

**Infusion pump**

A machine for administering a continuous, controlled amount of a drug or other fluid through a needle inserted into a vein or under the skin. It consists of a small battery-powered pump that controls the flow of fluid from a syringe into the needle. The pump may be strapped to the patient and pre-programmed to deliver the fluid at a constant rate. See also *Methods of administration* (p.17).

**Inhalator**

A mouthpiece similar to a cigarette holder into which a nicotine-impregnated plug is inserted. The inhalator and plug are a form of nicotine-replacement therapy used during attempts to give up smoking. The inhalator should be used whenever the urge to smoke occurs.

**Inhaler**

A device used for administering a drug in powder or vapour form. Inhalers are used principally in the treatment of respiratory disorders such as asthma and chronic bronchitis. The kinds of drugs that are often administered by this method include corticosteroids and bronchodilators. See also *Methods of administration* (p.17) and *Inhalers* (p.49).

**Inhibitory**

A term meaning to have a blocking effect on cell activity, e.g. a chemical that prevents muscle contraction has an inhibitory effect. See also *Antagonist* and *Excitatory*.

**Inoculation**

A method of administering biological substances, such as microorganisms, to produce immunity to disease by scratching the *vaccine* into the skin. See also *Vaccines* and *immunization* (p.92).

**Interaction**

See p.16.

**Intramuscular injection**

Injection of a drug into a muscle, usually located in the upper arm or buttock. The drug is absorbed into the bloodstream from the muscle. See also *Methods of administration* (p.17).

**Intrathecal injection**

An injection of a drug into the space around the brain or spinal cord. This route is used to minimize systemic effects of a drug while allowing high drug levels to be achieved within the enclosed nervous tissue. It is used for some anticancer drugs, antispasticity drugs (e.g. baclofen), and analgesic drugs (e.g. morphine) to provide pain relief. Local anaesthetic drugs are injected by this route to provide spinal anaesthesia. See also *Epidural Injection*.

**Intravenous infusion**

Prolonged, slow injection of fluid (often a solution of a drug) into a vein. The fluid flows at a controlled rate from a bag or bottle through a fine tube inserted into an opening in a vein. An intravenous infusion may also be administered via an *infusion pump*.

**Intravenous injection**

Direct injection of a drug into a vein, putting the drug immediately into the circulation. Because it has a rapid effect, intravenous injection is useful in an emergency. See also *Methods of administration* (p.17).

**JL****Jaundice**

A condition in which the skin and whites of the eyes take on a yellow coloration. It can be caused by an accumulation in the blood of the yellow-brown bile pigment bilirubin. Jaundice is a sign of many disorders of the liver. A drug may cause jaundice as an *adverse effect* either by damaging the liver or by causing an increase in the breakdown of red blood cells in the circulation. See also *Liver and kidney disease*, p.22.

**Liniment**

A liquid medicine for application to the skin with friction, that is, to be rubbed in. See also *Embrocation*.

**Lotion**

A liquid preparation that may be applied to large areas of skin. See also *Bases for skin preparations* (p.135).

**M****Medication**

Any substance prescribed to treat illness. See *Medicine*.

**Medicine**

A medication or drug that is taken in order to maintain, improve, or restore health.

**Metabolism**

The term used to describe all chemical processes in the body that involve either the formation of new substances or the breakdown of substances to release energy or detoxify foreign substances. The metabolism provides the energy that is required to keep the body functioning at rest – that is, to maintain breathing, heart beat, and body temperature and to replace worn tissues. It also provides the energy needed during exertion. This energy is produced by the metabolism from the breakdown of foods.

**MHRA**

The Medicines and Healthcare products Regulatory Agency is the UK government licensing agency (part of the Department of Health) that is responsible for ensuring that medicines and medical devices work and are safe. A drug cannot be sold in the UK without a marketing authorization from the MHRA.

**Miotic**

A drug that constricts (narrows) the pupil. *Opioid* drugs such as morphine have a miotic effect, and someone who is taking one of these drugs has very small, pinpoint pupils. The pupil is sometimes deliberately narrowed by other

miotic drugs, such as pilocarpine, in the treatment of glaucoma. See also *Drugs for glaucoma* (p.128) and *Drugs affecting the pupil* (p.130).

**Mucolytic**

A drug that liquefies mucus secretions in the airways. See also *Drugs to treat coughs* (p.52).

**Mydriatic**

A drug that dilates (widens) the pupil. *Anticholinergic* drugs, such as atropine, have this effect and they may cause *photophobia* as a consequence. Mydriatic drugs may occasionally provoke the onset of glaucoma. These drugs are also used to facilitate examination of the retina at the back of the eye. See also *Drugs affecting the pupil* (p.130).

**N****Narcotic**

Originating from the Greek word for numbness or stupor and once applied to drugs derived from the opium poppy, the word narcotic no longer has a precise medical meaning; some American sources use the term to mean any potent abused drug. Narcotic analgesic, a term largely replaced by *opioid* analgesic, is used to refer to opium-derived and synthetic drugs that have pain-relieving properties and other effects similar to those of morphine (see *Analgesics*, p.36). See also *Opioids* (p.449).

**Nebulizer**

A method of administering a drug to the airways and lungs in aerosol form through a facemask. The apparatus includes an electric or hand-operated pump that sends a stream of air or oxygen through a length of tubing into a small canister containing the drug in liquid form. This inflow of gas causes the drug to be dispersed into a fine mist, which is then carried through another tube into the facemask. Inhalation of this drug mist is much easier than inhaling from a pressurized aerosol. See also *Inhaler*.

**Neuroleptic**

A drug used to treat psychotic illness. See *Antipsychotic drugs* (p.41).

**Neurotransmitter**

A chemical released from a nerve ending after receiving an electrical impulse. A neurotransmitter may carry a message from the nerve to another nerve so that the electrical impulse passes on, or to a muscle to stimulate contraction, or to a gland to stimulate secretion of a particular hormone. Acetylcholine and norepinephrine (noradrenaline) are examples of neurotransmitters. Many drugs either mimic or block the action of neurotransmitters. See also *Brain and nervous system* (p.34).

**O****Opioid**

A group of drugs (also called *narcotic* analgesics) that are given to relieve pain, treat diarrhoea, and suppress coughs. See also *Opioids* (p.449).