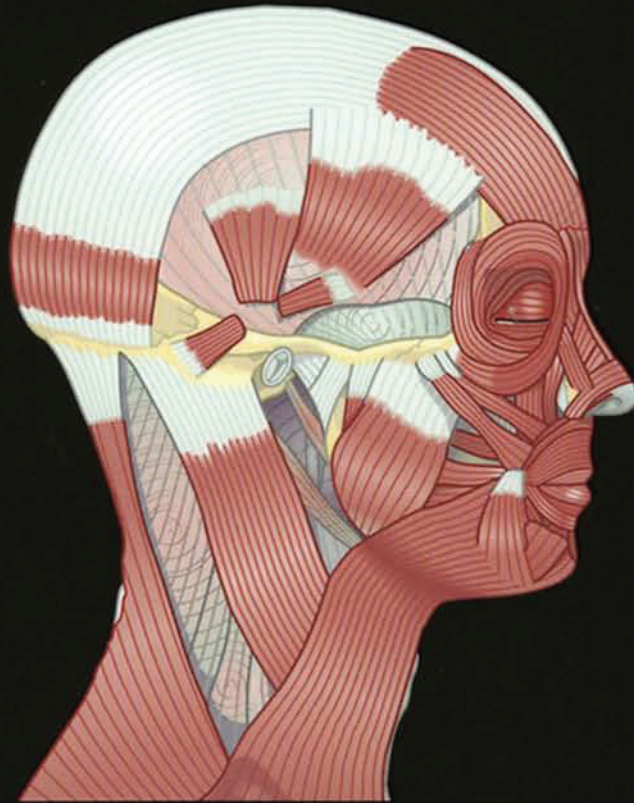


BLACK'S
MEDICAL
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41ST EDITION



Edited by
Dr Harvey Marcovitch

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including the UK, are controlled by legislation. Embryo transfer and research using embryos are regulated by the Human Fertilisation & Embryology Authority (see ASSISTED CONCEPTION; APPENDIX 7: STATUTORY ORGANISATIONS).

Emergency

A condition that needs urgent medical care. Examples include life-threatening injuries involving blood loss or damage to major organs, cardiac arrest or sudden loss of consciousness from, say, a blow or an epileptic fit. Emergency is a term also applied to any resuscitative procedure that must be undertaken immediately – for instance, cardiopulmonary resuscitation (see APPENDIX 1: BASIC FIRST AID – Cardiac/respiratory arrest) or TRACHEOSTOMY. Patients with an emergency condition may initially be treated on the spot by suitably qualified paramedical staff before being transported by road or air ambulance to a hospital Accident and Emergency department, also known as an A&E or Casualty department. These departments are staffed by doctors and nurses experienced in dealing with emergencies; their first job when an emergency arrives is to conduct a TRIAGE assessment to decide the seriousness of the emergency and what priority the patient should be given in the context of other patients needing emergency care.

As their title shows, A&E departments (and the 999 and 112 telephone lines) are for patients who are genuine emergencies: namely, critical or life-threatening circumstances such as:

- unconsciousness.
- serious loss of blood.
- suspected broken bones.
- deep wound(s) such as a knife wound.
- suspected heart attack.
- difficulty in breathing.
- suspected injury to brain, chest or abdominal organs.
- fits.

To help people decide which medical service is most appropriate for them (or someone they are caring for or helping), the following questions should be answered:

- Could the symptoms be treated with an over-the-counter (OTC) medicine? If so, visit a pharmacist.
- Does the situation seem urgent? If so, call NHS Direct or the GP for telephone advice, and a surgery appointment may be the best action.
- Is the injured or ill person an obvious emergency (see above)? If so, go to the local A&E department or call 999 for an ambulance,

and be ready to give the name of the person involved, a brief description of the emergency and the place where it has occurred.

Emesis

Emesis means VOMITING.

Emetics

An emetic is a substance which induces VOMITING (emesis). Emetics were previously used for gut decontamination in the treatment of poisoning but are now considered obsolete. This is because the efficacy of emesis as a means of gut decontamination is unproved; there is a delay between administration and actual emesis, during which time continued absorption of the poison may occur; and some emetics have effects other than vomiting which may mask the clinical features of the ingested poison. The most commonly used emetic was syrup of ipecacuanha (ipecac). Salt (sodium chloride) water emetics were also used but there are many cases of fatal HYPERNATRAEMIA resulting from such use and salt water emetics should never be given. The most common method of gut decontamination currently used is the administration of activated CHARCOAL.

Emetine

The active principles of IPECACUANHA.

EMG

See ELECTROMYOGRAPHY (EMG).

Emission

A discharge. The term is commonly used to describe the orgasmic flow of SEMEN from the erect PENIS that occurs during sleep. Described as a nocturnal emission or, colloquially, as a 'wet dream', it is a common event in late PUBERTY.

EMLA

This is a proprietary brand of topical cream (the abbreviation stands for Eutectic Mixture of Local Anaesthetics). EMLA has revolutionised the care of children in hospital in the last decade by allowing blood-taking, lumbar puncture and other invasive procedures to be conducted relatively painlessly. It is applied to the skin and covered. After one hour the skin is anaesthetised.

Emmetropia

The normal condition of the EYE as regards refraction of light rays. When the muscles in the eyeball are completely relaxed, the focusing

his or her agreement. Patients with mental illnesses that may endanger their own safety or that of others can be compulsorily admitted using special legal powers – this is traditionally called 'sectioning'. (See MENTAL ILLNESS.)

Voluntary Muscle

Also known as skeletal muscle, this forms the muscles which are under a person's conscious control. Muscles that control walking, talking and swallowing are examples of those under such control (see INVOLUNTARY MUSCLE; MUSCLE; NERVOUS SYSTEM).

Volvulus

An obstruction of the bowels produced by the twisting of a loop of bowel round itself. (See also STRANGULATION; INTESTINE, DISEASES OF.)

Vomiting

Vomiting means the expulsion of the STOMACH contents through the mouth. When the effort of vomiting is made, but nothing is brought up, the process is known as retching. When vomiting occurs, the chief effort is made by the muscles of the abdominal wall and by the diaphragm contracting together and squeezing the stomach. The contraction of the stomach wall is no doubt also a factor, and an important step in the act consists in the opening at the right moment of the cardiac or upper orifice of the stomach. This concerted action of various muscles is brought about by a vomiting centre situated on the floor of the fourth ventricle in the BRAIN.

Causes Vomiting is brought about by stimulation of this nervous centre, and in most cases this is effected through sensations derived from the stomach itself. Thus, of the drugs which cause vomiting, some act only after being absorbed into the blood and carried to the brain, although most are irritants to the mucous membrane of the stomach (see EMETICS); various diseases of the stomach, such as cancer, ulcer and food poisoning act in a similar way. Stimulation – not only of the nerves of the stomach, but also of those supplying other abdominal organs – produces vomiting; thus in obstruction of the bowels, peritonitis, gall-stone colic, renal colic, and even in some women during pregnancy, vomiting is a prominent symptom.

Severe emotional shock may cause vomiting, as may acute anxiety and unpleasant experiences such as seeing an accident, suffering severe pain or travel sickness.

Direct disturbance of the brain itself is a

cause: for example, a blow on the head, a cerebral tumour, a cerebral abscess, meningitis. Nausea and vomiting are common symptoms that may arise from local disease of the gastrointestinal tract, but they are also associated with systemic illness – for example, DIABETES MELLITUS or kidney failure (see KIDNEYS, DISEASES OF) – and also with disturbances of labyrinthine function, such as motion sickness and acute labyrinthitis.

Treatment The cause of the vomiting must be sought and treatment directed towards this. Symptomatic treatment for vomiting can be dangerous since accurate diagnosis of the cause may be hindered. If anti-nauseant drug treatment is indicated, the choice of drug depends on the cause of the vomiting.

Granisetron and ondansetron are 5-hydroxytryptamine (5HT₃) antagonists valuable in the treatment of nausea and vomiting induced by cytotoxic CHEMOTHERAPY or RADIOTHERAPY and prevention and treatment of post-operative nausea and vomiting. Prochlorperazine is valuable in the treatment of severe nausea, vomiting, VERTIGO and disorders of the LABYRINTH of the EAR, although extrapyramidal symptoms may occur, particularly in children, elderly and debilitated patients.

Vomiting may occur after surgical operations and this is due to the combined effects of analgesics, anaesthetic agents and the psychological stress of operation. Various drugs can be used to prevent or stop post-operative vomiting.

Nausea and vomiting are common symptoms in pregnancy. Drugs are best avoided in this situation as they may damage the developing FETUS. Simple measures, such as the taking of food before getting up in the morning and reassurance, are often all that is necessary.

Von Recklinghausen's Disease

An inherited disease, now called neurofibromatosis. About one case occurs every 3,000 live births. The disease is characterised by tumours along the course of nerves which can be felt beneath the skin. Soft tumours may also develop beneath the skin. The condition may have other associated abnormalities such as SCOLIOSIS, decalcification of the bones due to overactivity of the PARATHYROID glands, and fibrosis in the lungs. Surgery may be needed for cosmetic reasons or to relieve pressure on the nervous system.

Von Willebrand's Disease

A genetically determined blood disorder in

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