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Barbiturate

National Cancer Institute

Source

National Cancer Institute. *Barbiturate*. NCI Thesaurus. Code C67084.

A class of drugs characterized as central nervous system (CNS) depressants. Barbiturate compounds bind to the gamma amino butyric acid (GABA)-A receptor, thereby increasing the influx of chloride ions into the neuron and subsequently causing hyperpolarization, which produces a decrease in neuronal transmission. Other barbiturate effects in the CNS may include modulation of sodium and calcium channels as well as inhibition of glutamate-mediated excitation. Although the effects of barbiturates are seen throughout the CNS, the predominant effect occurs in the midbrain region, the part of the brain associated with arousal. CNS depressive effects associated with this drug class include mild sedation, hypnosis, anesthesia, and coma as well as a decrease in seizure activity.