

Urdang
Dictionary
of Current
Medical Terms

Urdang Dictionary of Current Medical Terms

For Health Science Professionals

Prepared by Laurence Urdang Associates Ltd.

A WILEY MEDICAL PUBLICATION
JOHN WILEY & SONS
New York • Chichester • Brisbane • Toronto

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Library of Congress Cataloging in Publication Data:

Laurence Urdang Associates.

Urdang dictionary of current medical terms for health science professionals.

(A Wiley Medical publication)

Includes index.

1. Medicine—Dictionaries. I. Title. [DNLM:

1. Dictionaries, Medical. W13 L379u]

R121.L33 1981 610'.3'21 80-22916

ISBN 0-471-05853-X

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

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Introduction and Guide to the Dictionary

This dictionary—an entirely new and up-to-date compilation—provides full definitions for all the terms that practitioners and students in the health sciences are likely to need to know. *Urdang Dictionary of Current Medical Terms* was prepared by a distinguished team of specialists and medical writers and is written in clear, concise English without the use of unnecessary jargon. Each entry contains a basic definition, followed, where appropriate, by a more detailed explanation or description.

Vocabulary

Coverage is provided in the basic sciences of anatomy, physiology, biochemistry, and pharmacology, as well as all the major specialties of clinical medicine and surgery. Treatment of psychology, psychiatry, community medicine, and dentistry is unusually comprehensive. To make room for this additional material, many of the more obscure and obsolescent terms found in larger medical dictionaries have been omitted. The meanings of many such terms, however, can be readily deduced from definitions of medical prefixes and suffixes, which are included in this work. Derivative words, such as adjectives of nouns that are defined, are listed at the end of the relevant entries in order to avoid cluttering the entry list with unnecessary terms. Synonyms of main entries appear in bold type in parentheses immediately following the main entry.

Subentries

An extraordinary feature of this work is the inclusion of thousands of terms that are defined within the definitions of other terms. These subentries appear in italic type. For example, the definition for *enterostomy* includes within it definitions of two types of enterostomy

(*gastroenterostomy* and *enteroenterostomy*), as well as referring the reader to three other related terms:

an operation in which the small intestine is opened and drained by a tube or brought through the abdominal wall (*see* *duodenostomy*, *jejunostomy*, *ileostomy*) or is joined to the stomach (*gastroenterostomy*) or to another loop of small intestine (*enteroenterostomy*).

Cross-references

An asterisk (*) immediately preceding a word in a definition indicates that the term is entered and defined in its own alphabetic place, where additional information may be found.

By providing the reader with copious cross-references, often within definitions (e.g., *duodenostomy*, *jejunostomy*, and *ileostomy* in the example above), this dictionary can be used as a learning device by which the reader can increase his or her command of medical terminology. *Urdang Dictionary of Current Medical Terms* attempts to lead the reader, by means of its unique cross-reference system, to many other terms. Although each term is fully defined in its own alphabetic place, longer articles also function as a core of meaning that branches out, like the spokes of a wheel, to related terms. The starred words and *see* cross-references invite the reader to follow these extensions and by-ways of meaning, often employing the same word roots as the entry term, and thus enlarge his or her vocabulary. Perhaps it is not too much to say that this dictionary, though designed primarily as a reference, can also be “read” with profit.

Illustrations

Wherever the editors felt that an illustration would be helpful, a clear and fully labeled line drawing has been provided. Approximately 150 illustrations are included. This edition also includes a special 10-page section of anatomical color plates and transparencies, with an index to each part depicted.

A

a- (an-) *prefix denoting absence of; lacking; not.* Examples: *amastia* (absence of breasts); *amorphic* (lacking definite form); *atoxic* (not poisonous).

ab- *prefix denoting away from.* Example: *abembryonic* (away from or opposite the embryo).

abarticulation *n.* 1. the dislocation of a joint.
2. a synovial joint (see *diarthrosis*).

abasia *n.* an inability to walk for which a physical cause may not be identified. See also *astasia*.

abdomen *n.* the part of the body cavity below the chest (see *thorax*), from which it is separated by the **diaphragm*. The abdomen contains the organs of digestion—stomach, liver, intestines, etc.—and excretion—kidneys, bladder, etc.; in women it also contains the ovaries and womb. —**abdominal** *adj.*

abdomin- (abdomino-) *combining form denoting the abdomen.* Examples: *abdominalgia* (pain in the abdomen); *abdominothoracic* (relating to the abdomen and thorax).

abdominoscopy *n.* see *laparoscopy*.

abducens nerve the sixth **cranial nerve* (VI), which supplies the lateral rectus muscle of each eyeball, responsible for turning the eye to look to one side.

abduct *vb.* to move a limb or any other part away from the midline of the body.
—**abduction** *n.*

abductor *n.* any muscle that moves one part of the body away from another or from the midline of the body.

aberrant *adj.* abnormal: usually applied to a blood vessel or nerve that does not follow its normal course.

abiotrophy *n.* degeneration or loss of function without apparent cause; for example, *retinal abiotrophy* is progressive degeneration of the retina leading to impaired vision, occurring in genetic disorders such as **retinitis pigmentosa*.

ablatio *n.* see *abruptio*, detached retina (*ablatio retinae*).

ablation *n.* the removal of tissue, a part of the body, or an abnormal growth, usually by cutting.

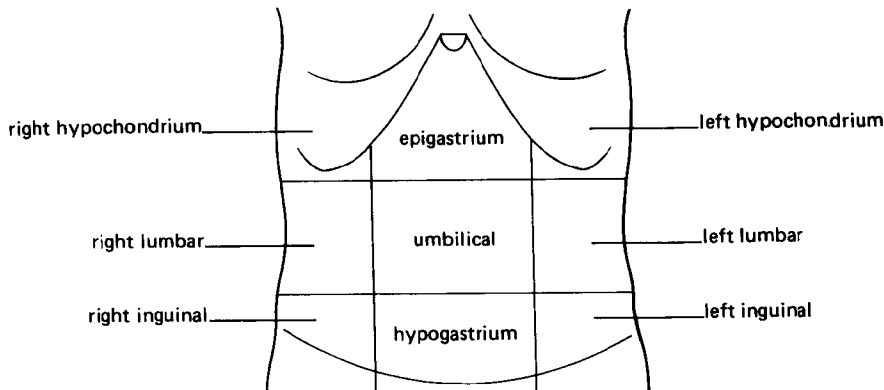
ablepharia *n.* absence of or reduction in the size of the eyelids.

ablepsia *n.* an obsolete term for **blindness*.

abortifacient *n.* a drug that induces abortion or miscarriage.

abortion *n.* the expulsion or removal of an embryo or fetus from the womb at a stage of pregnancy when it is incapable of independent survival (i.e. at any time between conception and the 28th week of pregnancy). In *threatened* abortion there is abdominal pain and bleeding from the womb but the fetus is still alive; once the fetus is dead abortion becomes *inevitable*. It is *incomplete* so long as the womb still contains some of the fetus or its membranes. Abortion may be *spontaneous* (a miscarriage) or it may be *induced* for medical or social reasons (termination of pregnancy). The *abortion rate* (the number of pregnancies lost per 1000 conceptions) is impossible to calculate precisely but is generally reckoned to be between one fifth and one third.

After January 1973, induced abortions during the first three months of pregnancy became legal in the US, requiring only agreement between the woman and her doctor. During the remaining six months, voluntary termination of a pregnancy may be permitted under terms of state laws. Methods in current use include 'salting out,' in which a saline solution is injected



Regions of the abdomen

through the cervix into the membranes surrounding the fetus; vacuum *aspiration of the products of conception through a thin cannula; *dilatation and curettage; opening the womb through an abdominal incision (hysterotomy); or the use of *prostaglandins or other drugs to induce premature labor. Termination carries little risk early in pregnancy, but complications are more likely after the 13th week.

abortus *n.* a fetus, weighing less than 400 g, that is expelled from the mother's body either dead or incapable of surviving.

ABO system see blood group.

abrasion *n.* 1. a graze: a minor wound in which the surface of the skin or a mucous membrane is worn away by rubbing or scraping. 2. the wearing of the natural contours of the teeth into flat surfaces by too energetic use of very abrasive tooth-pastes. 3. any rubbing or scraping action that produces surface wear.

abreaction *n.* the release of strong emotion associated with a buried memory. While this can happen spontaneously, it is usually deliberately produced by a therapist using psychotherapy, hypnosis, or drugs such as amphetamines or barbiturates. The technique is used as a treatment for hysteria, anxiety state, and other neurotic conditions, especially when they are thought to be caused by *repression of memories or emotions.

abruptio (ablatio) *n.* separation. In *abruptio placentae (ablatio placentae)* the placenta separates from the lining of the womb before the usual time. Bleeding and pain are experienced at the point of separation, and the womb undergoes constant contraction. Severe cases involve shock. The condition is often associated with high blood pressure or *pre-eclampsia. If the neck of the womb is firm and undilated, a live fetus may be delivered by *cesarean section.

abscess *n.* a localized collection of pus anywhere in the body, surrounded and walled off by damaged and inflamed tissues. A *boil is an example of an abscess within the skin. The usual cause is local bacterial infection, often by staphylococci, that the body's defenses have failed to overcome. In a *cold abscess*, sometimes due to tubercle organisms, there is swelling, but little pain or inflammation (as in acute abscesses). Antibiotics, aided by surgical incision to release pus where necessary, are the usual forms of treatment.

abscission *n.* removal of tissue by cutting.

Absidia *n.* a genus of fungi that sometimes cause disease in man (see phycomycosis).

absorption *n.* (in physiology) the uptake of fluids or other substances by the tissues of the body. Digested food is absorbed into

the blood and lymph from the alimentary canal. Most absorption of food occurs in the small intestine, in the jejunum and ileum, although alcohol is readily absorbed from the stomach. The small intestine is lined with minute fingerlike processes (see villus), which greatly increase its surface area and therefore the speed at which absorption can take place. See also assimilation, digestion.

abulia *n.* absence or impairment of will power. The individual still has desires but they are not put into action; initiative and energy are lacking. It is commonly a symptom of *schizophrenia.

acalculia *n.* an acquired inability to make simple mathematical calculations. It is a symptom of disease in the *parietal lobe of the brain. See Gerstmann's syndrome.

acantha *n.* 1. a spine projecting from a vertebra. 2. the *backbone.

acanthion *n.* the tip of the spine formed where projecting processes of the upper jaw bones (maxillae) meet at the front of the face.

acanthosis *n.* generalized thickening of the innermost (prickle-cell) layer of the *epidermis, with abnormal multiplication and increase in the number of cells. In *acanthosis nigricans* dark warty growths occur, especially in skin folds such as the groin, armpits, and mouth. It is usually a sign of internal cancer.

acapnia *n.* a condition in which there is an abnormally low concentration of carbon dioxide in the blood. This may be caused by breathing that is exceptionally deep in relation to the physical activity of the individual.

acarasis *n.* an infestation of mites and ticks and the symptoms, for example allergy and dermatitis, that their presence may provoke.

acaricide *n.* any chemical agent used for destroying mites and ticks.

acarid *n.* a *mite or *tick.

Acarina *n.* the group of arthropods that includes the *mites and *ticks.

Acarus (Tyroglyphus) *n.* a genus of mites. The flour mite, *A. siro (T. farinae)*, is nonparasitic, but its presence in flour can cause a severe allergic dermatitis in flour-mill workers.

acatalasia *n.* an inborn lack of the enzyme *catalase, leading to recurrent infections of the gums (gingivitis) and mouth. It is most common in the Japanese.

acceptor *n.* (in biochemistry) a substance that helps to bring about oxidation of a reduced *substrate by accepting hydrogen ions.

accessory nerve (spinal accessory nerve) the eleventh *cranial nerve (XI), which arises from two roots, cranial and spinal. Fibers from the cranial root travel with the nerve for only a short distance before branching

to join the vagus and then forming the recurrent laryngeal nerve, which supplies the internal laryngeal muscles. Fibers from the spinal root supply the sternomastoid and trapezius muscles, in the neck region (front and back).

accommodation *n.* adjustment of the shape of the lens to change the focus of the eye. When the ciliary muscle (see ciliary body) is relaxed, suspensory ligaments attached to the ciliary body and holding the lens in position are stretched, which causes the lens to be flattened. The eye is then able to focus on distant objects. To focus the eye on near objects the ciliary muscles contract and the tension in the ligaments is thus lowered, allowing the lens to become rounder.

accouchement *n.* delivery of a baby.

acentric *n.* (in genetics) a chromosome or fragment of a chromosome that has no *centromere. Since acentrics cannot attach to the *spindle they are usually lost during cell division. They are often found in cells damaged by radiation. — **acentric** *adj.*

acephalus *n.* a fetus without a head.

acervulus cerebri a collection of granules of calcium-containing material that is sometimes found within the *pineal body as its calcification proceeds (normally after the 17th year): 'brain sand'.

acetabulum (cotyloid cavity) *n.* either of the two deep sockets, one on each side of the *hip bone, into which the head of the thigh bone (femur) fits.

acetanilide *n.* a drug that relieves pain and reduces fever. Since it can cause hemolytic anemia and prolonged use may lead to *habituation, it has largely been replaced by safer analgesics.

acetarsol *n.* an arsenic-containing drug administered by mouth for the treatment of amebic dysentery, yaws, and *Vincent's angina; as vaginal tablets for vaginitis; and as a rectal *suppository for *proctitis. Possible side-effects include skin rashes (after oral administration) and local irritation (with vaginal tablets).

acetazolamide *n.* a *diuretic used in the treatment of glaucoma to reduce the pressure inside the eyeball. Side-effects include drowsiness and numbness and tingling of the hands and feet. Trade names: **Cidamex**, **Diamox**.

acetoacetic acid an organic acid produced in large amounts by the liver under metabolic conditions associated with a high rate of fatty acid oxidation (for example, in starvation). The acetoacetic acid thus formed is subsequently converted to acetone and excreted. See also ketone.

acetohehexamide *n.* a drug that reduces the level of blood sugar, used in the treatment of *diabetes mellitus. It is administered by

mouth; side-effects include headache, dizziness, and nervousness. See also tolbutamide, chlorpropamide.

acetone *n.* an organic compound that is an intermediate in many bacterial fermentations and is produced by fatty acid oxidation. In certain abnormal conditions (for example, starvation) acetone and other *ketones may accumulate in the blood (see ketosis). Acetone is a volatile liquid that is miscible with both fats and water and therefore of great value as a solvent. It is used in chromatography and in the preparation of tissues for enzyme extraction.

acetone body (ketone body) see ketone.

acetonuria *n.* see ketonuria.

acetylcholine *n.* the acetic acid ester of the organic base choline: the *neurotransmitter released at the synapses of parasympathetic nerves and at *neuromuscular junctions. After relaying a nerve impulse, acetylcholine is rapidly broken down by the enzyme *cholinesterase. *Atropine and curare cause muscular paralysis by blocking the action of acetylcholine at muscle membranes; *physostigmine prolongs the activity of acetylcholine by blocking cholinesterase.

acetylcysteine *n.* a drug used to break down thick mucus secretions. It is administered as an aerosol, primarily for the treatment of respiratory diseases, such as bronchitis, and cystic fibrosis. Side-effects may include spasm of the bronchial muscles, nausea, vomiting, and fever.

acetylsalicylic acid see aspirin.

achalasia (cardiospasm) *n.* a condition in which the normal muscular activity of the esophagus (gullet) is disturbed, which delays the passage of swallowed material. It may occur at any age: symptoms include difficulty in swallowing liquids and solids, slowly increasing over years; sometimes regurgitation of undigested food; and occasionally severe chest pain caused by spasm of the esophagus. Diagnosis is by a barium X-ray examination and pressure motility studies. Treatment is by forceful instrumental stretching of the tight lower end of the esophagus or by surgical splitting of the muscular ring in that area (*cardiomyotomy*).

Achilles tendon the tendon of the muscles of the calf of the leg (the *gastrocnemius and soleus muscles), situated at the back of the ankle and attached to the calcaneus (heel bone).

achlorhydria *n.* absence of hydrochloric acid in the stomach. Achlorhydria that persists despite large doses of histamine is associated with atrophy of the lining (mucosa) of the stomach. In this condition there may be an absence of secretion of *intrinsic factor, which will lead to *pernicious anemia. In

some people, however, achlorhydria is not associated with any disease, produces no ill-effects, and needs no treatment.

acholia *n.* absence or deficiency of bile secretion or failure of the bile to enter the alimentary canal (for example, because of an obstructed bile duct).

acholuria *n.* absence of the *bile pigments from the urine, which occurs in some forms of jaundice (*acholuric jaundice*). —**acholuric** *adj.*

achondroplasia *n.* an inherited disorder in which the bones of the arms and legs fail to grow to normal size due to a defect in both cartilage and bone. It results in a type of *dwarfism characterized by short limbs, a normal-sized head and body, and normal intelligence. —**achondroplastic** *adj.*

achromatic *adj.* without color.

achromatic lenses lenses specially designed for use in the eyepieces of microscopes and other scientific instruments. They give clear images, unblurred by the colored fringes that are produced with ordinary lenses (caused by splitting of the light into different wavelengths).

achromatopsia *n.* the inability to perceive color. Such complete *color blindness is very rare and is usually associated with poor *visual acuity; it is usually determined by hereditary factors.

achylia *n.* absence of secretion. The term is usually applied to a nonsecreting stomach (*achylia gastrica*) whose lining (mucosa) is atrophied (see achlorhydria).

acid-base balance the balance between the amount of carbonic acid and bicarbonate in the blood, which must be maintained at a constant ratio of 1:20 in order to keep the hydrogen ion concentration of the plasma at a constant value (pH 7.4). Any alteration in this ratio will disturb the acid-base balance of the blood and tissues and cause either *acidosis or *alkalosis. The lungs and the kidneys play an important role in the regulation of the acid-base balance.

acidemia *n.* a condition of abnormally high blood acidity. This may result from an increase in the concentration of acidic substances and/or a decrease in the level of alkaline substances in the blood. See also acidosis. Compare alkalemia.

acid-fast *adj.* 1. describing bacteria that have been stained and continue to hold the stain after treatment with an acidic solution. For example, tuberculosis bacteria are acid-fast when stained with a *carbol fuchsin preparation. 2. describing a stain that is not removed from a specimen by washing with an acidic solution.

acidophil (acidophilic) *adj.* 1. (in histology) describing tissues, cells, or parts of cells that stain with acid dyes (such as eosin). 2.

(in bacteriology) describing bacteria that grow well in acid media.

acidosis *n.* a condition in which the acidity of body fluids and tissues is abnormally high. This arises because of a failure of the mechanisms responsible for maintaining a balance between acids and alkalis in the blood (see acid-base balance). In *gaseous acidosis* more than the normal amount of carbon dioxide is retained in the body, as in drowning. In *renal acidosis*, kidney failure results in excessive loss of bicarbonate or retention of phosphoric and sulfuric acids. Patients with diabetes mellitus suffer from a form of acidosis in which sodium, potassium, and *ketone bodies are lost in the urine.

acinus *n.* (*pl.* *acini*) 1. a small sac or cavity surrounded by the secretory cells of a gland. Some authorities regard the term as synonymous with *alveolus, but others distinguish an acinus by the possession of a narrow passage (lumen) leading from the sac. 2. (in the lung) the tissue supplied with air by one terminal *bronchiole. *Emphysema is classified by the part of the acinus involved (i.e. *centriacinar*, *panacinar*, or *periacinar*). —**acinous** *adj.*

acclasis *n.* see diaphysial acclasis.

acne *n.* a skin disorder in which the sebaceous glands become inflamed. The commonest variety, *acne vulgaris*, generally starts in adolescence and is caused by overactivity of the sebaceous glands. The sebum produced by the glands cannot escape because the hair follicles become blocked by a *keratin plug and a pustule forms, with fluid leaking into the surrounding tissue. The keratin plug turns black, forming the familiar blackhead. *Acne vulgaris* occurs mainly on the face, chest, and back; it is usually mild, disappearing in adulthood, but can be severe and chronic, causing infected cysts and scarring of the skin. The course of this condition may be helped by regular washing, the removal of blackheads, and sometimes the use of antibiotics. There are many other varieties of acne, some being caused by contact with chemical substances (such as tar). See also rosacea.

aconite *n.* the dried roots of the herbaceous plant *Aconitum napellus* (monkshood or wolfbane), containing three *analgesic substances: *aconine*, *aconitine*, and *picraconitine*. Aconite was formerly used to prepare liniments for muscular pains and a tincture for toothache, but is regarded as too toxic for use today.

acoustic *adj.* of or relating to sound or the sense of hearing.

acoustic holography a technique of building up a three-dimensional picture of structures within the body using *ultrasound waves.

Two separate sound sources cause ultrasound waves to be transmitted through and reflected from the organs being examined. The interference patterns produced on a liquid surface are illuminated by laser light and photographed to form a *hologram*.

acoustic nerve see vestibulocochlear nerve.

acquired *adj.* describing a condition or disorder contracted after birth and not attributable to hereditary causes. *Compare* congenital.

acrania *n.* congenital absence of the skull, either partial or complete, due to a developmental defect.

acriflavine *n.* a dye used as an antiseptic on skin and mucous membranes and to disinfect contaminated wounds. It may cause sensitivity of the skin to sunlight.

acro- *prefix denoting* 1. extremity; tip. Example: *acrophothermy* (abnormal coldness of the extremities (hands and feet)). 2. height; promontory. Example: *acrophobia* (morbid dread of heights). 3. extreme; intense. Example: *acromania* (an extreme degree of mania).

acrocentric *n.* a chromosome in which the *centromere is situated at or very near one end. —*acrocentric adj.*

acrocyanosis *n.* bluish-purple discoloration of the hands and feet due to slow circulation of the blood through the small vessels in the skin.

acrodermatitis *n.* inflammation of the skin of the feet or hands. A diffuse chronic variety produces swelling and reddening of the affected areas, followed by atrophy. The cause is unknown and there is no treatment.

acrodynia *n.* see pink disease.

acromegaly *n.* increase in size of the hands, feet, and the face due to excessive production of *growth hormone (somatotropin) by a tumor of the anterior pituitary gland. The tumor can be treated with X-rays or surgically removed. *See also* gigantism.

acromion *n.* an oblong process at the top of the spine of the *scapula, part of which articulates with the clavicle (collar bone) to form the *acromioclavicular joint*. —*acromial adj.*

acroparesthesia *n.* a tingling sensation in the hands and feet.

acrosclerosis *n.* a skin disease thought to be a type of generalized *scleroderma. It also has features of *Raynaud's disease, with the hands, face, and feet being mainly affected.

acrosome *n.* the caplike structure on the front end of a spermatozoon. It breaks down just before fertilization, releasing a number of enzymes that assist penetration between the follicle cells that still surround the ovum.

ACTH (adrenocorticotrophic hormone, adre-

nocorticotropin, corticotropin) a hormone synthesized and stored in the anterior pituitary gland, large amounts of which are released in response to any form of stress. ACTH controls the secretion of *corticosteroid hormones from the adrenal gland. It is administered by injection to test adrenal function and to treat conditions such as rheumatic diseases (especially in children) and asthma.

actin *n.* a protein, found in muscle, that plays an important role in the process of contraction. *See* striated muscle.

Actinobacillus *n.* a genus of Gram-negative nonmotile aerobic bacteria that are characteristically spherical or rodlike in shape but occasionally grow into branching filaments. Actinobacilli cause disease in animals. The species *A. mallei* causes *glanders, an infection of horses that can be transmitted to man.

Actinomyces *n.* a genus of Gram-positive nonmotile funguslike bacteria that cause disease in animals and man. The species *A. israelii* is a causative organism of human *actinomycosis.

actinomycin *n.* a *cytotoxic drug, produced by *Streptomyces* bacteria, that inhibits growth of cancer cells. There are several forms, which are administered by injection. Actinomycin C may damage bone marrow. Actinomycin D may cause nausea, vomiting, diarrhea, blood disorders, and bone-marrow damage.

actinomycosis *n.* a noncontagious disease caused by the bacterium *Actinomyces israelii*, which most commonly affects the jaw but may also affect the lungs, brain, or intestines. The bacterium is normally present in the mouth but it may become pathogenic when a tooth is extracted, causing the slow formation of abscesses and ulcers. Prolonged treatment with penicillin is usually effective but it may be necessary to drain the abscesses.

actinotherapy *n.* the treatment of disorders with ultraviolet radiation.

action potential the change in voltage that occurs across the membrane of a nerve or muscle cell when a *nerve impulse is triggered. It is due to the passage of charged particles across the membrane (see depolarization) and is an observable manifestation of the passage of an impulse.

active transport (in biochemistry) an energy-dependent process in which certain substances (including ions, some drugs, and amino acids) are able to cross cell membranes against a concentration gradient. The process is inhibited by substances that interfere with cellular metabolism (e.g. high doses of digitalis).

actomyosin *n.* a protein complex formed in muscle between actin and myosin during

the process of contraction. See striated muscle.

acupuncture *n.* a traditional Chinese system of healing in which symptoms are relieved by thin metal needles inserted into selected points beneath the skin. The needles are stimulated either by rotation or, more recently, by an electric current. Recent hypotheses suggest that the needling activates deep sensory nerves, which cause the pituitary and midbrain to release *endorphins, the brain's natural pain killers. Acupuncture is widely used in the Far East for the relief of pain and in China itself has become an alternative to anesthesia for some major operations. Acupuncturists in the West may be medically qualified but many are not.

acute *adj.* 1. describing a disease of rapid onset, severe symptoms, and brief duration. Compare chronic. 2. describing any intense symptom, such as severe pain.

acute abdomen an emergency surgical condition caused by damage to one or more abdominal organs following injury or disease. The patient is in severe pain and often in shock. Perforation of a peptic ulcer or a severely infected appendix, or rupture of the liver or spleen following a crushing injury, all produce an acute abdomen requiring urgent treatment.

acute rheumatism see rheumatic fever.

ad- *prefix* denoting toward or near. Examples: *adaxial* (toward the main axis); *adoral* (toward or near the mouth).

adamantinoma *n.* see ameloblastoma.

Adam's apple (*laryngeal prominence*) a projection, lying just under the skin, of the thyroid cartilage of the *larynx.

Adams-Stokes syndrome see Stokes-Adams syndrome.

adaptation *n.* the phenomenon in which a sense organ shows a gradually diminishing response to continuous or repetitive stimulation. The nose, for example, may become adapted to the stimulus of an odor that is continuously present so that in time it ceases to report its presence. Similarly, the adaptation of touch receptors in the skin means that the presence of clothes can be forgotten a few minutes after they have been put on.

addiction *n.* a state of *dependence produced by the habitual taking of any of certain drugs. Strictly speaking, the term implies the state of physical dependence induced by such drugs as morphine, heroin, and alcohol, but it is also used for the state of psychological dependence, produced by drugs such as barbiturates. Treatment is aimed at gradual withdrawal of the drug and eventually total abstinence. See also alcoholism, tolerance.

Addison's disease a syndrome due to inadequate

secretion of corticosteroid hormones by the *adrenal glands, sometimes as a result of tuberculous infection. Symptoms include weakness, loss of energy, low blood pressure, and dark pigmentation of the skin. Formerly fatal, the disease is now curable by replacement hormone therapy.

adduct *vb.* to move a limb or any other part toward the midline of the body. —**adduction** *n.*

adductor *n.* any muscle that moves one part of the body toward another or toward the midline of the body.

aden- (*adeno-*) *prefix* denoting a gland or glands. Examples: *adenalgia* (pain in); *adenogenesis* (development of); *adenopathy* (disease of).

adenine *n.* one of the nitrogen-containing bases (see purine) that occurs in the nucleic acids DNA and RNA. See also ATP.

adenitis *n.* inflammation of a gland or group of glands. For example, *mesenteric adenitis* affects the lymph glands (nodes) in the membranous support of the intestines (the mesentery); *cervical adenitis* affects the lymph glands in the neck.

adenocarcinoma *n.* a malignant epithelial tumor arising from the glandular structures, which are constituent parts of most organs of the body. The term is also applied to tumors showing a glandular growth pattern. These tumors may be subclassified according to the substances that they produce, for example *mucus-secreting* and *serous adenocarcinomas*, or to the microscopical arrangement of their cells into patterns, for example *papillary* and *follicular adenocarcinomas*. They may be solid or cystic (*cystadenocarcinomas*). Each organ may produce tumors showing a variety of histological types; for example, the ovary may produce both mucinous and serous *cystadenocarcinomas*.

adenohypophysis *n.* the anterior lobe of the *pituitary gland.

adenoidectomy *n.* surgical removal of the *adenoids, commonly combined with tonsillectomy in a child who suffers recurrent sore throats and difficulty in breathing through the nose.

adenoids (*pharyngeal tonsils*) *n.* the collection of lymphatic tissue at the rear of the nose. Enlargement of the adenoids from recurrent throat infections may cause obstruction to breathing through the nose (see adenoidectomy).

adenoma *n.* a benign tumor of epithelial origin that is derived from glandular tissue or exhibits clearly defined glandular structures. Adenomas may become malignant (see adenocarcinoma). Some show recognizable tissue elements, such as fibrous tissue (*fibroadenomas*), while others, such as bronchial adenomas, produce active

compounds giving rise to clinical syndromes (see *argentaftinoma*). Tumors in certain organs, including the pituitary gland, are often classified by their histological staining affinities, for example *eosinophil*, *basophil*, and *chromophobe adenomas*.

adenosine *n.* a compound containing adenine and the sugar ribose: it occurs in ATP. See also nucleoside.

adenosine diphosphate see ADP.

adenosine monophosphate see AMP.

adenosine triphosphate see ATP.

adenosis *n.* (*pl.* adenoses) 1. excessive growth or development of glands. 2. any disease of a gland, especially of a lymph gland (node).

adenovirus *n.* one of a group of DNA-containing viruses causing latent infections of the upper respiratory tract that produce symptoms resembling those of the common cold.

adhesion *n.* 1. the union of two normally separate surfaces, such as the moving surfaces of joints, by fibrous connective tissue developing in an inflamed or damaged region. (The fibrous tissue itself is also called an adhesion.) Adhesion between loops of intestine may occur following abdominal surgery, possibly obstructing the alimentary canal. If the pericardial sac is affected by adhesion, the movements of the heart may be restricted. 2. a healing process in which the edges of a wound fit together. In *primary adhesion* there is very little **granulation tissue*; in *secondary adhesion* the two edges are joined together by *granulation tissue*.

adiadochokinesis *n.* see dysdiadochokinesis.

Adie's syndrome (Holmes-Adie syndrome) an abnormality of the pupils of the eyes, often affecting only one eye. At rest the affected pupil is larger than the normal one; it reacts slowly to light and the response on convergence of the eyes is also slow. Eventually the affected pupil will constrict much more completely than its fellow. One or more tendon reflexes may be absent. The condition is almost entirely restricted to women.

adipocere *n.* a waxlike substance, consisting mainly of fatty acids, into which the soft tissues of the body can be converted after death. This usually occurs when the body is buried in damp earth or is submerged in water. Adipocere delays post-mortem decomposition and is a spontaneous form of preservation without mummification.

adipose tissue fibrous **connective tissue* packed with masses of fat cells. It forms a thick layer under the skin and occurs around the kidneys and in the buttocks. It serves both as an insulating layer and an energy store; food in excess of requirements is converted into fats and stored within these cells.

adiposis (liposis) *n.* the presence of abnormally large accumulations of fat in the body. The condition may arise from overeating, hormone irregularities, or a metabolic disorder. In *adiposis dolorosa*, a condition affecting women more commonly than men, painful fatty swellings are associated with defects in the nervous system. See also obesity.

aditus *n.* an anatomical opening or passage; for example, the opening of the tympanic cavity (middle ear) to the air spaces of the mastoid process.

adjuvant *n.* any substance used in conjunction with another to enhance its activity. Aluminum salts are used as adjuvants in the preparation of vaccines from the toxins of diphtheria and tetanus: by keeping the toxins in precipitated form, the salts increase the efficacy of the toxins as antigens.

adnexa *pl. n.* adjoining parts. For example, the *uterine adnexa* are the fallopian tubes and ovaries (which adjoin the womb).

ADP (adenosine diphosphate) a compound containing adenine, ribose, and two phosphate groups. ADP occurs in cells and is involved in processes requiring the transfer of energy (see ATP).

adrenal glands (suprarenal glands) two triangular **endocrine glands*, each of which covers the superior surface of a kidney. Each gland has two parts, the *medulla* and *cortex*. The medulla forms the gray core of the gland; it consists mainly of **chromaffin tissue* and is stimulated by the sympathetic nervous system to produce **epinephrine* and **norepinephrine*. The cortex is a yellowish tissue surrounding the medulla. It is derived embryologically from mesoderm and is stimulated by pituitary hormones (principally **ACTH*) to produce three kinds of **corticosteroid hormones*, which affect carbohydrate metabolism (e.g. **hydrocortisone*), electrolyte metabolism (e.g. **aldosterone*), and the sex glands (estrogens and androgens).

adrenaline *n.* see epinephrine.

adrenergic *adj.* describing nerve fibers that release **norepinephrine* as a neurotransmitter. Compare cholinergic.

adrenocorticotrophic hormone (adrenocorticotropin) see ACTH.

adrenogenital syndrome precocious sexual development and apparent masculinization in girls, caused by overproduction of hormones by the adrenal cortex in infancy.

adrenolytic *adj.* inhibiting the activity of **adrenergic nerves*. Adrenolytic activity is opposite to that of **epinephrine*.

advancement *n.* the detachment by surgery of a muscle or tendon from its normal attachment site and its reattachment at a more advanced (anterior) point. The

technique is used, for example, in the treatment of squint or in repositioning the womb.

adventitia (tunica adventitia) *n.* 1. the outer coat of the wall of a *vein or *artery. It consists of loose connective tissue and networks of small blood vessels, which nourish the walls. 2. the outer covering of various other organs or parts.

adventitious *adj.* 1. occurring in a place other than the usual one. 2. relating to the adventitia.

Aedes *n.* a genus of widely distributed mosquitoes occurring throughout the tropics and subtropics. Most species are black with distinct white or silvery-yellow markings on the legs and thorax. *Aedes* species are not only important as vectors of *dengue, *yellow fever, *filariasis, and Group B viruses causing encephalitis but also constitute a serious biting nuisance. *A. aegypti* is the principal vector of dengue and yellow fever.

aer- (**aero-**) *prefix denoting air or gas.* Examples: *aerogastria* (gas in the stomach); *aerogenesis* (production of gas).

aerobe *n.* any organism, especially a microbe, that requires the presence of free oxygen for life and growth. See also anaerobe, microaerophilic.

aerobic *adj.* 1. of or relating to aerobes: requiring free oxygen for life and growth. 2. describing a type of cellular *respiration in which foodstuffs (carbohydrates) are completely oxidized by atmospheric oxygen, with the production of maximum chemical energy from the foodstuffs.

aerodontalgia *n.* pain in the teeth due to change in atmospheric pressure during air travel or the ascent of a mountain.

aeroneurosis *n.* a syndrome of anxiety, agitation, and insomnia found in pilots flying unpressurized aircraft and attributed to *anoxia.

aerophagia *n.* the swallowing of air. This may be done voluntarily to stimulate belching, accidentally during rapid eating or drinking, or unconsciously as a habit. Voluntary aerophagia is used to permit esophageal speech after surgical removal of the larynx (usually for cancer).

aerosol *n.* a suspension of extremely small liquid or solid particles (about 0.001 mm diameter) in the air. Drugs in aerosol form may be administered by inhalation.

aetiology *n.* see etiology.

afebrile *adj.* without, or not showing any signs of, a fever.

affect *n.* (in psychiatry) a wave of emotion or the emotion associated with a particular idea. —**affective** *adj.*

afferent *adj.* 1. designating nerves or neurons that convey impulses from sense organs and other receptors to the brain or spinal cord,

i.e. any sensory nerve or neuron. 2. designating blood vessels that feed a capillary network in an organ or part. 3. designating lymphatic vessels that enter a lymph node. Compare efferent.

afibrinogenemia *n.* complete absence of the coagulation factor *fibrinogen in the blood. Compare hypofibrinogenemia.

aflatoxin *n.* a poisonous substance produced in the spores of the fungus *Aspergillus flavus*, which infects peanuts. The toxin is known to produce cancer in certain animals and is suspected of being the cause of liver cancers in human beings living in warm and humid regions of the world, where stored nuts and cereals are contaminated by the fungus.

afterbirth *n.* the placenta, umbilical cord, and ruptured membranes associated with the fetus, which normally become detached from the womb and expelled within a few hours of birth.

after care long-term surveillance as an adjunct or supplement to formal medical treatment of those who are chronically sick or handicapped. After care includes the provision of special aids and the adaptation of homes to improve daily living.

after-image *n.* an impression of an image that is registered by the brain for a brief moment after an object is removed from in front of the eye, or after the eye is closed.

after-pains *pl. n.* pains in the womb during the first few days after childbirth, caused by contraction of the womb muscles as its nonpregnant dimensions are restored. After-pains can be relieved by the use of such drugs as aspirin.

agalactia *n.* absence or abnormally low production of milk in a woman who has just given birth.

agammaglobulinemia *n.* a total deficiency of the plasma protein *gamma globulin. Compare hypogammaglobulinemia.

agar *n.* an extract of certain seaweeds that forms a gel suitable for the solidification of liquid bacteriological *culture media. *Blood agar* is nutrient agar containing 5–10% horse blood, used for the cultivation of certain bacteria or for detecting hemolytic (blood-destroying) activity.

agenesis *n.* absence of an organ, usually due to total failure of its development in the embryo.

agglutination (clumping) *n.* the sticking together, by serum antibodies called *agglutinins*, of such microscopic antigenic particles as red blood cells or bacteria so that they form visible clumps. Any substance that stimulates the body to produce an agglutinin is called an *agglutino-gen*. Agglutination is a specific reaction; in the laboratory, sera containing different known agglutinins provide an invaluable means of

identifying unknown bacteria. When blood of different groups is mixed, agglutination occurs because serum contains natural antibodies (*isoagglutinins*) that attack red cells of a foreign group, whether previously encountered or not. This is not the same process as occurs in *blood coagulation.

agglutinin *n.* an antibody that brings about the *agglutination of bacteria, blood cells, or other antigenic particles.

agglutigen *n.* any antigen that provokes formation of an agglutinin in the serum and is therefore likely to be involved in *agglutination.

aglossia *n.* 1. congenital absence of the tongue. 2. loss of ability to speak.

agnathia *n.* congenital absence of the lower jaw, either partial or complete.

agnosia *n.* a disorder of the brain whereby the patient cannot interpret sensations correctly although the sense organs and nerves conducting sensation to the brain are functioning normally. It is due to a disorder of the *association areas in the parietal lobes. In *auditory agnosia* the patient can hear but cannot interpret sounds (including speech). A patient with *tactile agnosia* (*astereognosis*) retains normal sensation in his hands but cannot recognize three-dimensional objects by touch alone. In *visual agnosia* the patient can see but cannot interpret symbols, including letters (see *alexia*).

agonal *adj.* describing or relating to the phenomena, such as cessation of breathing or change in the ECG or EEG, that are associated with the moment of death.

agonist (prime mover) *n.* a muscle whose active contraction causes movement of a part of the body. Contraction of an agonist is associated with relaxation of its *antagonist.

agoraphobia *n.* a morbid fear of public places and/or of open spaces. See also *phobia*.

agranulocytosis *n.* a disorder in which there is a severe acute deficiency of certain blood cells (*neutrophils) as a result of damage to the bone marrow by toxic drugs or chemicals. It is characterized by fever, with ulceration of the mouth and throat, and rapidly leads to prostration and death. Treatment is by administration of antibiotics in large quantities. When feasible, transfusion of white blood cells may be life-saving.

agraphia (dysgraphia) *n.* an acquired inability to write, although the strength and coordination of the hand remain normal. It is related to the disorders of language and it is caused by disease in the *parietal lobe of the brain. See *Gerstmann's syndrome*.

agromania *n.* a pathologically strong impulse to live alone in open country.

ague *n.* see *malaria*.

AID see *artificial insemination*.

Aid to Families with Dependent Children (AFDC) a federally funded program designed to provide medical assistance on behalf of families with dependent children. All needy children under the age of 21 are eligible for medical care under provisions of this section of the US *Social Security Act, with states contributing 20-47% of the costs of the program according to the state's per capita income.

Aid to the Blind (AB) a federal program that provides financial aid to states so that medical assistance can be furnished to persons who are blind. Aid to the Blind is covered by Title XIX of the US *Social Security Act.

Aid to the Permanently and Totally Disabled (APTD) a federal program of medical care for permanently and totally disabled persons who are considered medically indigent although they are not on welfare. Funding is provided under Title XIX of the US *Social Security Act; prior to 1 January, 1974, APTD was administered as a separate category of medical services to persons receiving public assistance.

AIH see *artificial insemination*.

ainhum *n.* loss of one or more toes due to slow growth of a fibrous band around the toe that eventually causes a spontaneous amputation. The condition is found in Africans and is associated with going barefoot.

air bed a bed with a mattress whose upper surface is perforated with thousands of holes, through which air is forced under pressure. The patient is thus supported, like a hovercraft, on a cushion of air. This type of bed is invaluable for the treatment of patients with large areas of burns.

air embolism an air lock that obstructs the outflow of blood from the right ventricle of the heart. Air may gain access to the circulation as a result of surgery, injury, or intravenous infusions. The patient experiences breathlessness and chest discomfort and develops acute heart failure. Tipping the patient head down, lying on the left side, may move the air lock.

air sickness see *motion sickness*.

akinesia *n.* a loss of normal muscular tonicity or responsiveness. In *akinetic epilepsy* there is a sudden loss of muscular tonicity, making the patient fall with momentary loss of consciousness. *Akinetic mutism* is a state of complete physical unresponsiveness although the patient's eyes remain open and appear to follow movements. It is a consequence of damage to the base of the brain. —*akinetic adj.*

ala *n.* (*pl. alae*) (in anatomy) a winglike structure; for example, either of the two lateral flared portions of the external nose or the winglike expansion of the ilium.

alactasia *n.* absence or deficiency of the

enzyme lactase, which is essential for the digestion of milk sugar (lactose). All babies have lactase in their intestines, but the enzyme disappears during childhood in about 10% of northern Europeans, 40% of Greeks and Italians, and 80% of Africans and Asians. Alactasia causes symptoms only if the diet regularly includes raw milk, when the undigested lactose causes diarrhea and abdominal pain.

alanine *n.* see amino acid.

alastrim *n.* a mild form of smallpox, causing only a sparse rash and low-grade fever. Medical name: **variola minor**.

Albers-Schönberg disease see osteopetrosis.

albinism *n.* the inherited absence of pigmentation in the skin, hair, and eyes (see albino).

albino *n.* an individual lacking the normal body pigment (melanin). Albinos have white hair and pink skin and eyes. The pink color is produced by blood in underlying blood vessels, which are normally masked by pigment.

albumin *n.* a protein that is soluble in water and coagulated by heat. An example is *serum albumin*, which is found in blood plasma and is important for the maintenance of plasma volume. Albumin is synthesized in the liver; the inability to synthesize it is a prominent feature of chronic liver disease (*cirrhosis).

albuminuria (proteinuria) *n.* the presence of serum albumin, serum globulin, or other serum proteins in the urine. This may be associated with kidney or heart disease. Albuminuria is not always associated with disease: it may occur after strenuous exercise or after a long period of standing (*orthostatic albuminuria*).

albumose *n.* a substance, intermediate between albumin and peptones, produced during the digestion of proteins by pepsin and other endopeptidases (see peptidase).

alcaptonuria (alkaptonuria) *n.* congenital absence of an enzyme, homogentisic acid oxidase, that is essential for the normal breakdown of the amino acids tyrosine and phenylalanine. Accumulation of *homogentisic acid causes dark brown discoloration of the skin and eyes (*ochronosis*) and progressive damage to the joints, especially of the spine. The gene responsible for the condition is recessive, so that a child is affected only if both parents are carriers of the defective gene.

alcohol *n.* any of a class of organic compounds formed when a hydroxyl group (-OH) is substituted for a hydrogen atom in a hydrocarbon. The alcohol in alcoholic drinks is *ethyl alcohol (ethanol)*, which has the formula C_2H_5OH . It is produced by the fermentation of sugar by yeast. 'Pure' alcohol contains not less than 94.9% by

volume of ethyl alcohol. It is obtained by distillation. A solution of 70% alcohol can be used as a preservative or antiseptic. When taken into the body ethyl alcohol depresses activity of the central nervous system (see also alcoholism). *Methyl alcohol (methanol) is extremely poisonous.

Alcohol, Drug Abuse and Mental Health Administration an agency of the US *Public Health Service incorporating three of the National Institutes of Health: the National Institutes on Alcohol Abuse and Alcoholism, Drug Abuse, and Mental Health. The agency also operates the Clinical Research Center for neuropsychiatric patients at Lexington, Kentucky.

Alcoholic and Narcotic Addict Rehabilitation Amendment (1968) a US law that added new provisions to the Community Mental Health Centers Act, authorizing funds for construction of facilities and the employment of medical personnel needed for the treatment of alcoholics and narcotics addicts as well as for the financing of special training programs and studies to evaluate the problems and treatments.

Alcoholics Anonymous a voluntary agency of self help that is organized and operated locally among those with alcoholic dependency and has national and international support. Members are expected to admit to their drink problems, discuss these openly and frankly at the regular meetings of the group, and also to take part in efficient family support schemes to help those members who have lapses.

alcoholism *n.* the syndrome due to physical *dependence on alcohol, such that sudden deprivation may cause withdrawal symptoms: tremor, anxiety, hallucinations, and delusions (see delirium tremens). The risk of alcoholism for an individual and its incidence in a society depend on the amount drunk. Countries such as France, where heavy drinking is socially acceptable, have the highest incidence. Usually several years' heavy drinking is needed for addiction to develop, but the range is from one to 40 years. Alcoholism impairs intellectual function, physical skills, memory, and judgment: social skills, such as conversation, are preserved until a late stage. Heavy consumption of alcohol also causes *cardiomyopathy, peripheral *neuritis, *cirrhosis of the liver, and enteritis. Treatment is usually given in a psychiatric hospital, where the alcoholic is first 'dried out' and then helped to understand the psychological pressures that led to his heavy drinking. Drugs such as *disulfiram (Antabuse), which cause vomiting if alcohol is taken, may help in treatment.

Aldomet *n.* see methyldopa.

aldosterone *n.* a steroid hormone (see corti-

costeroid) that is synthesized and released by the adrenal cortex and acts on the kidney to regulate salt (potassium and sodium) and water balance. It may be given by injection as replacement therapy when the adrenal cortex secretes insufficient amounts of the hormone and also to treat shock.

aldosteronism *n.* overproduction of aldosterone, one of the hormones secreted by the adrenal cortex, leading to abnormalities in the amounts of sodium, potassium, and water in the body. It is one cause of raised blood pressure (hypertension).

Aleppo boil see oriental sore.

aleukemic *adj.* describing a stage of *leukemia in which there is no increase in the number of white cells in the blood. The stage is almost invariably followed by one in which excessive numbers of white cells are produced, as typical in leukemia.

alexia *n.* an acquired inability to read. It is due to disease in the left hemisphere of the brain in a right-handed person. In *agnosic alexia* (word blindness) the patient cannot read because he is unable to identify the letters and words, but he retains the ability to write and his speech is normal. This is a

form of *agnosia. A patient with *aphasic alexia* (visual asymbolia) can neither read nor write and often has an accompanying disorder of speech. This is a form of *aphasia. See also dyslexia.

alexin *n.* a former name for the serum component now called *complement.

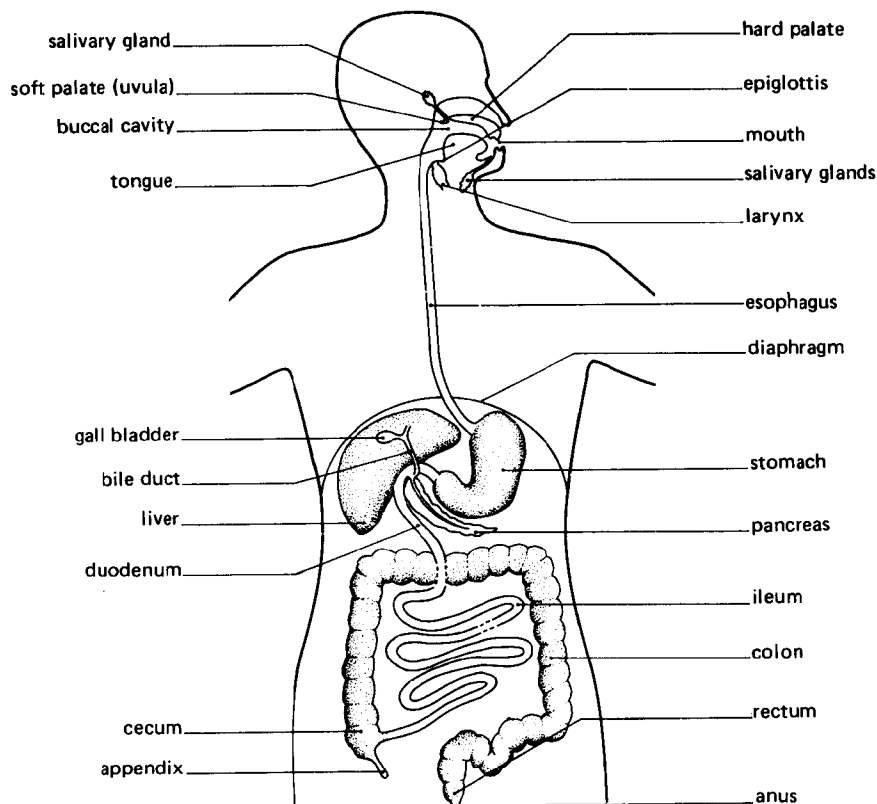
algometer *n.* a piece of equipment for determining the sensitivity of the skin to various touch stimuli, especially those causing pain.

-algia *suffix* denoting pain. Example: *neuralgia* (pain in a nerve).

algid *adj.* cold: usually describing the cold clammy skin associated with certain forms of malaria.

alienation *n.* (in psychiatry) 1. the experience that one's thoughts are under the control of somebody else, or that other people participate in one's thinking. It is a symptom of *schizophrenia. 2. insanity.

alimentary canal the long passage through which food passes to be digested and absorbed. It extends from the mouth to the anus and each region is specialized for a different stage in the processing of food, from mechanical breakdown in the mouth to chemical *digestion and *absorption in the stomach and small intestine and finally to



The alimentary canal