

are recorded is the identity of those who received the new drug revealed. Double-blind trials are performed for almost all new drugs. See also Testing and approving new drugs (p.12).

Drip

A non-medical term for *intravenous infusion*.

E

Electrolyte

See *Body salts*.

Elixir

A clear, sweetened liquid, often containing alcohol, that forms the base for many liquid medicines such as those used to treat coughs.

Embrocation

An ointment or liniment rubbed on to the skin to relieve joint pain, muscle cramp, or muscle injury. An embrocation usually contains a *rubefacient*.

Emetic

Any substance that causes a person to vomit. An emetic may work by irritating the lining of the stomach and/or by stimulating the part of the brain that controls vomiting. Emetics such as ipecac (ipecacuanha) may be used in the treatment of drug overdose but are not generally very effective. See also Drug poisoning emergency guide (p.510).

Emollient

A substance having a soothing, softening effect when applied to the skin. An emollient also has a moisturizing effect, preventing loss of water from the skin surface by forming an oily film. See also Bases for skin preparations (p.135).

Emulsion

A combination of two liquids that do not normally mix together but, on addition of a third substance (known as an emulsifying agent), can be mixed to give a complex liquid consisting of droplets of one liquid suspended in the other. An example of an emulsion is liquid paraffin. The medicine bottle may have to be shaken before use to ensure that the two liquids are thoroughly mixed.

Endorphins

A group of substances occurring naturally in the brain. Released in response to pain, they bind to specialized receptors and reduce the perception of pain. *Opioid* analgesics such as morphine work by mimicking the action of endorphins. See also Analgesics (p.36).

Enteric coated

Treatment of a drug to give it a coating so that, after being taken orally, it passes safely and unaltered through the stomach and affects the intestine.

Enzyme

A protein that controls the rate of one or more chemical reactions in the body. There are thousands of enzymes active in the body. Each

type of cell produces a specific range of enzymes. Cells in the liver contain enzymes that stimulate the breakdown of nutrients and drugs; cells in the digestive tract release enzymes that help digest food. Some drugs work by altering the activity of enzymes – for example, certain anticancer drugs halt tumour growth by altering enzyme function in cancer cells.

Epidural injection

An injection that resembles an intrathecal injection but delivers the drug into a more superficial space around the spine. Usually a local anaesthetic and analgesic are injected or infused together to provide regional anaesthesia for operations such as caesarean section or for post-operative pain relief.

Excitatory

A term meaning having a stimulating or enhancing effect. A chemical released from a nerve ending that causes muscle contraction is having an excitatory effect. See also *Inhibitory*.

Expectorant

A type of cough remedy that enhances the production of sputum (phlegm) and is used in the treatment of a productive (sputum-producing) cough. See also Drugs to treat coughs (p.52).

F

Formula, chemical

A way of expressing the constituents of a chemical in symbols and numbers. Every known chemical substance has a formula. For example, water has the formula H₂O, indicating that it is composed of two hydrogen atoms (H₂) and one oxygen atom (O). All drugs have much more complicated formulae than that of water.

Formulary

A list of drugs produced as a guide to prescribers and other health professionals with the intention of aiding choice. Local formularies are frequently found in hospitals and are sometimes used by groups of GPs. The British National Formulary (BNF) is jointly produced by the British Medical Association and the Royal Pharmaceutical Society as a non-promotional guide to what is available and considered worth prescribing for most common conditions.

G

Gel

A viscous, usually translucent, jelly-like formulation of a drug for application to the skin.

Generic name

The official name for a substance that is therapeutically active. The term generic is distinct from a *brand name*, which is a term chosen by a manufacturer for its version of a product containing a generic drug. For example: sildenafil is a generic name; Viagra is a brand name for a product that contains sildenafil. See also How drugs are classified (p.13).

GSL (General Sales List) medicines

Over-the-counter medicines considered suitable for sale by any retail outlet because of their safety record. Examples include aspirin and paracetamol. See also Managing your drug treatment (p.25).

H

Half-life

A term used in *pharmacology* for the time taken to reduce the concentration of the drug in the blood by half. Knowledge of the half-life of a drug helps to determine dosing frequency.

Hallucinogen

A drug that causes hallucinations (unreal perceptions of surroundings and objects). Common hallucinogens include the drugs of abuse LSD (p.446) and ketamine (p.445). Alcohol taken in large amounts may have a hallucinogenic effect; hallucinations may also occur during withdrawal from alcohol (p.440). Certain prescribed drugs can cause hallucinations e.g. SSRI and other antidepressants, opioids, and dopamine agonists.

Hormone

A chemical released directly into the bloodstream by a gland or tissue. The body produces numerous hormones, each of which has a specific range of functions – for example, controlling the *metabolism* of cells, growth, sexual development, and the body's response to stress or illness. Hormone-producing glands make up the endocrine system; the kidneys, intestine, and brain also release hormones. See also Hormones and endocrine system (p.98).

I

Idiosyncrasy

Some *adverse effects* appear not to be dose related. Where such an effect happens on the first use of a drug and is pharmacologically unexpected, the phenomenon is called idiosyncrasy, or an idiosyncratic reaction. This happens because people are different genetically; they may lack a particular enzyme or an enzyme may be less active than usual. In normal life this may not cause any problems. Because of this difference, they may react differently to a drug.

Immunization

The process of inducing immunity (resistance to infection) as a preventive measure against the spread of infectious diseases. See Vaccines and immunization (p.92).

Indication

The term used to describe a disorder, symptom, or condition for which a drug or treatment may be prescribed. For example, indications for the use of beta blockers include angina and high blood pressure (hypertension).