



Drug

Central Nervous System Drugs medical books

Central nervous system drugs—that is, drugs that affect the spinal cord and the brain—are used to treat several neurological (nervous system) and psychiatric problems. For instance, antiepileptic drugs reduce the activity of overexcited brain areas and reduce or eliminate seizures.

Antipsychotic drugs are used to regulate certain brain chemicals called neurotransmitters, which do not function properly in people with psychoses, major mental disorders often characterized by extreme behaviors and hallucinations, such as in schizophrenia. Antipsychotic drugs can often significantly alleviate hallucinations and other abnormal behaviors.

Antidepressant drugs reduce mental depression. Antimanic drugs reduce excessive mood swings in people with manic-depressive illness, which is characterized by behavioral fluctuations between highs of extreme excitement and activity and lows of lethargy and depression. Both types of drugs act by normalize chemical activity in the emotional centers of the brain. Antianxiety drugs, also referred to as tranquilizers, treat anxiety by decreasing the activity in the anxiety centers of the brain.

Sedative-hypnotic drugs are used both as sedatives to reduce anxiety and as hypnotics to induce sleep. Sedative-hypnotic drugs act by reducing brain-cell activity. Stimulatory drugs, on the other hand, increase neuronal (nerve cell) activity and reduce fatigue and appetite.

Analgesic drugs reduce pain and are generally categorized as narcotics and non-narcotics. Narcotic analgesics, also known as opioids, include opium and the natural opium derivatives codeine and morphine; synthetic derivatives of morphine such as heroin; and synthetic drugs such as meperidine and propoxyphene hydrochloride. Narcotics relieve pain by acting on specific structures, called receptors, located on the nerve cells of the spinal cord or brain. Non-narcotic analgesics such as aspirin, acetaminophen, and ibuprofen reduce pain by inhibiting the formation of nerve impulses at the site of pain. Some of these drugs can also reduce fever and inflammation.

General anesthetics, used for surgery or painful procedures, depress brain activity, causing a loss of sensation throughout the body and unconsciousness. Local anesthetics are directly applied to or injected in a specific area of the body, causing a loss of sensation without unconsciousness; they prevent nerves from transmitting impulses signaling pain.