

Appendix D

Pharmacology Terms

The major terms that are in common use in the field of pharmacology (preparation and dispensation of medications) are provided. The pronunciation guide and definition of each term is included.

absorption (ab SORP shun): the process of taking in, in which a drug moves into the body toward the target organ or tissue.

ACE inhibitor (AYSS * in HIB ih tor): angiotensin-converting enzyme inhibitor, a category of antihypertensive drugs that suppress the renin pathway to reduce blood pressure.

administration (ad min ih STRAY shun): providing a drug treatment to a patient.

adverse reaction (ad VERS * re AK shun): a harmful reaction to a drug that was administered at the proper dosage.

ampule (AM pyool): a sealed container containing a sterile solution to be used for injection.

analgesic (an al JEE zik): a compound that produces a reduced response to painful stimuli.

anesthetic (an ess THET ik): a compound that depresses neuronal function, resulting in a loss of the ability to perceive pain and other sensations.

antacid (ant ASS id): a substance that neutralizes or buffers an acid, usually taken orally to reduce hydrochloric acid in the stomach.

antianemic (an tee a NEE mik) agent: a drug that is used to treat or prevent anemia.

antianxiety (an tee ang ZI eh tee) agent: a drug that is used to treat anxiety such as fear, worry, or apprehension; usually a sedative or minor tranquilizer.

antiarrhythmic (an tee a RITH mik): a drug that is used to treat cardiac arrhythmia.

antibiotic (AN tee BYE ott ik): a chemical substance derived from a biological source (a mold or bacteria) that inhibits the growth of other microorganisms.

anticoagulant (AN tye koh AG yoo LANT): a drug that prevents or delays blood coagulation.

anticonvulsant (an tee kon VUL sant): a drug that reduces or prevents convulsive disorders, such as epilepsy.

antidepressant (an tee dee PRESS ant): a drug that counteracts depression.

antidiabetic (an tee DYE ah BET ik): a drug that reduces the amount of glucose in the blood; also called **hypoglycemic**.

antidiarrheal (an tee dye ah REE al): a drug that relieves the symptoms of diarrhea, usually by absorbing water from the large intestine and altering intestinal motility.

antidiuretic (an tee dye yoor EH tik): a drug that reduces the formation and excretion of urine.

antiemetic (an tee ee MET ik): a drug that is used to prevent or reduce nausea and vomiting.

antihistamine (an tih HISS tah meen): a class of drugs that suppress the action of histamines to counter the effects of inflammation.

antihormones (an tee HOR mohnz): substances that inhibit or otherwise prevent the normal effects of certain hormones.

antihypertensive (an tee high per TEN sihv): a drug or treatment that reduces high blood pressure.

anti-inflammatory (an tee in FLAM a tor ee): a drug or treatment that reduces inflammation by acting on body function.

antimutagenic (an tee myoo tah JEN ik): a drug or treatment that reduces a substance's ability to form mutations in cells.

antineoplastic (an tee nee oh PLASS tik): a drug that is used to destroy or inhibit cancer cells, usually by inhibiting the synthesis of DNA.

antipsychotic (an tee sigh KOH tik): a drug that counteracts the symptoms of psychosis, such as schizophrenia and major behavioral disorders.

antiseptic (an tih SEP tik): a substance that prevents infection by inhibiting the growth of microorganisms.

antispasmodic (an tee spaz MOD ik): a drug or treatment that inhibits muscle contractions to relieve convulsions or spasms.

antitoxin (an tee TAHKS inn): an antibody that forms in response to antigenic poisonous substances. The antibody is often collected from its biological origin and concentrated for use in treatment against the antigenic toxin.

antitussive (an tee TUSS iv): a drug or treatment that relieves coughing.

bactericidal (bak teer ee SIGH dal): a drug or treatment that destroys bacteria.

barbiturate (barr BIHCH yoor aht): a derivative of barbituric acid, which acts as a depressant on the central nervous system. They are usually used as tranquilizers and hypnotics.

beta-blocker (BAY ta * block er): an agent that suppresses the rate and force of heart contractions by inhibition of beta-adrenergic receptors.

bioavailability (bye oh ah vayl ah BILL ih tee): the percentage of a drug that is available to the target organ or tissue.

biotoxin (bye oh TAHKS inn): any toxic substance formed in a living organism.

biotransformation (bye oh trans for MAY shun): the changes that occur to a chemical due to biological action within the body.

calcium channel blockers: a class of drugs that inhibit the movement of calcium ions into muscle cells, which thereby inhibit muscle contraction. They are useful in the treatment of heart disease that involves coronary spasms.

capsule (KAP suhl): a small container that is soluble in water, which is used for the oral administration of a dose of medication. It is abbreviated **cap**.

carcinogen (kar SIN oh jenn): any substance that causes cancer.

cardiotonic (kar dee oh TOHN ik): a substance that exerts a favorable effect on the action of the heart by increasing the force and efficiency of its contractions.

catabolic (kat ah BOHL ik): relating to catabolism, which is the metabolic breakdown of chemicals to produce energy in the form of ATP.

chemotherapy (KEE moh THAIR ah pee): treatment of disease by the use of chemical agents. The term is usually used to describe agents used in the treatment of cancer.

contraindication (kon trah in dih KAY shun): a symptom or circumstance that renders the administration of a drug to be inadvisable.

detoxify (dee TAHK sih fye): to diminish or remove the poisonous quality of a substance or pathogen.

disinfectant (diss in FEK tant): a chemical that destroys microorganisms and is thereby often used to sanitize objects and surfaces.

distribution (diss trih BYOO shun): the pattern of absorption of drug molecules by the body once the drug has been administered.

diuretic (dye yoor EH tik): a drug that increases the production of urine by decreasing water reabsorption within the kidneys. It is often prescribed to reduce water retention by the body, which reduces blood pressure, edema, and congestive heart failure.

dose: the quantity of a drug that is to be administered at one time.

drug: a therapeutic agent; any substance (other than food) that is used in the diagnosis, prevention, or treatment of a disease.

drug clearance: the elimination of a drug from the body, usually through excretion by the kidneys, lungs, liver, or intestinal tract.

drug fast: microorganisms that become tolerant or resistant to an antimicrobial drug treatment.

drug interactions: the modification of a drug that results from the drug interacting with itself or with other drugs, components of the diet, or other chemicals that are administered. The modification can be either desirable or undesirable.

effect: the biological effect of the administration of a particular drug. The effect may be **local** if it is confined to the site of administration or **systemic** if the effect is more widespread.

enteral (ENT er ahl): administration of a drug by the oral route (by way of the intestines), as distinguished from parenteral. Enteral administration is the most common route.

Food and Drug Administration (FDA): the federal agency responsible for evaluation and regulation of pharmaceuticals in the United States. The FDA also enforces regulations dealing with the manufacture and distribution of food and cosmetics. The mission of the FDA is the protection of American citizens from the sale of impure or unhealthy substances.

formula (FOR myoo lah): a prescription that includes directions for the compounding of a medical preparation.

formulary (FOR myoo lahr ree): a compilation of drugs and other relevant information that is used as a reference library by health professionals to prescribe treatment.

genotoxic (jee noh TAHK sik): a substance that is capable of damaging DNA and therefore may cause mutation or cancer.

grain: a minute hard particle of any substance or a unit of weight equivalent to 1/60 of a dram (1/437.5 ounce).

gram: a unit of mass in the metric system, equivalent to 15.432 grains.

granule (GRAHN yool): a very small pill that is usually gelatin coated or sugar coated.

homeopathy (hoh mee OPP ah thee): a system of medical treatment centered on the theory that large doses of a certain drug given to a healthy person will produce conditions that are relieved by the same drug in small doses during a diseased state.

hormone (HOR mohn): a chemical substance, usually a protein or steroid, that is secreted by an endocrine gland and transported by the circulatory system throughout the body. Upon making physical contact with a target cell, the hormone enters the cell and induces changes in metabolism, growth rate, protein synthesis, or synthesis of other compounds. The changes the hormone induces can have profound effects on body function.

hypnotics (hip NOTT iks): drugs that depress central nervous system function, resulting in drowsiness. They are used as sedatives and to induce sleep.

immunodeficiency (IM yoo noh dee FISH ehn see): a condition resulting from defective immune mechanisms, characterized by a frequent and rapid onset of infectious diseases.

infusion (inn FYOO zhun): the introduction of a fluid (other than blood) directly into a vein.

inhalation (inn hah LAY shun): a treatment that involves breathing-in of a spray or vapor. The medication, known as the inhalant, is absorbed through capillaries in the mucous membranes of the upper respiratory tract.

injection (inn JEHK shun): introduction of a substance into the body with the use of a hollow needle. The injection may be beneath the skin (**subcutaneous** or **hypodermic**), into muscular tissue (**intramuscular**, or **IM**), into a vein (**intravenous**, or **IV**), or into the rectum (**rectal**).

laxative (LAHKS ah tihv): a substance that promotes bowel movement without pain or violent action. Laxatives work by softening the stool (decreasing water reabsorption), increasing the bulk of the feces, or lubricating the intestinal wall.

muscle relaxant: a drug that reduces muscle contraction.

nonprescription drugs: drugs that are not required (by the FDA) to be sold with a medical prescription. They are also called **over-the-counter (OTC)** drugs.

nonsteroidal anti-inflammatory drugs: a class of drugs that reduce the symptoms of inflammation (swelling, redness, and pain) and are not steroidal compounds. It is abbreviated **NSAID**. The most common NSAID is aspirin (salicylic acid).

ointment (OYNT ment): a semisolid, medicated mixture that is topically (externally) applied.

oral (OR ahl): by mouth, the most common route of drug administration.

parenteral (pah RENT er ahl): introduction of medication through a route other than the oral (intestinal) or inhalation (lungs) routes. It involves injection that may be subcutaneous, intravenous, intramuscular, or rectal.

pharmacist (FARM ah sist): a health professional formally trained to formulate and dispense prescription drugs and other medications.

pharmacodynamic (farm ah koh dye NAM ik): relating to drug action.

pharmacology (farm ah KALL oh jee): the science of drugs and their sources, chemistry, action within the body, and uses.

pharmacotherapy (farm ah koh THAIR ah pee): the treatment of disease by means of drugs.

pharmacy (FARM ah see): the practice of preparing and dispensing drugs; also, a place where drugs are prepared and dispensed.

placebo (plah SEE boh): a neutral, ineffective substance that is otherwise identical to a known drug, which is administered to a patient for the suggestive effect or during blind testing.

potency (POH ten see): the pharmacological activity of a drug. It is used to determine the amount of a drug to be administered to cause the desired effect.

prescription (pree SKRIP shun): a written order for pharmacotherapy, provided by an authorized health professional.

routes of administration: the various ways in which a drug may be administered; the options include subcutaneous injection, intravenous injection, intramuscular injection, rectal injection, oral, vaginal, rectal, or topical.

sedative (SED ah tiv): an agent that reduces central nervous system activity, producing a calming, quieting effect that is usually used to treat anxiety.

side effects: a reaction by the body resulting from a treatment program that is a diversion from the desired effects. The reaction can be beyond the desired effect and is usually undesirable.

solution (suh LYOO shun): a chemical mixture that includes a dissolved substance (solute) in a liquid medium (solvent).

stimulant (STIHM yool ant): an agent that increases the rate of activity of a body function.

superscription (SOO per skrip shun): the beginning of a prescription, consisting of the command recipe "take."

suppository (suh POZ ih tor ee): a medication that is introduced into one of the body orifices (other than the mouth), such as the rectum, vagina, or urethra. It is usually a solid mass that melts at body temperature.

suspension (suh SPEN shun): a mixture of solid particles in a liquid medium that do not dissolve. The solid particles are usually dispersed through the liquid by blending.

tablet (TAB let): a small solid that contains medication for oral administration. Tablets may be designed to be swallowed whole, chewed, or dissolved prior to administration.

topical (TAHP ih kuhl): administration of a drug onto the surface of the skin.

toxicity (tahk SISS ih tee): the state of being poisonous. It is the level at which a drug's concentration in the body produces serious adverse effects.

toxicology (TAHK sih KALL oh jee): the science of poisons, in which the source, chemical properties, and body responses to poisonous substances are studied.

trade name: the name provided to a drug by its manufacturer and commonly used by the health community to identify the drug.

tranquilizer (TRAN kwill eye zer): a drug that brings tranquility, or a calming effect, to the mind without depression. It is abbreviated **trank**.

transdermal (trans DERM al): administration of a drug topically to unbroken skin for its absorption into deeper tissues.

United States Pharmacopeia (FARM ah KOP ee ah): a reference text approved by the Federal Food, Drug, and Cosmetic Act containing specifications for drugs, such as chemical properties, uses, recommended dosage levels, contraindications, adverse side effects, and so forth. It is abbreviated **USP**.

vasoconstrictor (vaz oh kon STRIK tor): a chemical that causes blood vessels to constrict, which reduces blood flow and elevates blood pressure. Also called **vasopressors**.

vasodilator (vaz oh DYE lay tor): a chemical that causes blood vessels to relax, resulting in dilation that increases blood flow and lowers blood pressure. Due to their effect, they are in common use for acute heart failure.

vitamin (VYE tah min): an organic compound that is required for normal function of cells. Most vitamins are produced by the body, but those that are not are known as **essential vitamins** and must be included in the diet.

