.

bone marrow t. has been used in the treatment of a variety of hematopoietic and immunological disorders, e.g., in dogs with aplastic anemia.

corneal t. full-depth or partial-depth (lamellar) grafts of corneal tissue from a donor or within the recipient eye by transplantation.

t. immunology the study of immune responses that distinguish between self and non-self and the rejection of transplanted tissue or organs.

tendon t. the procedure is not favored in horses where it was at one time used for tendonitis. The success rate for return to racing performance is poor.

transponder implantable microchips used in animal identification; enclosed in inert glass; generate an alphanumeric code when stimulated by an external scanner’s low-frequency radio signal. Called also Passive Integrated Transponder (PIT) Tags. With ruminants the transponder may be in an intra-ruminal bolus or around neck. See also electronic identification, microchip.

transport [transˈpɔrt] 1. movement of materials in biological systems, particularly into and out of cells and across epithelial layers. 2. transport of animals, see transit, transportation. 3. movement of ions or molecules assisted by a carrier protein across the cell membranes and epithelial layers, usually against a concentration gradient, resulting directly from the expenditure of metabolic energy. For example, under normal circumstances, more potassium ions are present within the cell and more sodium ions extracellularly. The process of maintaining these normal differences in electrolytic composition between the intracellular fluids is active transport. The process differs from simple diffusion or osmosis in that it requires the expenditure of metabolic energy.
t. death death during transportation, e.g., porcine stress syndrome.
t. host see paratenic host.
t. media see transport medium.
t. membrane t. proteins specific proteins associated with the plasma membrane of cells that are responsible for moving solutes including ions, sugars, amino acids, nucleotides, and many metabolites across cell membranes.
t. myopathy see exertional rhabdomyolysis.
t. stress stress imposed by lack of access to water and feed, physical exhaustion caused by standing for long periods, heat stress, aggression by other animals.
t. tetany see transiti tetany.
transportation an essential part of the livestock industries. It is an expensive on-cost to a farming enterprise. It also represents a source of contact infection and of stress and reduced resistance to infection, and of shrinkage in animals, from 4% to 9% in cattle transported long distances over 3–4 days. Codes of ethics and guidelines for structure and use of transportation facilities are enforced in many countries.
transposase [trans-poz-əs] an enzyme that acts on transposable elements in DNA mutagenesis.
transposition [trans-poz-i'shan] displacement to the opposite side; in genetics, the nonreciprocal insertion of material deleted from one chromosome into another, nonhomologous chromosome.
t. of arterial trunks see transposition of great vessels (below).
t. of great vessels a congenital heart defect, in which the position of the chief blood vessels of the heart is reversed. Called also transposition of arterial trunks.
ulnar styloid t. a surgical procedure for correction of growth deformity resulting from premature closure of the distal ulnar physis. The distal tip of the ulna is fused to the distal radial epiphysis.
transposon [trans-po-zon] genetic elements that can be moved from one place and inserted in another place in the genome. See transposable genetic elements.
transpubic [trans-pu'bik] performed through the pubic bone after removal of a segment of the bone.
trans-segmental [trans-sag-men'tal] extending across segments.
transonic in ultrasonography, the complete transmission of sound so the image appears black; anechoic.
trans-septal [trans-sep'tal] extending or performed through or across a septum.
trans-stadial across or between stages of a process or disease.
t. vector transmission when an infection is picked up by one stage in the vector's life cycle and transmitted to succeeding stages in its metamorphosis e.g., Babesia species in ticks.
transthalaric [trans-'thə-lar'i-k] across the thalamus.
transthoracic [trans-'thə-ras'i-k] through the thoracic cavity or across the chest wall.
t. needle biopsy insertion of a fine needle through the thoracic wall for the purpose of obtaining a sample of lung tissue for cytological, microbiological, or histopathological examination.
transthyrein an electrophoretically fast-migrating protein found in serum that acts as a binding protein for thyroxine and retinol binding protein. Blood concentrations can be used for monitoring nutritional status and efficacy of parenteral nutrition. Called also prealbumin.
trans-tracheal aspiration, transtracheal wash [trans-tra ke-əl] collection of fluid from the trachea by aspiration through a catheter or plastic tubing. t. wash involves installation of fluid, usually an isotonic solution such as 0.9% saline, to lavage part of the trachea after which the fluid is aspirated. Catheter can be introduced into the trachea either during tracheobronchoscopic examination or via a cutaneous incision between two tracheal rings (transtracheal) and passage of the catheter to the most ventral portion of the trachea, which is at the thoracic inlet. Samples can be collected for cytologic and bacteriologic examination. See also bronchoalveolar lavage.
trans-tympanic [trans-tim-'pan-i-k] across the tympanic membrane or the cavity of the middle ear.
transudate [trans-'u-da] a fluid from a body cavity that has passed through a membrane or has been extruded from a tissue; in contrast to an exudate, a transudate is characterized by high fluidity, low specific gravity, low protein concentration, and low cellularity. modified t. one with increased protein or cell concentration. It may be a transitional stage, progressing to an exudate.
transudation [trans-'u-da'shen] 1. passage of serum or other body fluid through a membrane or tissue surface thereby creating a transudate. 2. transudate.
transudative diathesis see exudative diathesis.
transureteroureterostomy [trans-'u-re-'tar-o-'u-re-'tar-os-'to-me] a method of urinary diversion consisting of anastomosis of one ureter to the other but maintaining the patency of the proximal and distal parts of the transplanted ureter.
transurethral [trans-'u-re'θrōl] performed through the urethra.
transvaginal [trans-vag-i-nal] through the vagina.
t. ultrasound guided aspiration (TUGA) a technique used for ovum pick up in vivo, consisting of aspiration of oocytes from follicles following their visualization by an ultrasound transducer inserted into the vagina. Commonly used in large domestic species for collection of oocytes for in vitro fertilization.
transverse extending from side to side; situated at right angles to the long axis.
t. ligaments see Table 11.
t. trabeculae see growth arrest line.
transversectomy [trans-'vur-sek'ta-me] excision of a transverse process of a vertebra.
transversus [trans-ver'sas] [L.] transverse.
transvesical [trans-ves'i-kal] through the bladder.
trap-death syndrome deaths in small wild mammals subjected to close confinement in cages; includes gastric hemorrhage and ulceration.
trap-neuter-return (TNR) a nonlethal method for controlling the population of unowned, semi-owned or feral cats, particularly in urban areas. Typically, cats are humanely trapped and, if healthy, neutered, vaccinated, ear-tipped (for identification) and returned to their community. Effectiveness has been shown in some studies. Opponents cite concerns about the welfare of the reabandoned cats. Called also trapneuter-release.
trappeum [tra-pē'əm] an irregular, four-sided figure.
trapnest a laying box in which the hen releases a spring when she enters. When it is released the egg that she has laid is recorded. A device for measuring eggs laid by each bird.
trapping an essential technique for sampling wildlife populations in surveys of their diseases or in order to establish the size and variety of the population, especially if carried out systematically with the traps set out in a grid formation. See also capture-recapture method.
removal t. a means of measuring a wild animal population by the change in the population resulting from the trapping of a known number of animals and their removal to a distant site.
traps devices for the trapping of wild animals. Mostly used with an attractant, varying with the target species. Once in the target area the trap is sprung. The trap may be a limb snare, fowoned on in many circles now, a cage with a dropdown door, a net dropped from above or fired from a gun, a sticky surface, a funneled entrance to a cage, and so on.
traqueanard [Fr.] an irregular trot; trotting with the front legs while galloping with the rear legs; a cause for disqualification in racing.
Traube–Hering waves radiations of impulses from the respiratory center to the vasomotor center in the medulla oblongata during inspiration can increase arterial pressure.
trauma [trau'ma] a wound or injury, especially damage produced by external force, e.g., surgical operation, impact, blunt instrument.
birth t. an injury to the fetus during the process of being born.
travailler.t. trauma to a patient that could be fatal but is inapparent because it leaves no external mark.

self-inflicted t. see self-trauma.

traumatic [tra-mat‘ik] 1. pertaining to, resulting from, or causing trauma.
2. in cattle, and in all ruminants, a special meaning is perforation of the reticular wall by a swallowed foreign body.

tr. hepatitis penetration by a foreign body from externally via the skin or internally from the reticulum.

tr. laminitis see laminitis.

t. liver abscess caused usually by perforation of the stomach wall by a foreign body. Causes toxaemia, leukocytosis, fever, and pain on percussion over the posterior right ribs.

tr. mastitis see traumatic mastitis.

tr. peritonitis see traumatic peritonitis.

t. reticuloperitonitis caused by an extension of reticuloperitonitis, especially in cows in late pregnancy; characterized by congestive heart failure with marked edema of the brisket and jowl, “washing machine” heart sounds, and disappearance of the normal sounds. There is a marked leukocytosis, fever, and toxaemia.

tr. reticuloperitonitis (TRP) caused by perforation of the reticular wall by a sharp foreign body in any ruminant but most common in adult dairy cows being fed processed feeds. Prevalence now much reduced by the use of twine rather than wire for binding hay bales. Manifested by an acute fall in milk yield and appetite, a humped back and disinclination to move, pain on percussion over the xiphisternum, ruminal stasis, fever, and a leukocytosis. Called also TRP, hardware disease, reticulitis, traumatic peritonitis.

t. reticulopleurisy inflammation of the wall of the reticulum and nearby pleura of cattle caused by the penetration of a foreign body from the reticulum into the pleural cavity. Characterized by toxaemia, fever, leukocytosis, pain on percussion over the ribs, fast shallow grunting respiration, elbows abducted.

t. reticuloplenitis inflammation of the wall of the reticulum and nearby spleen of cattle caused by penetration of a foreign body into the spleen. Characterized by toxaemia, leukocytosis, fever, and pain on percussion over the upper posterior right ribs.

t. shock see vasogenic shock.

t. splenitis see traumatic reticuloplenitis (above).

t. wet lung see shock lung.

traumatism [tra-ma-laz-em] 1. the physical state resulting from an injury or wound. See also shock. 2. a wound.

traumat(o)- word element. [Gr.] relationship to trauma, wound, or injury.

traumatology [tra-ma-tol‘a-jé] the branch of surgery dealing with wounds and disability from injuries.

traumatopnea [tra-ma-top-ne-a] passage of air through a wound in the chest wall; a sucking injury.

travel edema wateriness of lamb carcasses, especially in the shoulders, when the lambs are transported long distances just before slaughter.

travel sickness see motion sickness.

trazodone a serotonin antagonist/reuptake inhibitor, an antidepressant, used as a sedative and anxiolytic in dogs and cats.

traveller’s joy Clematis vitalba.

tread [tred] injury to the coronet of the horse’s hoof by treading on it by the opposite hoof, or by another horse when they are being worked in a team. If the coronary matrix is injured there may be a subsequent crack or deformity.

treading a part of a restlessness syndrome or a neurosis in ruminants or horses; the animal repeatedly changes weight from one limb to the opposite of the pair, lifting the hoof slightly at each change; the action looks as though the animal is treading grapes to make wine. The action is restricted largely to the hindlimbs and usually indicates subacute abdominal pain.

treatment [tre-mant] management and care of a patient or the combating of disease or disorder.

active t. treatment directed immediately to the cure of the disease or injury.

causal t. treatment directed against the cause of a disease.

conservative t. treatment designed to avoid radical medical therapeutic measures or operative procedures.

empirical t. treatment by means that experience has proved to be beneficial.

expectant t. treatment directed toward relief of untoward clinical signs, leaving the cure of the disease to natural forces.

palliative t. treatment that is designed to relieve pain and distress, but does not attempt a cure.

t. plan MEDIG preventive t., prophylactic t. that in which the aim is to prevent the occurrence of the disease.

rational t. that based upon knowledge of disease and the action of the remedies given.

specific t. treatment particularly adapted to the special disease being treated.

supporting t. that which is mainly directed to sustaining the strength of the patient.

symptomatic t. treatment of the primary clinical abnormalities rather than the underlying cause, which may not be known.

treats see food rewards.

tree [tre] an anatomical structure with branches resembling a tree.

bronchial t. the trachea, bronchi, and successive branching generations of the respiratory passages.

decision t. see decision tree.

tracheobronchial t. the trachea, bronchi, and their branching structures.

Treeing Tennessee brindle an American hound-type dog; medium size with a short coat of black or brindle.

Treeing Walker coonhound a medium-sized (50–70 lb) hound with powerful shoulders, long ears and a short, smooth tricolor coat, resembling Beagles or Foxhounds. Bred for tracking and treeing raccoons.

trefoil broadly, plants with compound leaves of three leaflets; includes plants in the Medicago and Lotus genera of the family Fabaceae; big trefoil (L. major), birdfoot trefoil (L. corniculatus), burr trefoil (M. polymorpha), red-flowered birdfoot trefoil (L. cruentus).

t. dermatis photosensitization of uncertain cause from ingestion of Medicago polymorpha (M. denticulata).

Treg cell regulatory T lymphocyte. Called also suppressor T cell.

Tremata genus of plant in the family Ulmaceae; cause acute liver necrosis in herbivores in Australia and Brazil. Includes T. tomentosa (T. aspera, poison peach, peach-leaf poison bush), T. micrantha (Jamaican nettletree).

trematocides drugs effective in the treatment of immature and adult flukes, e.g., rafoxanide, closantel, triclabendazole, diamephendithine. Bromsalsan, oxyxozoneolate, nitroxynil, and carbon tetrachloride are effective only against mature fluke.

trematode [trem′təd] parasitic worm; member of the subclass Digenea (class Trematoda) containing the flukes of domestic animals, called also digenetic trematodes. These cause parasitic disease of most systems, including the blood, eye, liver, reproductive tract, respiratory system, skin, and urinary system.

trematodiasis [trem′a-to-di-ə-sis] infestation by trematodes.

trematocin an uncharacterized toxic glycoside in Trematostoma.

tremblante du mouton [Fr.] scrapie.

tremblante du mouton see motion sickness.

Trembler pup a condition involving hypomyelogenesis in young Bernese mountain dogs. Dogs of other breeds with congenital myelin deficiency, e.g., Weimaraners, are more commonly referred to as shaker puppies.

trembles [trem′bəlz] porcine congenital tremor syndrome.

trembling visible muscle tremor caused by fever, fear, weakness, electrolyte imbalance, especially hypocalcemia and hypomagnesemia, and neuromuscular disease.

t. disease of sheep, scapie: of piglets, congenital tremor syndrome.

tremetol toxic alcohol in Eupatorium rugosum and Hopiappus heterophyllus.

tremor [trem′ər] a continuous repetitive contraction and relaxation of skeletal muscle, usually palpable and visible. The diseases characterized by tremor by tremor, the tremors, syndromes, may be caused by: degenerative myelin formation or function, e.g., hypomyelination, as the result of toxins, e.g., aflatoxins, electrolyte deficiencies, e.g., hypocalcemia, or cerebellar disorders. Tremor is also a sign in many other diseases of the nervous and musculoskeletal systems.

action t. rhythmic, oscillatory, involuntary movements of the limbs.

coarse t. that involving large groups of muscle fibers contracting slowly.

congenital t. syndrome of piglets see congenital tremor syndrome.

epidemic t. see avian encephalomyelitis.

fibrillary t. rapidly alternating contraction of small bundles of muscle fibers.

fine t. one in which the vibrations are rapid.
intention t. a tremor that occurs or worsens when voluntary movement, particularly fine motor movement, is attempted. Called also kinetic tremor. See also volitional tremor (below).

kinetic t. see intention tremor (above).

primary orthostatic t. high-frequency trembling of the limbs when in a weight-bearing posture, which improves with walking or running. A condition reported in Great Danes and other giant breed dogs.

rest t. tremor occurring in a relaxed and supported limb.

static t. one in which antigravity muscles are active.

T. syndrome see shaker dogs. Called also white dog shaker syndrome.

volitional t. trembling of the entire body during voluntary effort.

tremorgen a group of fungal metabolites known to act on the central nervous system, causing sustained tremors, ataxia, stress-induced weakness, convulsions, and occasionally death. Produced by a number of fungi, including Aspergillus spp., Penicillium spp., and endophytic fungi of the genera Epichloë and Neotyphodium that grow on or in a variety of feeds, including forages, stored grain, and other spoiled feedstuffs. Occurs most commonly in ruminants and horses, but also in companion animals consuming spoiled feedstuffs.

tremorgen staggers incoordination caused by tremorgens, usually myco-
toxins.

tremorgenic pertaining to or emanating from tremorgens.

T. neurotoxicosis seen in cattle fed Aspergillus clavatus-infested sprouting grains, some associated with production in hydroponic fodder factories, and manifested with posterior ataxia, tremors, progressive paresis, hypersensitiv-ity, occasionally aggression, loss of milk production, recumbency, and clonic convulsions. Histologically, there is degeneration and necrosis of large neurons in nuclei of the brainstem, the ventral horns of the spinal cord, and in spinal ganglia. The causative toxin is not identified.

tremor see tremorgen-A.

tremulous [trem-o-lus] shaking, trembling, or quivering.

trenchmouth stomatitis resulting from bacterial infection, which can be a result of excessive accumulation of dental plaque.

trend see trend describer.

trend describer the apparatus used in trendscription.

trendscription a programmed method of continuous electrocardio-
graphic monitoring, wherein the tracing is condensed on a rotating drum recorder and the program permits selective sampling of rhythm data.

trepan trephine.

trepanation [trep’a-na’shən] trephination.

trephination [tref’-nə-shən] use of the trephine for creating an opening in the skull or in the sclera.

trephine [trə-fin] 1. a crown saw for removing a circular disk of bone, chiefly from the skull. See also Galt trephine, Michel’s trephine. 2. an instrument for removing a circular area of cornea for keratectomy and grafting techniques, e.g., Castroviejo trephine. 3. to remove with a trephine.

trephocyte [trep’a-sit] a cell that provides nourishment for another cell, e.g., Sertoli cell, avian thrombocytes.

Treponema a genus of motile, gram-negative, spiral rods in the bacterial family Treponemataceae (spirochetes). Anaerobic or microaerophilic.

T. paraluiscuniculi causes benign venereal spirochetalis of rabbits called rabbit syphilis, venous disease, or venereal spirochetalis. Previously called T. cuniculi.

T. pedis, T. medium, and T. phagedenis species associated from bovine digital dermatitis.

treponemes bacteria that are members of the genus Treponema.

treppen phenomenon [trep’a] the gradual increase in muscular contraction following rapidly repeated stimulation. Called also staircase phenomenon.

tresis perforation.

tretinoin [tret’-ə-no-in] the all-trans stereoisomer of retinoic acid, used topically in dermatology for the treatment of inflammatory conditions such as inflammatory bowel disease, pancreatitis, and cholangitis in cats.

Triaenophorus a genus of tapeworms in the family Triaenophoridae. T. nodulosus adults occur in the intestine of pike and other predatory fish; intermediate hosts are first copepods, and second fish, especially trout. The plerocercoids in the trout tissues cause loss of value and liver damage may cause deaths.

triage [tre-əzh] setting priorities for treatment wherever multiple patients require emergency treatment. The most critical patients are treated first. See also A CRASH PLAN.

triad see triad.

Whipple’s t. see Whipple’s triad.

Triadan system system of identifying teeth in veterinary dental records. Each tooth has a three-digit number that identifies the jaw quadrant, position within the quadrant, and whether it is a deciduous or permanent tooth.

triaditis [tri-ad-i-tis] a term referring to a common syndrome of concurrent inflammatory bowel disease, pancreatitis, and cholangitis in cats.

Triadan tooth numbering system in the dog. (A) Maxilla. (B) Mandible.

From Bassett, S.M., McCurnin, D.M., McCurnin’s Clinical Textbook for Veterinary Technicians, 7th ed, Saunders, 2010.

t. lipase (LPS) enzyme that releases fatty acids from triacylglycerol by hydrolysis of the ester bonds; produced primarily by the pancreas and in smaller quantities by the gastric and intestinal mucosa. Determination of serum concentration is used to detect acute necrosis of pancreatic acinar cells. Called also steapsin, lipase, triglyceride lipase.

t. rich lipoprotein see triglyceride-rich lipoprotein.

triad [tri-ad] 1. an element with a valence of three. 2. a group of three similar bodies, or a complex composed of three items or units. See portal triad.

T’s of the tarsus the various combinations of (usually three) injuries that occur in trauma to the hock joint, based first on injury to the central tarsal bone.

Virschow’s t. see triad.

Whipple’s t. see Whipple’s triad.

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as osteoarthritidis; used in the form of the acetonide derivative and the diacetate ester.

**Triamterene** [tri-am-ter-en] a weak diuretic that increases sodium and chloride excretion, but not potassium.

**Triangle** [tri-ang-gal] a three-cornered object, figure or area, as such an area on the surface of the body capable of fairly precise definition. Called also trigone, facial t. a triangular area whose points are the basion and the alveolar and nasal points. femoral t. the triangle bounded cranially by the sartorius, caudally by the pectineus and deeply by the ilipsoas muscles in the dog. The pulse of the femoral artery can be taken at this site. vesical t. the area of the bladder wall within the triangle demarcated by the ureteral and urethral orifices. The bladder mucosa is smooth and firmly attached over this region and does not form folds. Viborg's t. a surgical site, immediately caudal to the vertical ramus of the mandible, on the side of the throat of the horse. Used for surgical access to the gastrointestinal pouch it is bounded by the caudal border of the mandible, the lingual evagination, and the tendon of the sternocleidomastoid muscle.

**Tretamine** triethylenemelamine.

**Triangularis** [tri-ang’-gu-lär’is] [L.] triangular.

**Trianthema** genus of the Aizoaceae family of plants; have a high soluble triangularis in brachycephalic dogs. Called also aberrant dermis.

**Triatoma** genus of the Triatoma species of true bugs. Vectors of Trypanosoma cruzi. A disease caused by the a nematode of the genus Trichinella encysted in a muscle cell. Further transmission involves ingestion by a carnivore. A term less commonly used in the literature.

**Triatoma** a genus of bugs (order Hemiptera), the cone-nosed bugs, important in human medicine as vectors of Trypanosoma cruzi from its natural vectors, dogs, cats, foxes, monkeys, and others. Includes T. dimidiata, T. infestans, T. protracta, T. sanguisuga (vector for equine encephalomyelitis).

**T. dimidiata** a predator of chickens, rats, toads, and lizards. Found in Southern and Central America. T. infestans a predator of mammals, nicknamed the ‘kissing bug’, is found in Argentina, Chile, and Bolivia. T. protracta found in Western US and nicknamed the American Chagas Disease. T. sanguisuga found in North America; the wood rat is the most common host.

**Triateome** a member of the genus Triatoma of true bugs. Vectors of Chagas disease (Trypanosoma cruzi).

**Triatomine** pertaining to the genus Triatoma.

**Triazine** selective herbicides including atrazine, propazine, simazine, prometone, prometryne. They are poisonous if given in sufficient quantity but the syndrome, weight loss, anorexia, and weakness, is too nonspecific to be valuable diagnostically.

**Triazole antifungals** [tri-az-o-l] azole derivatives with broad-spectrum antifungal activity; includes fluconazole and itraconazole.

**Tribe** [trib] a taxonomic category subordinate to a family (or subfamily) and superior to a genus (or subtribe); grammatical ending is -ini in botany.

**Tribochromosome** a compression apparatus to squash a small sample of pork muscle and a projector to display the image of the tissue on a screen so that Trichinella spp. larvae can be identified. Tribrachi...
artificial digestion for t, a sample of the meat to be examined is incubated with a mixture of pepsin and hydrochloric acid, and the digesta examined under a microscope for specimens of Trichinella spiralis.

trichinous [trik’nyūs] affected with or containing trichiniae.

trichlorfon [tri-klor’fon] an organophosphorus insecticide and anthelmintic, used in horses, often in combination with other anthelmintics, for treatment of endoparasites and cutaneous habronemiasis. Also used in dogs against whipworms and as a pour-on in cattle for control of warble flies. It is used in fishponds and commercial fish farms to control anchorworms, gill flukes, and lice. Called also metrifonate.

trichloroacetate a relatively nontoxic herbicide.

trichloroacetic acid [tri-klor’o-ÁE-sit] an extremely caustic acid, CCl₃COOH, used as a topical caustic agent for local destruction of skin lesions and as a protein precipitating agent.

t. a. test a quantitative assay for urine total protein; proteins are precipitated and measured by the increased solution turbidity.

trichlorobenzene acid [tri-klor’o-ben-zon] a nonselective weedkiller of very low animal toxicity.

trichlorocarbanilide triclocarbon.

trichloroethylene, trichloroethylene [tri-klor’o-et-hi-l’en] a volatile, non-flammable solvent with a similar odor to chloroform. Used in the extraction of oils and fats from plant and animal materials for the purpose of using the oil. The residue is available as animal feed. Has anesthetic and analgesic properties but is not recommended for use as either in animals.

triclocarban. trichlorocarbanilide

trichloroacetic acid trichlorofen.

t. a. test incubated with a mixture of pepsin and hydrochloric acid, and the digesta caninum

trichodermia a protozoan parasite of fish similar to and having similar effects to Trichodina.

Trichodina genus of protozoa (Peritricha) that parasitizes the skin and gills of fish and causes local irritation. They have a characteristic disk-like appearance and are in constant revolving motion. Only pathogenic when in large numbers and/or in stressed fish.

Trichodina a protozoan parasite of fish similar to and having similar effects to Trichodina.

trichodesma plant genus in the family Boraginaceae; contain pyrrolizidine alkaloids; cause hepatopathy, dummy syndrome, photosensitization, death due to hepatic insufficiency; includes T. ehrenbergii, T. incanum, T. zeylanicum (camel bush).

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Trichoderma a genus of fungi belonging to the family Trichocomaceae.

Trichodesma plant genus in the family Boraginaceae; contain pyrrolizidine alkaloids; cause hepatopathy, dummy syndrome, photosensitization, death due to hepatic insufficiency; includes T. ehrenbergii, T. incanum, T. zeylanicum (camel bush).

Trichomalacia a condition of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichophagia excessive growth of eyelashes and eyebrows.

trichomonad a genus of flagellates which includes many species pathogenic to domestic animals.

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trichomonad trichomonas a benign neoplasm of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichophagia excessive growth of eyelashes and eyebrows.

trichomalous a condition of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichomancy a belief in the supposed power of the hair to influence the outcome of various events.

trichomastia a condition of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichomastia a benign neoplasm of the hair follicle, resembling hair.

trichomastoma a benign neoplasm of the hair follicle, resembling hair.

trichomastoma a benign neoplasm of the hair follicle, resembling hair.

trichomammone a benign neoplasm of the hair follicle, resembling hair.

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trichomacrognathy a condition of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichomegaly a benign neoplasm of the hair follicle, resembling hair.

trichomycosis a condition of the hair follicle with a large central follicle and numerous smaller follicle-like structures radiating from it; occur in dogs where they appear as firm nodules that may have tufts of hair protruding.

trichonomas a genus of flagellates which includes many species pathogenic to domestic animals.

trichomonad, trichomastoma a benign neoplasm of the hair follicle, resembling hair.

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**Trichothecium roseum**

T-51: *Trichophyton mentagrophytes* infection of 4 years duration in a dog.

**Trichophyton**

- *T. mentagrophytes* infection of 4 years duration in a dog.
- *T. nodosa* structural abnormalities (nodes) of the hair shaft result in breakage and hypotrichosis; a very rare condition reported in horses, dogs, and cats. Physical or chemical damage to the hair is usually responsible.

**trichoschisis** [ trík-o-s̩k̩i-s̩] trichoptilosis.

**trichoscopy** microscopic examination of the hair shaft and bulb.

**trichosis** [ trík-o-s̩̬] any disease of, or abnormal growth of hair. *Trichosomoides crassicauda* a nematode in the family Trichuridae; found in the urinary bladder of Norway and black rats and may cause granulomatous lesions. Migrating larvae may cause focal hemorrhage of the liver, lungs, and kidneys.

**Trichosporon** a genus of yeast-like fungi that are soil saprophytes but may occasionally be pathogenic, especially as a cause of mastitis in cattle. *T. beigelii* an obsolete name for organisms in this genus. Disseminated infections in cats and cutaneous mycosis in horses have previously been attributed to this species.

**T. capitatum** now classified as *Magnusomyces capitatus*. *T. cutaneum* an occasional cause of bovine mastitis.

**trichosporonosis** [ trík-o-s̩̬-pa-ra-no-s̩̬] infection with yeasts of the genus *Trichosporon*; occurs rarely in immunosuppressed cats as popular or nodular skin lesions around the nostril or at the site of bite wounds on the legs.

**trichosporosis** [ trík-o-s̩̬-spa-ro-s̩̬] see *trichosporonosis*.

**trichostrongyliasis, trichostrongylosis** [ trík-o-stron-g̩-l̩-o-s̩̬] infection with nematodes of the order Trichostrongylida. *Trichostrongyulus* a genus of nematode parasites belonging to the family Trichostrongylidae, occurring in the stomachs and intestines of birds and mammals (rodents, ruminants, camelids, marsupials). *T. tenuis* found in the small intestine and ceca of domestic and wild birds.

- *T. tenuis* found in the small intestine of rabbits, hares. *T. skrjabini* found in the small intestine of sheep, goats, camels, and on occasion roe deer.
- *T. probolurus* found in the small intestine of sheep, goats, deer, antelope, and in the stomach of pigs, horses, donkeys, and rarely humans.
- *T. caprile* found in the small intestine of sheep and goats.
- *T. colubriformis* found in the small intestine, sometimes abomasum also, in cattle, sheep, goat, antelope, camel. Also recorded in pig, human, dog, and rabbit.

**Trichophyton** a genus of dermatophytic fungi in the phylum Ascomycota that can infect the skin, hair, and nails. The use keratin as a nutritional source. The perfect states (teleomorphs) are in the genus *Arthroderma*. Previously classified as *Achorion*. *T. equinum* causes *dermatophytosis* (ringworm) in horses. A zoophilic species.

- *T. gallinae* now called *Lophophyton gallinae* (previously *Microsporum gallinae*); the cause of *fauvus* in fowl. A zoophilic species.
- *T. megnini, T. rubrum, T. shoelaninii, T. tonsurans, T. violaceum* anthropophilic species that occasionally infect animals.
- *T. mentagrophytes* (syn. *T. gypseum*) causes *dermatophytosis* (ringworm) in horses, dogs, and many other species. *T. mentagrophytes var erinacei* occasionally causes ringworm in dogs and other species; the reservoir is the European hedgehog. A zoophilic and anthropophilic species.
- *T. simii* causes ringworm in monkeys and poultry. A zoophilic species.
- *T. verrucosum* cause *dermatophytosis* (ringworm) in cattle, sheep, and goats; zoophilic species.

**trichophytosis** [ trík-o-fi-to-s̩] infection with dermatophytic fungi of the genus *Trichophyton*.

**trichorrhaxis** [ trík-o-rek-s̩] the condition in which the hairs are split.
trichotomous [tri-kot’-ə-mas] divided into three parts.

trichuria [tri-kii’-ə-sis] the disease caused by the infestation of the cecum by Trichuris spp. The most obvious clinical feature is diarrhea sometimes with mucus and blood.

Trichuris a genus of nematodes in the family Trichuridae, found in the large intestine of most species. Called also whipworms. Includes T. campanula (cats), T. discolor (ruminants), T. globulosa (ruminants), T. leporis (rabbits, hares), T. ovis (ruminants), T. serrata (cats), T. skrabhini (sheep, goats, camels), T. suis (pigs), T. styvlagi (rabbits, hares, coyups), T. tenus (dromedary), T. triehuris (humans, simian primates), T. vulpis (dogs, foxes). Formerly the generic name Trichocephalus was used for this species.

trichuriasis infection with the nematode Trichuris (=whipworm).

tricipital [tri-sip’-i-tal] three-headed; relating to the triceps muscle.

t. bursa see triceps bursa.

triclabendazole [tri’-klə-ben’də-zəl] a highly effective fasicicilide against liver flukes, Fasciola spp., and lung flukes, Paragonimus spp. Although a benzimidazole, it is not effective against other flukes. Its mode of action involves inhibition of microtubule formation. Resistance has developed to this anthelmintic in many parts of the world.

triclocarban [tri’-klo-kar’-ban] a bacteriostat and disinfectant used in soaps and other cleansing compouds. Called also trichlorocarbanilide.

triclosan [tri’-klo-sən] a biphenyl disinfectant used most often in medicated shampoos.

tricolor describes a coat color of dogs and cats that has orange and black patches (similar to the tortoiseshell) but has in addition patches of white hair; see tortoiseshell.

tricornuate having three horns, cornua or processes.

tricresol [tri’kre-səl] a mixture of o-, m-, and p-cresols.

tricuspid [tri’kus-pid] having three points or cusps, as a valve of the heart. t. dysplasia an uncommon congenital defect of the tricuspid heart valve seen in dogs and cats. It is inherited in Labrador retrievers as an autosomal dominant trait with incomplete penetrance; it has been mapped to chromosome 9 in this breed. There is a variety of forms of the defect that causes enlargement of the right atrium and ventricle. See also Ebstein’s anomaly.

t. insufficiency a functional incompetence that may be caused by rupture of the chordae tendineae of the tricuspid valve, endocarditis, bacterial endocarditis, heartworms, or congenital anomalies, resulting in regurgitation of blood from the right ventricle into the right atrium during systole.

tr. regurgitation see tricuspid insufficiency (above).

t. valve the valve located between the right atrium and right ventricle. Called also right atrioventricular valve. The tricuspid valve in dogs and cats has only two leaflets/cusps. The tricuspid valve in human has three leaflets/cusps.

tricyclic [tri-sik’-lik] containing three fused rings in the molecular structure.

tridactylism [tri-dak’tə-liz-əm] the presence of three digits on each limb.

tridentate [tri-den’tət] having three prongs.

tridermic [tri-dur’mik] derived from all three germ layers, the ectoderm, endoderm, and mesoderm.

tridihexyl an anticholinergic quaternary ammonium compound.

trientine triethylendiamine dihydrochloride; a copper-chelating agent used in the treatment of chronic hepatopathies in which copper accumulates.

triethanolamine [tri’-eth-ə-nəl-a-nə-mən] a mixture of alkanolamines consisting largely of triethanolamine and containing some di- and monoethanolamine; used as an alkylating agent in pharmaceutical preparations.

triethylenediamine dihydrochloride; a copper-chelating agent used in the treatment of chronic hepatopathies in which copper accumulates.

triethylenetriaminophosphoramide [tri’-eth-ə-lən-thi’-ə-fos-for’-ə-mid] see thiopeta.

trifemorph see 4-trimethylphosphate.

trifida [tri’-fa-du] split into three parts.

trifluomeprazine [tri’-floor-o-mə-prə-zən] a phenothiazine tranquilizer.

trifluorothyminde [tri’-floor-o-thi’-mə-dən] a synthetic nucleotide that blocks DNA synthesis. Once used as an antiviral agent in the treatment of ocular herpesvirus infections.

triflupromazine a phenothiazine tranquilizer used as a sedative and antieptic agent. Called also fluropromazine.

trifurculin a dinitroaniline compound used as a herbicide. Excessive, accidental access causes diarrhea, anorexia, nervousness.

trifuridine an antiviral agent used typically in the treatment of herpesvirus infections of the eye.

trifluridine see trifluridine.

trifoliol one of the coumestan group of phytoestrogens.

trifoliosis [tri’-fo-lo-e-səs] photosensitive dermatitis caused by the ingestion of clovers and legumes.

Trifolium plant genus of the legume family Fabaceae; clovers. They are the plants of the greatest importance in high-producing pastures but can have disadvantages in some circumstances, e.g., they are common causes of bloat in cattle. Major syndromes include hyperestrogenism (T. alpestre, T. fragiferum, T. pratense, T. subterraneum), neonatal goiter due to low-level cyanide poisoning (T. repens), slobbers (T. pratense), putative hepapathy with encephalopathy and photosensitization (T. hybridum), molybdenum poisoning (T. hybridum), obstructive urolithiasis (T. subterraneum). Useful pasture plants are alpestrine clover (T. alpestre), alsike clover (T. hybridum), red clover (T. pratense), strawberry clover (T. fragiferum), subterranean clover (T. subterraneum), white clover (T. repens).

trifurcation [tri’-fə-rə-kən] division or the site of separation into three branches.

trigeminal [tri-jem’-ə-nəl] 1. triple. 2. pertaining to the fifth cranial (trigeminal) nerve.

t. nerve paralysis causes an inability to close the mouth (dropped jaw), difficulty in mastication and atrophy of the masticatory muscles together with a loss in facial sensation on the affected side. See also mandibular neuritis.

t. neuritis see seasonal head shaking.

t. neuropaxia see mandibular neuritis.

trigeminy [tri-jem’-ə-nə] the condition of occurring in threes, especially the occurrence of three abnormal beats in a row.

triggerfish brightly colored fish of the family Balistidae. They are popular saltwater aquarium fish. They are aggressive and the defensive structure of the dorsal and ventral spines give rise to their name.

Triglochin genus of marsh plants in the family Juncaginaceae; cattails. Can cause cyanide poisoning. Includes T. maritima, T. palustris. Called also seaaside or marsh arrowgrass.

triglyceride [tri-glə-’si-dəd] a compound consisting of three molecules of fatty acids esterified to one molecule of glycerol; a neutral fat that is the usual storage form of lipids in animals. Called also triacylglycerol.

t. absorption test see fat absorption test.

t. lipase see tricyclic glycerol.

medium-chain t. (MCT) short- and medium-length chain fatty acids (containing 4–12 carbon atoms) are much more rapidly digested than those with long chains. Coconut oil contains a high proportion of medium-chain triglycerides and may be used in the diet of dogs with malabsorption syndrome, although clinical benefit of MCTs has not been demonstrated for this condition.

t. rich lipoprotein see triglyceride-rich lipoprotein.

trigonal [tri-gon’-əl] triangular. 1. pertaining to a trigone.

t. colonic anastomosis a method of diverting urine flow by surgically joining the trigone of the bladder to the colon.

trigone [tri-gon] a triangular area.

olfactory t. the triangular area of gray matter between the roots of the olfactory tract.

vesical t. see vesical triangle.

trigonecny excision of the vesical trigone.

trigonitis [tri’gə-ni’-tis] inflammation or localized hyperemia of the vesical trigone.

trigonum [tri-gon’əm] pl. trigona [l.] trigone or triangle.
triethylene melamine: an alkylating agent used as an antineoplastic agent; a cause of testicular degeneration. Called also tretamine.

triiodothyronine (T3) [tri’o-do-thi’ro-nen] one of the thyroid hormones; an organic iodine-containing compound liberated from thyroglobulin by hydrolysis and deiodination of thyroxine. It has several times the biological activity of thyroxine.

T3 suppression test the difference between the serum concentration of T3 and T4 before and after oral administration of triiodothyronine for 2 days. With normal thyroid function, there is a marked decrease in T3 concentration, but in hyperthyroidism there is little change. Used in cats when other laboratory indicators of hyperthyroidism are ambiguous.

T. uptake the uptake of the compound by red blood cells is used as a measure of thyroid function. Called also T3 uptake.

Triabine [tri’o-bine] a three-pronged lithorite.

trilaminar [tri-lam’i-nar] three-layered.

trilocular [tri-lo’kər] having three loculi or cells.

trilogy [tri-o’lej] a group or series of three.

t. of Fallot a term sometimes applied to concurrent pulmonic stenosis, atrial septal defect, and right ventricular hypertrophy. See also tetralogy of Fallot.

Triostane [tri’o-stân] an inhibitor of adrenal, ovarian, and placental steroids. Used in the treatment of hyperadrenocorticism.

Trimenopon hispidum [trî-měn’-pōn] an amblycerid (i.e., chewing) louse is considered the intermediate host for Triraphis mollis.

trimethoprim. a combination of three objects or entities acting together, as three lenses.

trimethoprim. a thiazole derivative; a mild central antispasmodic agent.

trimexazine [tri-mek’să-zên] a phenothiazine derivative; a mild central antispasmodic agent.

trimipramine. a form of lysine with three methyl groups on the N6 atom; component of histone proteins; precursor of carmine, the coenzyme of fatty acid oxidation.

trimethamphetamine [tri-meth’o-ben’-tə-md] an ethanolamine derivative; a strong antidopaminergic antagonist that is used as a central anticonvulsant.

trimethoprim [tri-meth’o-prim] an antibiotic agent closely related to pyrimethamine; administered in combination with a sulfonamide because these drugs blockade two consecutive steps in the synthesis of tetrahydrofolate by micro-organisms. This combination is called a potentiated sulfonamide.

trimethylnitrosoamine [tri-meth’o-nit’rs-o-ə-mən] one of the commercially available triple sulfas; contains a mixture of sulfadiazine, sulfamerazine, sulfamerazine, and sulfamethazine. See also triple sulfonamide.

trimethylamine. a sulfur compound containing three atoms of sulfur.

trimethylamine. a triacylglycerol formed by esterification of glycerol with three oleic acid molecules. A major component found in most natural fats from both plants and animals. See olein.

trichloracetic acid. a triacylglycerol formed by esterification of glycerol with three oleic acid molecules. A major component found in most natural fats from both plants and animals. See oleic.

trichorhism [trî-or-kir’iz-ən] the presence of three tests.

trichophyton. one of the genera of the great strongyles of horses in the family Strongylidae. They are all parasites of the large intestine of equids.

T. brevicauda in the horse and ass.

T. minor in donkey.

T. nipponicus found in various equids.

T. serratus in horse, ass, mule, zebra.

T. tenia coli found in the right dorsal colon of horses where it causes deep, hemorrhagic ulcers.

triol an organic compound containing three hydroxy groups, a trihydric alcohol, e.g., glycerol.

triolen [tri-o’le-n] a triacylglycerol formed by esterification of glycerol with three oleic acid molecules. A major component found in most natural fats from both plants and animals. See olein.

tricholidism [tri-or-kil’i-dis-əm] the presence of three tests.

trichophytosis. a form of lice characterized by a non-specific and non-inflammatory reaction of the skin and hair. It is caused by the mites of the genus Trichodectes.

tricholfat [tri-or’-thel’-fat] the ortho isomer of cresyl phosphate; used in industry and very toxic to animals, causing degeneration of nerves, leading to stiffness, incoordination, and paralysis.

triorthocresyl phosphate [tri-or’-tho-kres’i-l fəs’fət] see triorthocresyl phosphate.
triterpene \( \text{tritərˈpɛn} \) a large and structurally diverse class of natural products, isoprene-derived 30-carbon compounds that are plant toxins.

tritiated thymidine thymidine linked to the radioisotope tritium. Used to label DNA in the study of cellular and viral DNA synthesis.

triticale a cereal crop plant, a hybrid of wheat and rye, used only for livestock feed. Has the same energy content as wheat but a higher content of better-quality protein. Yield of grain per hectare is much less than that of wheat.

Triticum genus of cultivated cereals in the family Poaceae; grazing young green crop can contribute to hypomagnesemic tetany; includes \( T. \text{aestivum} \) (\( T. \text{vulgare}, \) wheat), \( T. \text{durum} \) (durum wheat) \( T. \text{dicheccum} \) (emmer, close relative of wheat and similar quality to it but lower yield), \( T. \text{spelta} \) (spelt), \( T. \text{vulgar}e \) (\( T. \text{aestivum} \)). \( T. \text{aestivum} \) sporadically causes photosensitization.

tritium \( ^{3}\text{H} \) \( \text{trit} \text{ium} \) the mass 3 isotope of hydrogen, obtained by bombardment of beryllium in the cyclotron with deuterium ions. It has a half-life of 12.3 years, and is used as an indicator or tracer in metabolic studies. See also tritiated thymidine.

Trichomonas a genus of protozoan parasites with three anterior flagella in the family Trichomonadidae. Rarely zoonotic in immunocompromised humans. \( T. \text{cav}iae \) found in the cecum and colon of guinea pigs but is not pathogenic. \( T. \text{eberthi} \) found in the ceca of the chicken, turkey, and duck. \( T. \text{enteritis} \) found in the cecum and colon of \( B. \text{indicus} \) and \( B. \text{taurus} \), but has no pathogenic effects. \( T. \text{equi} \) thought at one time to be the cause of acute and chronic undifferentiated diarrhea in horses but considered to be non-pathogenic. \( T. \text{foetus} \) found in cattle, pig, horse, and deer; causes trichomoniasis in cattle and large bowel diarrhea in dogs and cats. \( T. \text{minuta} \) found in the cecum and colon of rat, mouse, and hamster. \( T. \text{muris} \) found in the cecum and colon of mouse, rat, hamster, and wild rodents. \( T. \text{suis} \) found in the stomach, small intestine, cecum, and nasal passages of pigs.

triturate \( \text{trich} \text{ərˈæt} \) 1. to reduce to powder by rubbing. 2. a substance powdered fine by rubbing.

trituration \( \text{trich} \text{ərˈɑd ʃən} \) 1. reduction to powder by friction or grinding. 2. a finely powdered substance.

triturator \( \text{trich} \text{ərˈɑtər} \) an apparatus in which substances can be continuously rubbed.

4-tritylmorpholine a molluscicide used in the control of bilharziasis (schistosomiasis). Called also trifenmorph, Frescon. Is highly toxic to livestock feed. Has the same energy content as wheat but a higher content of better-quality protein. Yield of grain per hectare is much less than that of wheat.

t. phenylorganic arsicals includes the pharmaceuticals thiacetamide, arsphencomplexamine. See also organic arsicals.

Trichurus a genus of mange mites in the family Sarcoptidae. \( T. \text{cav}iae \) \( \text{syn.} \text{Caviacoptes cav}iae \) causes mange in guinea pigs characterized by alopecia, pruritus, and keratinization. \( T. \text{diversus} \) causes mange in rats, mice, and hamsters.

trixylenyl phosphate one of the compounds used in the manufacture of triaryl phosphates.

trixylyl phosphate an industrial aryl phosphate capable of causing organophosphate poisoning in cattle.

tRNA transfer RNA (ribonucleic acid).

aminocacyl-tRNA transfer RNA to which its specific amino acid has been coupled by its specific aminocacyl-tRNA synthetase.

aminocacyl-tRNA binding site one of two tRNA binding sites on a ribosome that holds the incoming tRNA molecule charged with an amino acid. Called also A site.

aminocacyl-tRNA synthetases a set of enzymes that couple each of the 20 amino acids to its appropriate tRNA molecule.

initiator tRNA a special methionine tRNA that binds to the initiation codon AUG that forms part of the initiation complex at the start of mRNA translation.

peptidy1-tRNA binding site one of two tRNA binding sites on a ribosome that holds the tRNA that is normally linked to the polypeptide chain. Called also P site.

trocar a sharp-pointed, needle-like instrument equipped with a cannula; used to puncture the wall of a body cavity and withdraw fluid or gas. An especially large-bore trocar and cannula, 1.0-.1.5 cm diameter, is used in the treatment of bloat in cattle.

bleeding t. a large-bore, about 10-gauge, needle with a ferruled hub for the attachment of rubber tubing.

Duchenne's t. a trocar for obtaining specimens of deep-seated tissues.

trocarization the action of using a trocar to penetrate an organ or tissue.

trochanter \( \text{tro} \text{kanˈtər} \) one of three tuberosities on the femur, at the upper end of its lateral surface (greater trochanter), toward the upper end on its medial surface (lesser trochanter) and more distally on the lateral surface (third trochanter). The third trochanter is prominent in horses and rabbits.

trochlea \( \text{troc} \text{ˈleə} \) pl. trochleae \( [\text{L.}] \) a pulley-shaped part or structure; various bony or fibrous structures through or over which tendons pass or with which other structures articulate. See examples below.

femoral t. the articular surface on the cranial aspect of the distal femur upon which the patella glides.

humeral t. grooved articular surface at the distal end of the humerus; articulates with the radius and ulna.

trochlear \( \text{troc} \text{ˈleər} \) 1. pertaining to a trochlea. 2. pertaining to the fourth cranial (trochlear) nerve.

t. nerve see Table 13.

t. notch semicircular notch in the proximal extremity of the ulna, articulates with the trochlea of the humerus, overhung by the ‘beak’ of the ulna’s anconeal process.

t. orbit a flat piece of cartilage, or loop of fibrous tissue, embedded in the dorso-medial wall of the orbit close to the edge of the orbit; acts as a pulley for the dorsal oblique muscle.

t. talus one of two articular surfaces on the talus. The trochlea tali proximalis articulates with the cochlea of theibia in horses, and with theibia and fibula in ruminants, pigs, and carnivores; the trochlea tali distalis on the distal surface of the talus of pigs and ruminants for articulation with the central tarsal and fourth tarsal bones.

trochleoplasty deepening of the femoral trochlea is used to stabilize the patellofemoral joint in patellar luxation.

trochoid \( \text{troc} \text{ˈkoid} \) pivot-like, or pulley-shaped.

trochoïdes \( \text{trō-kəˈdēz} \) a pivot joint.

troglitazon \( \text{trōˈgəl-təˈzən} \) a thiazolidinedione compound that enhances peripheral insulin receptor sensitivity; used in the management of diabetes mellitus. Withdrawn from the market because of hepatotoxicity.

Troglosterella ciliated protozoa isolated from cases of diarrhea in recently captured great apes, chimpanzees, gorillas, and gibbons. Includes \( T. \text{ab}rassarti}, T. \text{g}orilae\).

Troglostrostrongylus a genus of nematodes in the family Crenosomatidae found in the lungs of members of the family Felidae. \( T. \text{brevior} \) found in the respiratory tract of cats. \( T. \text{subcrenatus} \) found in the lungs of domestic and wild cats.

Trogloctrema a genus of trematodes in the family Trogloctrematidae.

\( T. \text{acutum} \) found in the frontal and ethmoidal sinuses of fox, mink, and polecat and may destroy the walls of the sinuses.

T. salmincola see \text{Nanophyetus salmincola}. 

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**T-53:** Electron micrograph of Trichomonas foetus. From Noakes, D.E., Parkinson, T.J., England, G.C.W., Arthur's Veterinary Reproduction and Obstetrics, 8th ed, Saunders, 2001.
trophic study see case-control study.
trolamine [trɔləmən] triethanolamine.
troleandomycin [trələˈdændəmɪs] the triacetyl ester of oleandomycin; a macrolide antibiotic, similar to erythromycin. Called also triacetyloleandomycin.

Trombicula a genus of mites (family Trombiculidae), whose larvae are parasitic on animal species and cause dermatis. Some also transmit diseases from their natural hosts rodents to humans, e.g., scrub typhus. The larvae are also called chiggers.

T. akamushi transmits scrub typhus.
T. alfreddugesi Eutrombicula alfreddugesi.
T. autumnalis distinctively red mite found on all domestic animal species including poultry. Attacks humans. It causes dermatis, e.g., between dog’s claws and on the heels of horses. Called also harvest mite, aouat, lepte automnale.
T. batatas causes dermatis.
T. deliensis transmits scrub typhus of humans from rodents.
T. minor the scrub-itch mite.
T. sarcina Eutrombicula sarcina.
T. spendens causes dermatis.

trombiculiasis see trombiculidiasis.

trombiculid an a member of the mite family Trombiculidae whose parasitic larvae (chiggers) infest vertebrates causing trombiculidiasis. Over 10,000 species are known.

trombiculidiasis [trom-ˈbik-ə-ˌlĭ-de-ˈne-sis] dermatis in all pastoral animal species and birds caused by mites of the family Trombiculidae (chigger mites, harvest mites). The bites produce wheals and intense pruritus followed by the development of moderate to severe dermatis. This is mostly on the lower part of the face and the distal extremities. The disease is most likely to occur in autumn when the parasites are active and is often confined to particular fields that provide the best ecological niche for the mite.

trombiculosis infestation with Trombicula.

tropane alkaloid plant toxins, e.g., atropine, hyoscyamine, scopolamine (hyoscine) found in solanaceous plants.

trophectoderm [trof-ɛkˈtɒ-dərm] the earliest trophoblast.

trophi [trɔf] pertaining to nutrition.

-trophic word element. [Gr.] nourishing, stimulating. troph(o)- word element. [Gr.] food, nourishment.

trophoblast [trɔfˈɒ-blæst] the peripheral cells of the blastocyst, which attach the fertilized ovum to the uterine wall and contribute to the placenta and the membranes that nourish and protect the developing organism. In humans, the inner cellular layer is the cytotrophoblast and the outer layer is the syncytiotrophoblast.

trophocyte [trɔf-ə-sit] a cell that provides nourishment for other cells.

trophology [trɔf-ə-lə-je] the study or science of nutrition.

trophoneurosis [trɔf-ə-ˈnjuːroʊsɪs] any functional nervous disease due to failure of nutrition from defective nerve influence.

trophonosis [trɔf-ə-ˈnɔʊsɪs] any disease due to nutritional causes.

trophoptosis [trɔf-ˈɒp-tə-ˈsɪs] adult feeding stage of protozoan such as Oodinium spp. (called also Piscinoodinium, Amyloodinium) and Ichthyophthirius, found attached to the skin or gills of fish.

trophonucleus [trɔf-ə-ˈnʊklə-ˈklezəs] macronucleus. the larger of two nuclei in ciliated protozoa that lacks a nuclear membrane and regulates metabolic activities. Called also meganucleus.

trophopathy [trɔf-ə-ˈpæθ-ə-ˈsi] disease due to derangement of nutrition.

trophoplasma a granular protoplasmic body, a plastid.

trophotaxis [trɔf-ə-ˈtæk-sɪs] taxis in relation to nutritive materials.

trophotherapy [trɔf-ə-ˈθer-ə-ˈpe] treatment of disease by dietary measures.

trophozoite [trɔf-ə-ˈzoʊ-ɪt] the active, motile stage of a protozoan parasite. Refers to the motile stage of flagellate protozoa, e.g., Giardia spp. and the stage that follows a sporozoite, e.g., some apicomplexan parasites.

-trophy word element. [Gr.] condition of growth or development.

trop[ə]- a manifest deviation of an eye from the normal position when both eyes are open and uncovered. See also strabismus.

-tropic word element. [Gr.] turning toward, changing, tending to turn or change.

tropical [tropɪˈkɔl] pertaining to the tropics, the regions of the earth lying between the tropic of Cancer above the equator and the tropic of Capricorn below.

t. anhidrotic asthenia a condition due to generalized absence of sweating in conditions of high temperature. See also anhidrosis.

t. canine pancytopenia (TCP) see canine ehrlichiosis.

t. cattle tick Rhipicephalus (Boophilus) microplus.

t. fish includes 400 species suitable for home aquariums. The common ones are goldfish, Molly fish, guppy, angelfish (Pterophyllum), swordtail, and sea horse.

t. horse tick Dermacentor nitens.

tropicamide [tropˈɪkə-mɪd] a relatively rapidly but short-acting parasympatholytic agent used typically as a mydriatic of choice for ophthalmoscopic examination in domestic animals.

Tropilaelaps a genus of mites, two species of which (T. clareae, T. koenigerum) parasitize honey bees causing abnormal brood development and death, leading to colony decline and collapse. The natural host of the giant Asian honey bee (Apis dorsata), but it readily infests colonies of the Western honey bee (A. mellifera). A disease notifiable to the OIE (see Table 21).

T. clareae an Asian bee mite; geographic region: Iran to Papua-New Guinea; occurs only in five species of bees (Apis cerana, A. dorsata, A. florea, A. laboriosa and A. mellifera).
-tropin word element. [Gr.] nourishing, stimulating. See also -trophin.

trope a derivative of the alkaloid atropine.

tropin a protein aggregate in thin muscle filaments.

tropism [tropˈɪz-əm] tendency to turn toward or develop in response to an external stimulus. Growth response in a nonmotile organism elicited by an external stimulus, and either toward (positive tropism) or away from (negative tropism) the stimulus; used as a word element combined with a stem indicating nature of the stimulus (e.g., phototropism) or material or entity for which an organism (or substance) shows a special affinity (e.g., neurotropism).

trop(o)- word element. [Gr.] turn.

tropocollagen the molecular unit of all forms of collagen; it is a helical structure of three polypeptides.

tropomyosin [trɔpˈɒ-mə-sɪn] a muscle protein of the I band that inhibits contraction by blocking the interaction of actin and myosin, except when influenced by troponin.

troponins [trɔpˈɒ-nɪn] a complex of muscle proteins that, when combined with Ca2+, influence tropomyosin to initiate contraction. Troponin I is a highly conserved polypeptide that forms a complex with troponin T and troponin C on the actin portion of the contractile mechanism of striated muscle throughout the body. Occurs in three isoforms, one of which is cTnI that is not found in smooth muscle nor in substantial concentrations in striated muscle. cTnI is released from the myocardium in proportion to the degree of tissue injury. Plasma concentrations are used as a biomarker of myocardial disease.

tropectomy an antibiotic drug; a derivative of spectinomycin with greater activity against gram-positive bacteria.

trot one of the natural gaits of the horse; a two-beat gait on alternating diagonals.

collected t. the head is held well in, and the horse is not permitted to fully extend its limbs. The gait can be very showy but not fast nor a great coverer of distance.

extended t. not a racing trot in that the rhythm is not fast but the horse takes long strides and covers a lot of distance; the head and neck are extended.

Trotter trotting racehorse; includes American, Baltic, Cuban, French, German, Russian, etc. Trottiers. See American Trotter.

trough [tɾʌf] 1. standard equipment for feeding and watering animals. A. an M-shaped false top to be placed on a surgical table. A small patient laid in it is propped up in the groove. Made of sterilizable material. Useful also in radiology if made of radiolucent materials.

troughing collective term for water or feed troughs.
trout operation and food finish in the family Salmonidae. Includes brown, brook, cutthroat, rainbow, sea trout, and Great Lakes trout. Some are freshwater and some are anadromous.

brook t. Salvelinus fontinalis.
brown t. Salmo trutta.
lake t. Salvelinus namaycush.
rainbow t. Oncorhynchus mykiss.

triclosan [tri-kloss-an] a fluoroquinolone antibiotic with activity against anaerobic bacteria. It has been withdrawn from use.

TRP traumatic reticuloperitonitis.

Trp tryptophan.

Tru-Cut biopsy needle a disposable needle with outer cannula and inner, notched rod in which a tissue specimen is cut, trapped, and withdrawn. The needle is commonly used for percutaneous biopsy of lymph nodes, liver, kidney, etc.

Trueperella a genus of pleomorphic gram-positive actinomyces bacteria previously classified within the genus Arcanobacterium. 

T. bernardiae isolated from the prepuce of European bison (Bison bonasus) with balanoposthitis.

T. bonasi isolated from the prepuce of European bison (Bison bonasus) with balanoposthitis.

T. pyogenes capable of inducing supplicative lesions in any organ or tissue in animals. In farm animals, especially ruminants, it is the most common bacterial species found in infected wounds and abscesses. A significant cause of mastitis in cattle. Previously called Actinomyces pyogenes, Corynebacterium pyogenes and Arcanobacterium pyogenes.

truncal [trung'kal] of the nature of or pertaining to the trunk.

truncate [trung'kät] 1. to amputate; to deprive of limbs. 2. having the end cut squarely off.

truncus [trung'kas] pl. trunci [trun-] (L.) trunk; individual trunci are listed as truncus in Table 8 (arteries) and Table 13 (nerves).

T. arteriosus an artery issuing from the fetal heart, that develops into the aortic and pulmonary arteries. The trunk may persist into extrauterine life.

T. brachiocephalicus a vessel arising from the root of the aorta and giving origin to one or both of the common carotid and one or both subclavian arteries.

T. celiacus celiac trunk.

T. pulmonalis pulmonary trunk, trunk [trungk] 1. the main part, as the part of the body to which the head and limbs are attached, or a larger structure (e.g., vessel or nerve) from which smaller divisions or branches arise, or that is created by their union. 2. the extended nose of the elephant, containing many muscles giving it extraordinary strength and mobility. Anatomically it includes the nose and upper lip. There is a single finger-like papilla on the dorsal part of the tip in the Asian elephant and two papillae on the African elephant.

bicarotid t. a short artery that is the origin of the two common carotid arteries in ungulates.

brachiocephalic t. the largest branch of the aorta; see Table 8.

celiac t. the arterial trunk arising from the abdominal aorta and giving origin to the left gastric, common hepatic, and splenic arteries; see Table 8.

costocervical t. a branch of the subclavian artery; see Table 8.

lumbar lymph t. a plexus of lymph vessels on the roof of the abdomen that drains into the cisterna chyli.

lumbosacral t. a nerve trunk formed by union of the ventral branches of the lumbar and sacral nerves; see also Table 8.

pudendoperigastric t. see Table 8.

pulmonary t. a vessel arising from the conus arteriosus of the right ventricle and bifurcating into the right and left pulmonary arteries; see also Table 8.

sympathetic t. see sympathetic trunk.

vagal t. see dorsal, ventral vagal trunks in Table 13.

trypan blue a supravital stain and a stain for amyloid. Also, a largely superseded trypansode; causes tissue sloughs if injected around the vein, and stains tissues blue, an inconvenience in meat animals.

trypanocidal [trin-pan-o-si-dal] destructive to trypanosomes. Drugs included are diminazene aceturate, homidium bromide, quinapyramine (an aminoquinidine), suramin, and benznidazole.

trypanolysis [trin-pan-o-lis-e] the lysis of trypanosomes. Trypanoplasma cyprini a fusiform haemoflagellate parasite with a flagellum at each pole. A member of the family Cryptobiidae. May invade the vascular system and cause depression and emaciation. See also Cryptobia cyprini. Trypanoplasma is treated as a subspecies of Cryptobia by some authors.

trypanoplasmosiasis disease of fishinfish caused by Trypanoplasma spp.

Trypanosoma a multispecies genus of protozoa in the family Trypanosomatidae, parasitic in the blood, lymph, and tissues of vertebrates and invertebrates, including humans; most species live part of their life cycle in the intestines of insects and other invertebrates, the flagellate stage being found only in the vertebrate host. The species that cause serious diseases of domestic animals are listed below. Species of minor pathogenicity include T. avium (birds), T. biniyeyi (platypus), T. calmetti (ducklings), T. diazi (capuchin monkeys), T. dimorphon (domestic animals generally), T. falilinum (fowl), T. melophagium (sheep), T. minusense (monkeys, e.g., marmosets), T. nabiasi (rabbits), T. primatum (chimpanzees, gorillas), T. rangeli (humans, dogs, cats). Called also T. ariarii, T. guatamalense, T. saimiri (squirrel monkeys), T. sammarini (squirrel monkeys), and T. theodorii (pigs). Called also Trypanozoon.

T. brucei (syn. T. brucei) causes a severe disease in all species including horse, cattle, sheep, dogs, and cats.

T. congolense (syn. T. pechorum, T. nanum, T. montgomeryi) causes diseases in all domestic animals but most serious in humans (sleeping sickness), cattle (nagana); reservoir hosts are wild ruminants.

T. cruzi (syn. T. escomeli) a disease of humans (Chagas’ disease, American trypanosomiasis) that has reservoirs in pigs, dogs, and cats and many wild animals. It causes disease in these hosts and may be fatal to dogs.

T. equinum occurs in various species but is most serious in equids, in which it is characterized by posterior paralysis; called Mal de Caderas. T. equiperdum a serious disease of equids that it is transmitted venereally and is called dourine.

T. evansi causes infection in many species including camels, horses, and dogs. The disease in horses is surra. In cattle and bufallo, the disease is subclinical, but these species act as reservoirs.

T. gambiense (syn. T. hominis, T. nigeriensis, T. ugandense) a chronic disease of humans that can occur also in cattle, goats, sheep, horses, dogs, and cats.

T. lewisi occurs in rats and may cause death in rats.

T. rhodesiense causes a serious disease in humans but only a mild one in ruminants and other domestic animals and monkeys.

T. suis found in pigs in which it causes a fatal disease.

T. theileri considered to be nonpathogenic in cattle, in which it occurs almost universally but may cause illness in stressed animals.

T. uniforme found in most ruminants. Similar to T. vivax in pathogenicity.

T. vivax (syn. T. capræ, T. angolense) found in ruminants and horses but not pigs, dogs, cats. Causes a serious and fatal disease in cattle and goats, especially in animals under stress.

trypanosome [trin-pan-o-söm] a protozoan of the genus Trypanosoma.

trypanosomiasis [trin-pan-o-so-mi-o-sis] clinically a nondescript disease that may be peracute, acute, or chronic. Called also nagana, mal de caderas, and others. See also dourine, surra. The diagnosis is based on a positive blood smear and the presence of an insect vector, often a tsetse fly, or a history of mating in the case of dourine. Tsetse-transmitted trypanosomiasis is a disease notifiable to the OIE (see Table 21).

American t. a disease of humans caused by infection with Trypanosoma cruzi.

trypanosomicide [trin-pan-o-so-mi-aid] 1. lethal to trypanosomes. 2. an agent that is lethal to trypanosomes.

trypanosomid [trin-pan'o-so-mid] a skin eruption occurring in trypanosomiasis.

trypanosomosis trypanosomiasis.

trypanotolerance resistance to infection with trypanosomes, inherent in some breeds of cattle, e.g., the N'Dama, Nigerian shorthorn, Lagune and others, and some other animals.

Trypanozoon see Trypanosoma.

trypomastigote [trin-pô-mas'ti-göt] the characteristic developmental stage of trypanosomes, usually in the vertebrate host but may be in the invertebrate. A leaf-like form in which the flagellum arises from a posteriorly located kinetoplast and emerges from the side of the body, with an undulating membrane running along the length of the body and often with a free flagellum.

Trypsin [trip'sin] a proteolytic enzyme formed in the intestine by the cleavage of trypsinogen by enterokinase. Trypsinogen enters the intestine
as part of the intestinal juice. It is an endopeptidase that hydrolyzes peptides of arginine or lysine.

t. fecal tests may be measured qualitatively or quantitatively to diagnose exocrine pancreatic insufficiency. Large amounts exceed by more accurate diagnostic tests.

feline t.-like immunoreactivity (fTLI) see trypsin-like immunoreactivity (below).

t. inhibitor small protein synthesized in the exocrine pancreas that prevents conversion of trypsinogen to trypsin, so protecting itself against trypsin digestion. Pancreatic trypsin inhibitor competitively binds to the active site of trypsin and inactivates it at a very low concentration. The binding is among the strongest noncovalent associations, but only a fraction of the potential trypsin is so inhibited.

t.-like immunoreactivity (TLI) serum proteins, particularly trypsinogen, react immunologically as trypsin and a normal concentration is dependent upon a normally functional pancreas. Decreased values are associated with exocrine pancreatic insufficiency, while elevated concentrations are consistent with either acute or chronic pancreatitis or decreased renal excretion. Species-specific tests, cTLI (canine) and fTLI (feline) are used.

trypsinogen [tryp-sin'-o-jan] the inactive precursor of trypsin, secreted by the pancreas and activated to trypsin by contact with enterokinase.

t. activation peptide (TAP) a product of the cleavage of trypsinogen by enterokinase, together with trypsin. With acinar cell damage, there is cleavage by cathepsin B within the pancreas; TAP can be found in the plasma and urine.

tryptamines [tryp'to-mên] monoamine alkaloids widespread in plants. Three tryptamine alkaloids in Phalaris aquatica are thought to be the cause of both nervous and cardiac forms of poisoning by this plant.

tryptase a serine protease found in mast cells that is active in inflammation and a mediator of anaphylaxis.

tryptic [tryp'tik] relating to or resulting from digestion by trypsin.

tryptophan (Trp. W) a naturally occurring amino acid, existing in proteins; essential in the diet of all species. High levels of intake of dl-tryptophan are thought to be a significant cause of atypical interstitial pneumonia in cattle. The actual toxic agent is 3-methylindole, a metabolic product of d,l-tryptophan in the rumen.

dl-t. component of some roughages; high levels can cause acute bovine pulmonary emphysema and edema.

oxygenase first enzyme in the catabolic pathway for tryptophan. Essential step in the pathway to synthesis of nicotinamide nucleotides NAD+ and NADP+. Approximately 30% of the nicotinamide nucleotide requirement of some animals can be supplied through this enzyme. The cat is notably lacking in the latter capacity.

tryptophanase a bacterial enzyme that catalyzes the cleavage of tryptophan into indole, pyruvic acid, and ammonia. Indole is an important signaling molecule and may be important in biofilm formation for pathogens such as Escherichia coli.

tryptophanuria [tryp'-to-fa-nur'e-a] excessive urinary excretion of tryptophan.

Ts cell suppressor T lymphocyte. Called also regulatory T lymphocyte.

t. an African fly of the genus Glossina, which transmits trypanosomiasis.

l. fly disease nagana.

TSH thyroid-stimulating hormone; called also thyrotropin, thyrotropic hormone. Determination of blood concentration has been used in dogs, along with other laboratory indicators, to diagnose or rule out a diagnosis of primary hypothyroidism.

cTSH canine TSH.

TSH releasing factor see thyrotropin releasing hormone.

TSH stimulation test administration of TSH will result in an increase in T4 concentration in a patient with normal thyroid function and little or no response if hypothyroidism is present. Used most often in dogs.

TSTA tumor-specific transplantation antigen.

tsutsugamushi fever see scrub typhus.

T4 total thyroxine.

TPP thymidine triphosphate.

TU tuberculin unit.

tuatara an endangered, nocturnal, burrowing reptile in the family Sphenodontidae, found only in New Zealand. This single species is the only surviving member of the order Rhynchocephalia. A primitive lizard whose closest relatives are extinct reptiles. It has a spiny crest along the back and a primitive, photosensitive organ on the head, which is often called a ‘third eye’ or ‘parietal eye’, which is part of the pineal complex.

tuba [too bə] pl. tubae [L.] tube.
tubectomy (too-bek-ta-m) excision of a portion of the uterine tube.

**tuber** (too-bar) 1. a swelling or protuberance, especially on a bone. 2. a short, thick, fleshy, underground stem carrying a number of buds each capable of growing into a new plant, e.g., potato. A storage phase of plant growth.

t. calcaneus, t. calcs the point of the hock that serves as the attachment for the common calcaneal tendon.

t. cingereum a mound on the undersurface of the forebrain to which the stalk of the pituitary gland is attached.

t. coxae, coxal t. the point of the hip; the most lateral point of the ilium. Called also: the hooks or hook bones. Some hoists (the Bagshaw hoist) are placed over these prominences to lift a paralyzed cow.

facial t. the anterior point on the facial crest, just above the third and fourth cheek teeth of the horse. A homologous point in the cow.

t. ischiī the caudal point on the floor of the pubis, the tuber ischium or pin bone.

sacral t. the most medial prominence on the ilium; above the sacroiliac joint.

t. scapulae supraglenoid tubercle.

t. spinæ the tuber in the middle of the spine of the scapula that is well covered by the latissimus dorsi muscle.

**tubercle** (too-bar-kal) 1. a small, rounded nodule produced by the bacillus of tuberculous (Mycobacterium bovis). It is made up of small spherical masses that contain giant cells and are surrounded by spindle-shaped epitheloid cells. 2. a nodule or small eminence, especially one on a bone, for attachment of a tendon. See also [tuberculate] t.

dysgotic t. (1) one from which it is difficult to culture mycobacteria, typical of Mycobacterium bovis.

eugonic t. (1) one from which mycobacteria can be isolated with ease. Typical of Mycobacterium avium.

fibrous t. (1) a tubercle of bacillary origin that contains connective tissue elements.

gener t. see phallic tubercle (below).

gracile t. a small swelling; used as an anatomical landmark; that indicates the location of the gracilis muscle in the medulla oblongata.

humerus t. the point of the shoulder; the greater tubercle on the head of the humerus.

infragnoidal t. a tubercle on the caudal border of the scapula for attachment of the triceps muscle.

intercondylar t’s situated on the intercondylar eminence on the head of the tibia, there are medial and lateral tubercles. Called also intercondylar eminences.

intermediate humerus t. a small ridge between the greater and lesser tubercles of the horse's humerus; it serves to restrain the bicapital tendon.

interventous t. a fold on the inner wall of the right atrium, directing the flow of blood from the venae cavae to the atrioventricular opening.

miliary t. one of the many minute tubercles formed in many organs in acute miliary tuberculosis.

phallic t. primum tuberculum of the penis or clitoris; called also genital tubercle.

supraglandulæ t. a tubercle on the scapula for attachment of the biceps muscle.

tubercular (too-ber’-ku-lar) tuberculous.

tuberculate, tuberculated (too-ber’-ku-lat’) covered or affected with tubercles.

tuberculoid (too-ber’ku-loyd) resembling a tubercle or tuberculosis.

tuberculosis (too-ber’ku-lo-sis) a tumor-like mass resulting from enlargement of a cased tubercle.

tuberculoprotein (too-ber’-ku-lo-pro’ten) protein fraction extractable from the culture of Mycobacterium spp. See also purified protein derivative of tuberculosis.

tuberculosis (too-ber’ku-lo-sis) applied generally to diseases caused by tuberculous group of bacteria in the genus Mycobacteria, which includes M. tuberculosis, M. bovis, and M. avium. See also fish tuberculosis, mycobacteriosis.

atypical mycobacterial t. see atypical mycobacteriosis.

avian t. see Mycobacterium avium tuberculosis (below).

bovine t. see Mycobacterium bovis tuberculosis (below).

cutaneous t. infection with Mycobacterium tuberculosis uncommonly involves the skin; in dogs and cats it can occur as cutaneous ulcers, abscesses, plaques, and nodules. More often, the term is used to describe infection with atypical mycobacteria.

fish t. disease of aquarium and occasionally aquaculture species caused by Mycobacterium spp. Usually occurs in fish held in warm water conditions. Characterized by weight loss, exophthalmia, internal granuloma-like lesion in the visceral organs, and cutaneous ulcers and pallor. The acid-fast organisms can be found in lesions.

Mycobacterium avium t. causes a significant disease only in birds. In birds it is a chronic disease characterized by loss of body weight, poor egg production, and eventual death. There are characteristic large gray, yellow or white tubercles in liver, spleen, and intestinal wall. The disease is very persistent in a flock. In mammals, it causes nonprogressive lesions, especially in lymph nodes, causing the animals to be positive to the tuberculin test.

Mycobacterium bovis t. a chronic disease characterized by the development of tubercles or discrete nodular lesions in any organ. These may develop a necrotic center containing yellow-orange pus, often caseous. Diffuse involvement of lungs causing bronchopneumonia, and of uterus causing metritis, and of the udder also occur. The common clinical syndrome is wasting with localizing signs dependent on the

t. tests tuberculin skin tests, with removal of test-positive (reactor) cattle, have allowed the eradication of bovine tuberculosis from many countries and are the international standard for ante mortem diagnosis of bovine tuberculosis in cattle herds and individual animals. Based on eliciting a delayed-type hypersensitivity response to the intradermal injection of tuberculin. In the *single intradermal test (SIT)* a small volume of bovine tuberculin is injected into a lateral skin fold at the base of the tail (caudal fold SIT) or skin in the mid cervical area (cervical SIT). Approximately 72 hour after the injection, the site of injection is palpated for evidence of inflammation, or with the cervical SIT skin thickness is measured with calipers prior to injection and approximately 72 hour later. T-47: Tuberculin single intradermal test (SIT). Positive tuberculosis test. Swelling at 72 hours following intradermal injection of bovine tuberculin. The *single intradermal comparative cervical tuberculin (SICCT) test* uses simultaneous injection of both bovine and avian tuberculins side-by-side into the skin of the neck. M. bovis-infected cattle show a greater response to bovine tuberculin than to avian tuberculin, whereas infections with other mycobacteria promote the reverse effect. The interferon-γ (IFN-γ) test is a cellular immune assay that can detect early infection. The main ancillary test in many countries as it improves specificity of testing and minimizes slaughtering animals with false-positive skin tests. It has also been used for ante mortem diagnosis of TB in goats, sheep, African buffalo. Marketed as a patented commercial kit under the trade name Bovigam®.
tubular

**tubular** [too-**b**u-lər**-**] pertaining to or affected with tuberculosis.

**tuboligamentous** [too-**b**u-lə-*li-ga-men-təs] pertaining to or affected with tuberculosis; caused by Mycobacterium tuberculosis, e.g., tuberculous adhesions.

**t. mastitis** chronic mastitis but with fibrosis commencing at the base of the udder, not around the milk cistern; abnormality of the milk is in the form of fine floccules in watery liquid, settling out on standing, and appearing at the end of milking instead of in the first few streams.

**tuberculum** [too-**b**u-ler-kəm] pl. *tubercula* [L.] see *tubercle*.

**tuberculosis** [too-**b**u-ral**-**sɪ-sɪs] a condition characterized by the presence of nodules.

**tuberosities** [too-**b**u-ros-i-təs] pl. *tuberositates* [L.] tuberosity; elevations on bones to which muscles are attached.

**tuberosity** [too-**b**u-ros-**i**-te] an elevation or protuberance.

**t. deltoide** t. a prominence on the lateral aspect of the humerus; the point of attachment of the deltoid muscle.

**t. facial** t. a discrete elevation on the maxilla of cows that serves as an attachment for the rostral part of the masseter muscle.

**t. ischial** t. the pin bone; the most caudal process of the ischium.

**t. olecranon** t. the free end of the ulna; point of attachment of the triceps brachii muscle; the point of the elbow.

**t. radial** t. a rough patch on the cranial aspect of the proximal end of the radius; for insertion of the biceps brachii.

**t. tibial** t. prominent tuberosity protruding from the cranial aspect of the proximal end of the tibia onto which the patellar ligament inserts.

**tuberculous** [too-**b**u-ral**-**s] pertaining to the uterine tube and broad ligament of the uterus.

**TSST-1** toxic shock syndrome toxin.

**tubo-ovarian** [too-**b**u-ə-**v**-ar-**e**-ərin] pertaining to the uterine tube and ovary.

**tuboperitoneal** [too-**b**u-**p**er-**e**-tə-**r**-e**-**nɛl] pertaining to a uterine tube and the peritoneum.

**tuboplasty** [too-**b**u-**p**las-tı-te] 1. salpingoplasty. 2. plastic repair of a tube, such as the eustachian tube.

**tubouterine** [too-**b**u-**u**-tər-ə-in] pertaining to the uterine tube and uterus.

**tubular** [too-**b**u-lər] 1. shaped like a tube. 2. relating to or of the form of a tube or tubule.

**t. backleak** leakage of tubular fluid into the intestinum of the kidney is one of the factors in the pathogenesis of acute renal failure.

**t. maximum** (*T*<sub>a</sub>) the highest rate in milligrams per minute at which the renal tubules can transfer artificially administered test substances; the maximal tubular excretory capacity.

**t. necrosis** acute necrosis of the tubular epithelium caused usually by ischemia or exposure to a nephrotoxin; in most cases, the patient succumbs to uremia in a few days. See also *nephrosis*.

**t. proteinuria** failure of the tubules to resorb small-molecule proteins excreted by the glomerulus.

**t. reabsorption** reabsorption of solutes from the glomerular filtrate by the tubules, the conservation of protein, glucose, and bicarbonate, and the conservation of the water that accompanies them.

**t. transport** refers to all processes that occur with renal tubular fluid during its transport from glomerular space to renal pelvis.

**t. transport maximum** when the tubular transport maximum for a renal tubular solute is exceeded the solute appears in the urine.

**tubulation** the mechanism and principle of development in the form of tubes such as the neural tube, and the visceral tube.

**tubule** [too-**b**u-lə] a small tube; a minute canal found in various structures or organs of the body.

**collecting t.'s** the terminal channels of the nephrons that open on the summits of the renal papillae or renal crests.

**convoluted t.'s** channels that follow a tortuous course. See also renal tubules (below) and *tubuli seminiferi contorti*.

**dental t.** minute wavy, branching channels in the dentin of a tooth that contain the long cytoplasmic processes of odontoblasts and that extend radially from the pulp cavity to the cement or the enamel. Called also dental canalculus.

**galactophorous t.'s** small channels for the passage of milk from the secreting cells in the mammary gland. Called also lactiferous ducts.

**lactiferous t.'s** see *lactiferous ducts*.

**mesonephric t.'s** the tubules comprising the mesonephros, or temporary kidney, of amniotes.

**metanephric t.'s** the tubules comprising the permanent kidney of amniotes.

**proximal t.** intrarenal site for the reabsorption of most of the protein in the tubular fluid.

**proximal convoluted t.** the portion of the nephron immediately succeeding the glomerulus; susceptible to disease because of its early exposure to toxins in the glomerular filtrate.

**renal t.'s** the minute canals made up of basement membrane and lined with epithelium, composing the substance of the kidney and secreting, reabsorbing, collecting, and conducting the urine. Include proximal convoluted, the nephron loop (containing the proximal straight tubule, descending and ascending thin, and the distal straight tubules) and the distal convoluted tubules.

**semiferous t.'s** the tubules of the testis, in which spermatooza develop and through which they leave the gland.

**transverse t.'s** structures in myofibers that run transversely to the long axis of the myofibrils in skeletal and cardiac muscle. They are filled with basal lamina material and are part of the communication system of muscle fibers and provide a means for the passage of action potentials into the depths of the fibers. The tubules are invaginations of the sarcolemma. Called also T tubules.

**uriniferous t.'s** renal tubules; channels for the passage of urine.

**tubuli** [too-**b**u-luli] plural of *tubulus*.

**t. seminiferi recti** straight semiferous tubules.

**tubulin** [too-**b**u-lin] the constituent protein of microtubules of cells that provide a skeleton for maintaining cell shape and is thought to be involved in cell motility; α- and β-tubulin contributes to the heterodimer tubulin, the building blocks of the electron microscopically visible cell components, the microtubules.

**β-t.** one of the monomeric globular proteins that associate to form the dimer, α-β-tubulin, the basis of microfilaments.

**tubulovascular glands** [too-**b**u- **v**o-lə-və- **l**ər**-**gən-dz] glands that secrete from both alveoli (acini) and tubules as those secreting mucous onto the tracheal mucosa.

**tubuloglomerular feedback** [too-**b**u- **g**lə- **g**rə- **m**ə- **r**-**u-**lər**-**] an essential ingredient of the juxtaglomerular theory of renal autoregulation; TGF is the proposed mechanisms whereby the glomerular flow rate is modified by changes in the tubular flow rate.

**tubulorrhexis** [too-**b**u-*luh*-rɛks-ɪs] rupture of the tubules of the kidney.

**tubulus** [too-**b**u-lu-lus] pl. *tubuli* [L.] a minute canal.

**tubus** [too-**b**u-las] a tube or canal.

**tuckered-up** describes an abdomen of small circumference compared to the depths of the abdomen.

**tuft** [tuft] a small clump or cluster; a coil.

**t. cell** see *caveolated cell*.

**malpighian t.** renal glomerulus.

**tuftsin** [tuft-sɪn] a basic tetrapeptide (Thr-Lys-Pro-Arg) produced in the spleen by enzymatic degradation of IgG heavy chains that serves as an opsonin and stimulates phagocytosis in polymorphonuclear leukocytes and in macrophages.

**TUGA** translavaginal ultrasound guided aspiration. Called also ovum pickup or OPU.
tugs stout leather loops, connected to the backband or saddle, into which vehicle shafts fit.

tui Quechua term referring to a young alpaca, from weaning at 6–8 months of age until sexual maturation at about 18–24 months.

tui nar a combination of acupressure (finger acupuncture) and massage and stretching techniques.

Tukidale a specialized, New Zealand carpetwool sheep, a mutant Romney Marsh with a large percentage of medullated fibers in its high-yielding fleece; the fiber diameter is 35–45 microns. It has a white face and dark skin.

tularemia [too’s-o-re´me-a] a highly contagious disease of rodents caused by Francisella (Pasteurella) tularensis, which may infect other animals and humans. F. tularensis subspp. tularensis, is prevalent in North America and is associated with tick-borne tularemia in rabbits and is more virulent than F. tularensis susp. holarctica, which is found in Asia, Europe, and North America and is associated with mosquitoes and with water-borne disease in aquatic rodents. It rarely causes disease in higher mammals. Disease in livestock occurs in association with heavy tick infestations and sheep and pigs are the most susceptible. The clinical disease is very variable, depending on where the infection localizes. Cats may be infected by ticks and from hunting or the ingestion of infected rabbits. They develop a generalized lymphadenopathy, splenomegaly, and hepatomegaly. Dogs appear to be more resistant to infection. Called also rabbit fever. A disease noti—

tumor a t. tumid a. See also tumori. See also tumoricidal. t. tumescence a. See also t. too-mes. t. tumidora too-mes. t. tulip a., homoiotypic t., homologous t. one made up of tissue resembling that in which it grows. Hürthle cell t. a new growth of the thyroid gland composed wholly or predominantly of Hürthle cells. See also Hürthle cell tumor. t. immunology the interactions between tumor cells and cells of the immune system.

t. immunotherapy see immunotherapy.

islet cell t. a tumor of the islets of Langerhans, which may result in hyperinsulinism. See also insulinoma.

t. lysis syndrome a possible sequel to chemotherapy in which very rapid destruction of highly sensitive tumor cells results in release of large amounts of nucleic acid purines, lactate, and uric acid that exceed renal and hepatic excretory mechanisms. Characterized by hyperkalemia, hyperphosphatemia, hypocalcemia, hyperuricemia, and renal failure.

malignant t. malignant neoplasml.

mast cell t. see mast cell tumor.

mixed t. see mixed tumor.

t. necrosis factor (TNF) two related cytokines produced by macrophages (TNF-a) and some T cells (TNF-β) that are cytotoxic for tumor cells but not for normal cells and that exert a variety of other inflammatory effects. See also lymphotaxis.

t. -node-metastases (TNM) classification see TNM staging.

neoplastic t. tumor (1).

organoid t. teratoma.

phantom t. abdominal or other swelling not due to structural change.

sand t. psammoma.

t.-specific antigen (TSA) see tumor-specific antigen.

true t. neoplasml.

tumoral calcium deposits see calcinosis circumscripta.

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tunicamycin an antibiotic produced by Streptomyces spp. fungi that inhibits the synthesis of all N-linked glycoproteins by blocking the transfer of acetyl-galactosamine from UDP-N-acetylglactosamine to dolicholphosphate.

tuning fork auscultation see tuning fork auscultation.

tunisian barbary sheep white or red-brown head, carpetwool, and meat sheep, male horned, female polled.

tunnel [turˈnəl] a passageway of varying length through a solid body, completely enclosed except for the open ends, permitting entrance and exit. carpal t. see carpal tunnel, carpal tunnel syndrome.

t. of Corti spiral passage in the organ of Corti.

t. graft see rope flap.

tarsal t. see tarsal tunnel.

tup ram.

tumping mating with a ram.

t. crayon a raddle crayon worn on the brisket in a harness by a ram running with ewes. Ewes that are mated are branded with the crayon. See also crayon-marking.

turacin crimson pigment in the feathers of turacos.

turacoverdin the green pigment in the feathers of some birds of the family Musophagidae, the turacos.

turbid [turˈbid] cloudy.

turbidimeter [turˈbi-diˈmə-tar] an apparatus for measuring turbidity of a solution.

turbidimetry [turˈbi-diˈmi-tre] the measurement of the turbidity of a solution.

turbidity [turˈbi-dɪ-te] cloudiness; disturbance of solids (sediment) in a solution, so that it is not clear.

turbidometric emanating from or pertaining to turbidimetry.

turbinal, turbinate [turˈbi-nal] 1. shaped like a top. 2. turbinate bone (concha nasalis ossea).

turbinate atrophy [turˈbi-nət] see atrophic rhinitis.

turbinate bones the nasal conchae; see Table 9.

turbanctomy [turˈbi-nəkt ˈti-mə] excision of a turbinate bone (nasal concha).

turbinotomy [turˈbi-nət-o-mə] incision of a turbinate bone.

turban t. a flatfish in the family Scophthalmidae; an important aquaculture species in the UK, Europe, and Scandinavia.

turbulence filter the effect of the structure of the turbinates, trachea, and bronchi in directing air flow against mucous membranes, serving to remove particulate matter from inspired air.

turbulent flow occurs in blood vessels where there is a stenosis or where there is a sudden increase in velocity; the laminar flow of normal tubes is disrupted and the fluid is randomly mixed; turbulent flows have a greater apparent viscosity than laminar flows. See also Reynolds's number.

turgescence [turˈje-səns] turgor.

turgescence [turˈje-səns] becoming swollen.

turgid [turˈji-d] swollen and congested.

turgor [turˈguə] the condition of being turgid; normal or other fullness.

turino cattle Portuguese and Brazilian dairy cattle originated from Dutch Black Pied. Türk cell [tərk] a lymphocyte with increased basophilia.

turkey a bird in the family Meleagridae. The common turkey is Meleagris gallopavo. There are two breeds, the American Bronzewing and the White Holland. Bred entirely for meat mostly for human consumption on festive occasions.

t. berry see Rivina humilis.

t. bluecomb disease see turkey coronaviral enteritis (below).

t. bordetellosis see turkey coryza.

t. bush Eremophilia deserti.

t. coronaviral enteritis acute, highly infectious disease of turkeys of all ages characterized by inappetence, wet droppings, weight loss, and heavy mortality is caused by a coronavirus. Called also bluecomb disease.

t. coryza see turkey coryza.

t. hemorrhagic enteritis an acute, infectious disease of turkeys 4 weeks old and older caused by a Group II avian adenovirus. Clinically there is illness for only 24 hours, bloody droppings, and a mortality rate of up to 60%.

t. hepatitis a highly contagious disease of turkeys caused by an enterovirus. The disease is characterized by a high level of subclinical infection and sudden death in stressed birds. There is focal necrosis in the liver and pancreas.

t. herpesvirus antigenically related to Marek's disease virus (MDV) but not pathogenic in any species. Used to vaccinate chickens against Marek's disease. The infection is universal in domestic and wild turkey populations and now widespread in chicken populations.

t. leg edema see leg edema.

t. meningocencephalitis see Israeli turkey encephalomyelitis.

t. mullein see Erremocarpus setigerus.

t. rhinotracheitis a cattarhal infection of the upper respiratory tract in young pouls. See also rhinotracheitis.

t. x disease a disease given to turkeys infected with Mycoplasma meleagridis and with airsacculitis as a result. The syndrome is characterized by deformity and shortening of the tarsometatarsal bone, hock joint swelling, and deformity of cervical vertebrae. There may also be stunting of growth and abnormal feathering.

t. Turkish Angora a small- to medium-sized cat originating in Turkey. It has a long, slender body with a flat, silky, wavy coat most commonly in white, but other colors are recognized. The eyes may be blue, green, or amber and sometimes with eyes of different colors (odd-eyed).

turkish kangal dog a large, flock guarding dog, similar to the Anatolian shepherd, but recognized as a separate breed by the Kennel Club UK.

turpinia an uncommon breed of domestic cats with a medium-length haircoat that is chalk white except where it is colored on the tail and in a few spots on the head. The breed is characterized by its attraction to water. Called also the swimming cat.

turned-in ears a defect in which the top part of the pinna is bent at an angle of 90° toward the animal's midline. A sporadic defect but also accompanies baldy calf disease. See inherited epidermal dysplasia of calves.

turned-in toes a conformation defect in horses. May cause the gait to be abnormal and the horse to be subject to brushing or similar injury.

turned-out toes a conformation defect in horses because it may cause the gait to be very wide in front and therefore marginally inefficient.

turner (XO) syndrome [turˈnər] see XO.

turning an obstetrical term for alteration of the presentation of a fetus in a dystocia. Called also version.

turning sickness an aberrant form of theileriosis in which parasitized lymphocytes cause emboli and hemorrhagic infarcts in central nervous tissue. Thelidia parva is credited with causing the disease that is characterized by convulsive attacks of spinning followed by collapse and unconsciousness, or by a more chronic syndrome of circling, head pressing, incoordination, and blindness.

turnip familiar root vegetable Brassica rapa, (purple top turnip) but also used as a common name for plants in other genera. Includes Indian turnip (Arisaema triphyllum), St. Anthony's turnip (Ranunculus bulbosus), swede turnip (Brassica napobrassica), turnip weed, or wild turnip (Rapistrum rugosum).

t. stubble green top regrowth after the roots have been harvested. Used for grazing by ruminants but toxicity (nitrate-nitrite, hemolytic agent, goitrogen, poliopenchomolalacia).

turnover [tərnˈər] the rate at which a substance is replaced in tissues or cells; alternatively, the rate at which the entire pool of a substance is replaced in the tissue.

t. iron t. much of the body's iron store is fixed in intracellular sites and is not available metabolically. The portion of the iron store that is available for mobilization into new sites is called the labile iron pool and may undergo a good deal of turnover via metabolic activity.

t. number see catalytic constant.

T. roll [tərnˈsik] see coenurus.

turpentine a sticky oleoresin that exudes from Pinus spp. trees.

t. oil commercial extract from turpentine used as a solvent for waxes and varnishes. The active constituent is terpenes, o-pine being the important one. In veterinary medicine it has been used, in the past, as a treatment for bloat in cattle and tympanitic colic in horses and as a constituent of general tonic drenches for cattle. Also has some use in stimulant ointments and liniments. Absorbed readily from the gut and the skin and is a significant poison for the kidney and intestine. Clinical signs of acute poisoning include colic, vomiting, diarrhea, incoordination and excitement followed by coma. No
longer considered standard of care in any species, and is toxic to many domesticated animals, such as cats and dogs.

t. weed see Gutierrezia microcephala.

turtle reptiles in the order Testudinidae; includes the turtles and pond turtles (family Emydidae), sea turtles (family Cheloniidae), and tortoises (family Testudinidae). They have webbed feet or flippers and their body is covered by a horny shell from which only the legs, head and neck, and tail protrude when needed. The dorsal upper shell is called the carapace and the ventral undershell the plastron. Common terminology is not consistent throughout the world. 'Tortoises' are terrestrial (land) based, 't'errapins' are freshwater semi-aquatic, and 'turtle' refers to marine or aquatic species. 'Sea turtles' usually refers to the marine species. Some choose to avoid confusion by just calling them all cheloniens.

green t. (Chelonia mydas), a large sea turtle; an endangered species, but they are being farmed commercially in some countries. Also know as green sea turtle.

tusk the well-developed canine tooth in the male pig and similar large projecting teeth in some wild species. They are open-rooted so that they continue to grow. The upper and lower ones in the pig have growth directions that bring them together in such a way that they sharpen each other as the jaws close. Elephant tusks are modified first incisor teeth that are largest in the African species (up to 10 ft), with the ivory being dentin. They bear a thin enamel cap that wears away soon after eruption. Incisor tusks are also found in dugongs, and the canine tooth forms the conspicuous tusk of walruses.

tussigenic [tus'si-jen ik] causing cough.

Tussilago farfara plant in the family Asteraceae; contains hepatotoxic pyrrolizidine alkaloids. Called also colt's-foot.

tussis [tus'sis] [L.] cough.

tussive [tus'iv] pertaining to or due to a cough.

tutamen [tut'amən] pl. tutamina [L.] a protective covering or structure.

tutamina oculi the protecting appendages of the eye, as the eyelids, eyelashes, etc.

tutin toxic sesquiterpenoid lactone in Coriaria spp. that inhibits the receptors of the neurotransmitter γ-aminobutyric acid

Tuttle forceps thumb-type tissue forceps with the tips of the blades directed that bring them together in such a way that they sharpen each other as the jaws close. Elephant tusks are modified first incisor teeth that are largest in the African species (up to 10 ft), with the ivory being dentin. They bear a thin enamel cap that wears away soon after eruption. Incisor tusks are also found in dugongs, and the canine tooth forms the conspicuous tusk of walruses.

twist disease term used to describe whirling disease

twist knot cerclage wire secured by twisting the two ends.

twisted leg a sporadic disease of fowls and turkeys of varied etiology and low incidence in many flocks. There is deformity of the small tarsal bones or tibia and a resulting inward bending and twisting usually of only one leg.

Twisty cats see radial agenesis.

twitch [twitch] 1. a brief, contractile response of a skeletal muscle elicited by a single maximal volley of impulses in the neurons supplying it. 2. a device used in the restraint of horses; there are a great many designs. The standard twitch consists of a loop of cord or chain at the end of a short, 2 ft (0.6 m), wooden handle. A fold of muzzle is enclosed in the loop that is then screwed tight. The handle may be held by an assistant or tied to the halter.

bulldog t. consists of two bars, usually metal, hinged at one end. The jaw is clamped shut with a piece of muzzle in it. The other end is then fixed, usually with a ratchet device.

car t. a rope twitch is twisted onto an ear instead of the muzzle.

Fletcher t. a compact nose twitch for horses. Consists of a cord loop attached to a hollow metal cap that can be screwed to the end of any wooden handle.

Galvayne's t. a loop of soft rope is passed over the poll and through the mouth, below the upper lip but in front of and above the incisor teeth.

halter t. the shank of the halter is passed over the poll and back to the near side through the mouth and then through the halter again.

humane t. for restraining horses, it consists of a hinged metal device that is placed over the upper lip and clipped to the halter.

leg t. a tourniquet applied above the carpal joint.

loop t. a loop in a soft rope is passed over the poll and through the mouth above the tongue and pulled tight.

Martingale t. see humane twitch.

Pratt t. a twitch that combines the loop twitch and Galvayne's twitch.

screw t. has the same effect as the standard twitch but the loop is of rigid metal, and it is closed by screwing a bar up to clamp the fold of muzzle skin.

snout t. see hog' holder.

twisting [twish'ing] 1. the occurrence of a single contraction or a series of contractions of a muscle. 2. the act of applying a nose twitch to a horse.

two-stage prothrombin test see prothrombin time test.

two-tailed test a test in which both 'large' and 'small' values of the test statistic indicate that the null hypothesis is not correct.

two tooth sheep with only the two central incisors erupted; average just over one year old.

two-way cross the male parent-to-be comes from one population, for example breed or type, the female from another.

two-year-old a horse aged between 2 and 3 years, the age dating from the horse's date of birth. In racehorses the birth date of the horse is determined by the local racing authority as the birthday of all horses.

induced t. produced experimentally in ruminants using PMSG or FSH, or by immunization against androstenedione.

monovular t. monzygotic twins.

monzygotic t's those which develop from a single ovum that divides after fertilization. Because they share the same set of chromosomes, they are always of the same sex, and are remarkably similar in haircoat color and pattern, teeth, and other respects. Monzygotic twins have exactly the same blood type and can accept tissue or organ transplants from each other. May be free and symmetrical, free and asymmetrical, joined and symmetrical, or cojoined and asymmetrical. Called also identical, enzygotic, monochorial, mono-ovular, similar, or true twins.

Siamese t's conjoined twins. Called also Siamese twins.

similar t. monzygotic twins.

symmetrical t's twins of equal size, age, and stage of development.

two t. monzygotic twins.

unequal t's twins of which one is incompletely developed, called also asymmetric twins.

unlike t. dizygotic twins.

twintip see Stemodia spp.

TV Tidal volume.

TVT Transmissible enzootic leukemia.

Tween-80 [twien] a proprietary name for a nonionic surfactant use as an emulsifier.

T-80 Hydrolysis a test used to detect lipase production by bacteria. Used to differentiate Corynebacterium cystitidis from other corynebacteria and also to differentiate some mycobacteria.

Twin-lamb disease see pregnancy toxemia.

Twin leaf see Zygophyllum.

twinning [twin'ing] 1. the production of symmetrical structures or parts by division. 2. the simultaneous intrauterine production of two or more embryos. Twinning is a desirable feature in animals that depend for their profitability on the production of young, e.g., lambs of the meat-producing breeds, and selection for the characteristic is a standard husbandry strategy. In animals that are essentially uniparous, e.g., mares, twins represent a danger to the foals and to the mare. Twins in which one is a female and one a male have the added risk of the female being a freemartin.

twins [twin] one of the two same-age fetuses in the one pregnancy. See also twinning.

binovular t's. dizygotic twins.

conjoined t's fused, symmetrical twins formed by incomplete division of one embryo into two components. See also Siamese twins.

discordant t's a particular trait is present in only one of the twins.

dizygotic t's those that develop from two separate ova fertilized at the same time. They may be of the same sex or of opposite sexes, and are no more similar than any other two offspring of the same parents. Called also fraternal, binovular, dichorial, dissimilar, and unlike twins.

fraternal t's dizygotic twins.

free symmetrical monzygotic t's see identical twins (below).

identical t's derived initially from a single zygote; placentas may be shared or separate.

impacted t's twins so situated during delivery that pressure of one against the other produces simultaneous engagement in the birth canal of both.
T-59: Humane twitch
From Bassert, J.M., McCurnin, D.M., McCurnin’s Clinical textbook for Veterinary Technicians, 9th ed., Saunders, 2018.

T-60: Normal canine left tympanic membrane.
From Gotthelf, L.N., Small Animal Ear Diseases, 2nd ed., Saunders, 2003.

tympanogenic [ˈtaɪmpə-nə-jənˈɪk] arising from the tympanum or middle ear.
tympanogram [ˈtaɪmpə-nəɡrəm] a graphic representation of the relative compliance and impedance of the tympanic membrane and ossicles of the middle ear obtained by tympanometry.
tympanohyoid one of the paired, short, proximal terminal segments in the chain of skeletal elements of the hyoid apparatus that connects the stylohyoid bone to the styloid process of the petrous part of the temporal bone.
tympanometry [ˈtaɪmpə-nə-mətər] indirect measurement of the compliance (mobility) and impedance of the tympanic membrane and ossicles of the middle ear; it is done by subjecting the external acoustic meatus to positive, normal and negative air pressure and monitoring the resultant sound energy flow.
tympanosclerosis [ˈtaɪmpə-səkˈloʊ-sərɪs] a condition characterized by the presence of masses of hard, dense connective tissue around the auditory ossicles in the middle ear.
tympanotomy [ˈtaɪmpə-nətər] myringotomy.
tympanous [ˈtaɪmpə-nəs] distended with gas.
tympanum [ˈtaɪmpə-nəm] 1. the part of the cavity of the middle ear, in the temporal bone, just medial to the tympanic membrane. 2. the tympanic membrane itself.
pyramid of t. the hollow elevation in the inner wall of the middle ear that contains the stapedius muscle. Called also eminentia pyramidalis.
tympany [ˈtaɪmpə-nə] 1. a tympanic, or bell-like, percussion note. 2. distention of a hollow viscus with gas.
crop t. see pendulous crop.
gastric t. see gastric dilatation colic.
testinal t. see intestinal tympany, intestinal dilatation.
ruminal t. see ruminal tympany.
secondary t. ruminal tympany secondary to some other condition, e.g., traumatic reticulitis, vagus indigestion, esophageal obstruction.
Tyndall effect [ˈtaɪndəl ɛfəkt] the light reflected by particles suspended in a gas or liquid. Called also Tyndall light phenomenon, Willis-Tyndall scattering.
Tyndall light phenomenon [ˈtaɪndəl ˈlaɪt ˌfenəmən] see Tyndall effect.
type [taɪp] 1. the general or prevailing character of any particular case of disease, microorganism, person, substance, etc. 2. to determine or assign a character or category.

blood t’s see blood group.

wild t. the normal or naturally occurring phenotype of an organism.
type 1 error an error that occurs when using data from a sample that demonstrates a statistically significant association when no such association is present in the population. When one rejects a correct null hypothesis, Type 1 error is made.
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typhlectasis [ˈtaɪfəklektəsɪs] distention of the cecum.
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typh(o) [ˈtaɪf(oʊ)] 1. word element. [Gr.] relationship to the cecum. 2. relationship to blindness.

tx commonly accepted shorthand abbreviation for ‘treatment’; used in medical records.
TXA 2 thromboxane.
tying-up syndrome [ˈtaɪn ing up] see exertional rhabdomyolysis.
Tyloko [ˈtaɪloʊkoʊ] southern African genus in plant family Crassulaceae; contains cumulative bufadienolide cardiac glycosides; causes Krippsiekte (cotyledonosis); includes T. cacalioides, T. grandiflorus, T. paniculatus, T. ventricostus, T. wallchii. Previously in genus Cotyledon. Called also plakkies, nenta.
tymoma [ˈtaɪmoʊmə] a callus or callosity.
tympanic t. see interdigital tympanum.
tylosin [ˈtiɪloʊsn] an antibiotic produced by cultures of Streptomyces fradiae, with a structure similar to erythromycin. It is effective against gram-positive bacteria generally and especially those susceptible to members of the macrolide group. Used in dogs for the treatment of chronic enteropathies, but contraindicated in horses, as it causes potentially fatal colitis.
tylosis [ˈtaɪloʊsɪs] formation of callosities.
tyloxyol [ˈtaɪloʊkəʊl] a nonionic liquid polymer used as a surfactant and mucolytic to aid liquefaction and removal of mucopurulent bronchopulmonary secretions; administered by inhalation.
tympanal [ˈtaɪmpanəl] pertaining to the tympanum or to the tympanic membrane.
tympanectomy [ˈtaɪmpə-nekˈtə-mə] excision of the tympanic membrane.
tympanic [ˈtaɪmpə-nɪk] 1. of or pertaining to the tympanum. 2. bell-like; resonant.
t. cavity the air chamber of the middle ear that lies medial to the tympanic membrane and contains the ear ossicles.
t. membrane a thin, semitransparent membrane, nearly oval in shape, that stretches across the ear canal separating the middle ear from the external acoustic meatus (outer ear). It is composed of fibrous tissue, covered with skin on the outside and mucous membrane on the inside. It is constructed so that it can vibrate freely with audible sound waves that travel inward from outside. The manubrium (handle) of the malleus (hammer) of the middle ear is attached to the center of the tympanic membrane and receives the vibrations collected by the membrane, transmitting them to other bones of the middle ear (the incus and stapes) and eventually to the fluid of the inner ear. Called also the eardrum.
t. membrane (secondary) the membrane enclosing the fenestra cochleae; called also Scarpa’s membrane.
t. nerve see Table 13.
t. plexus see tympanic plexus.
t. ossicles see auditory ossicles.
tympanism [ˈtaɪmpə-nɪzəm] drumlike distention of the abdomen due to air or gas in the intestine or peritoneal cavity.
tympanites [ˈtaɪmpə-nɪtəz] tympanism.
tympanitic [ˈtaɪmpə-nɪˈtɪk] 1. pertaining to or affected with tympanites. 2. bell-like; tympanic.
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typh(o) [ˈtaɪf(oʊ)] 1. word element. [Gr.] relationship to the cecum. 2. relationship to blindness.
Typhlocoelium a genus of trematodes of the family Typhlocoelidae found in the trachea of waterfowl. It has in the past been treated as a synonym of Trachepholius. The type species is *T. cucumerinum*.

**Typhlocolitid** inflammation of the cecum and colon.

**Typhlocidilitis** inflammation of the ileocecal valve.

**Typhloctitis** the presence of calculi in the cecum.

**Typhlopia** a member of the Typhlopididae family; blind snakes with mostly vestigial eyes that live in underground burrows. See worm *snake*.

**Typhloproctostomy** a fistula between the rectum and the cecum.

**Typhlotomy** [ti-fol’tə-mə] incision of the cecum.

**Typhoid** [ti/foyd] 1. resembling typhus. See *fowl* typhoid, *mouse* typhoid, pig typhoid, salmonellosis. 2. typhoid fever, an infectious disease of humans caused by *Salmonella typhi*.

**Typhus** [ti/fus] acute infectious diseases caused by *Rickettsia* that are usually transmitted from infected rats and other rodents to humans by lice, fleas, ticks, and mites. Asian tick *tick* t. see *boultounasse fever*.

**Canine typhus** see *Rickettsia felis*.

**Epidemic typhus** see *Rickettsia prowazekii*.

**Kenya typhus** see *boultounasse fever*.

**Murine typhus** a disease of rats caused by *Rickettsia typhi*, transmitted by the rat flea *Xenopsylla cheopis* and the rat louse *Polyplax spinulosa*. It is an important disease of humans.

**Queensland tick** t. a tickborne fever of humans, similar to Rocky Mountain spotted fever, caused by *Rickettsia australis* and transmitted by ixodid ticks. Dogs and cats may be unusual hosts.

**Sao Paulo tick** t. see *Rocky Mountain spotted fever*.

**Scrub typhus** a disease of humans caused by *Orientia tsutsugamushi* and transmitted by *Trombicula akamushi*. Resident in rodents that serve as reservoirs; occasionally dogs may be hosts. Called also Japanese river fever, tsutsugamushi disease.

**Siberian tick** t. a disease of humans and many species of feral mammals, especially rodents caused by *Rickettsia sibirica* and transmitted by the ticks *Dermacentor* and *Haemaphysalis*.

**Typing** [tip/ning] in transplantation and transfusion immunology, a method of measuring the degree of organ, solid tissue, or blood compatibility between two individuals, in which specific histocompatibility antigens (e.g., those present on leukocytes) or other cell surface antigens, e.g., red blood cell antigens, are detected by means of suitable immune serum.

**Blood typing** determining the antigenic determinants present on the surface of red blood cells by using specific antibodies (typing serums). See also blood group.

**Phage typing** t. see *phage* typing.

**Tissue typing** t. see tissue typing.

**Typology** [ti-pol’ə-jē] the study of types; the science of classifying, as bacteria according to type.

**Tyros** tyrosine.

**Tyramine** [ti/ram-in] 1. a decarboxylation product of tyrosine, which may be converted to cresol and phenol, found in decayed animal tissue, ripe cheese, and ergot. Closely related structurally to epinephrine (adrenaline) – phenylethylamine, a toxic amine found in *Acacia berlandieri* and mistletoes.

**Tyrocidine** [ti-ro-si-din] a bactericidal polypeptide antibiotic used in topical preparations.

**Tyrogeneous** [ti-gen’ə-us] originating in cheese.

**Tyrophagus** a genus of mites in the family Acaridae, commonly known as ‘cheese mites’. Parasites of cheese, grain, and other vegetable matter and only parasitize animals accidentally. They cause itching (pruritis) and occasionally a mild dermatitis. The infestation is usually self-limiting.

**T. farinae** (syn. *Acarus farinae*), lives in cheeses and grain.

**T. siro** (syn. *Acarus siro*), the cheese mite; also infests grain and may cause diarrhea.

**Tyroid** of cheesy consistency; caseous.

**Tyrol grey cattle** silver-gray, multiple purpose cattle, from Austrian Tyrol.

**Tyromatosis** [ti-rom-at-o-sis] a condition characterized by caseous degeneration.

**Tyropanoate** a radiopaque contrast medium for use in oral cholecystography.

**Tyrophagus** a genus of free-living mites in the family Acaridae. They feed on pollen and fungi and are cosmopolitan in their distribution.

**T. farinae** house dust mites; common in stored cereal; thought to be associated with allergic dermatitis.

Tyrol's disease a potentially fatal necrotizing hepatitis caused by *Clostridium piliforme* (*Bacillus piliformis*). The host range is broad and includes all laboratory rodents and rabbits, several wild rodents, domestic animals, and several exotic nonrodent hosts. Signs are severe diarrhea, jaundice, and high serum concentrations of liver enzymes. Probably the most common disease of gerbils, in which it is usually subclinical, but it can cause an acute disease characterized by death in young or stressed individuals. Tzetze ([tsert’se] tsetse.

**T. longior** found in grains and corpa. The cause of corpa itch in humans.

**T. palmarum** a pasture mite found in the nostrils of cattle, especially those with nasal granuloma.

**Tyrosinase** [ti-ro-sin-əs] an enzyme that oxidizes phenols such as tyrosine and dopamine to form benzoquinone and water; important in the production of melanin from tyrosine. Deficiency has been reported rarely in Chow Chows, where it is transient and is associated with hypopigmentation of the oral mucosa, which is a dramatic change from the normal darkly pigmented mucosa seen in this breed, and of hairs. Reduced activity with aging results in gray hairs around the muzzle and face of older dogs and cats.

**Tyrosine** (Tyr) [ti-ro-sé] a naturally occurring amino acid present in most proteins; it is a product of phenylalanine metabolism and a precursor of melanin, catecholamines, and thyroid hormones; an acceptor of phosphate groups in protein phosphorylation mechanisms for the regulation of enzyme activity.

**Tyrosinemia** [ti-ro-sin-e-me-a] an excess of tyrosine in the blood. Several types with varying clinical features occur in humans. A syndrome of dermatitis and keratoconjunctivitis resembling tyrosinemia type II of humans (Richner–Hanhart syndrome) occurs in rats fed a diet high in tyrosine, in mink as an inherited disorder (called also pseudostomenter), and it has been reported in a German shepherd dog.

**Tyrosinosis** [ti-ro-sin-o-sis] a condition characterized by a faulty metabolism of tyrosine in which an intermediate product, parahydroxy-phenyl pyruvic acid, appears in the urine, and gives it an abnormal reducing power.

**Tyrosinuria** [ti-ro-sin-u-re-ə] the presence of tyrosine in the urine; seen in liver disease.

**Tyrosis** [ti-ro-sis] caseation (2).

**Tyrosyluria** [ti-ro-sil’ə-ri-o-sis] increased urinary secretion of para-hydroxyphenyl compounds derived from tyrosine, as in tyrosinuria.

**Tyrothricin** [ti-ro-thri’sin] a mixture of tyrocidin and gramicidin antibiotics used for topical or intramammary application.

**Tyrotoxicism** poisoning from a toxin present in milk or cheese.

**Tyzzer's disease** a potential disease of gerbils, in which it is usually subclinical, but it can cause an acute disease characterized by death in young or stressed individuals. Tzetze ([tsert’si] tsetse. 