A very broad definition of a drug would include "all chemicals other than food that affect living processes." If the affect helps the body, the drug is a medicine. However, if a drug causes a harmful effect on the body, the drug is a poison. The same chemical can be a medicine and a poison depending on conditions of use and the person using it. Another definition would be "medicinal agents used for diagnosis, prevention, treatment of symptoms, and cure of diseases." Contraceptives would be outside of this definition unless pregnancy were considered a disease.

- **Anti-Cancer Drugs**
- **Anti-Cancer Drugs II**
- **Antidepressants**  
  Antidepressant drugs are used to restore mentally depressed patients to an improved mental status. Depression results from a deficiency of norepinephrine at receptors in the brain. Mechanisms that increase their effective concentration at the receptor sites should alleviate depression.

- **Barbiturates and Benzodiazepines**  
  Barbiturates are central nervous system depressants and are similar, in many ways, to the depressant effects of alcohol.

- **Drugs Acting Upon the Central Nervous System**  
  Chemical influences are capable of producing a myriad of effects on the activity and function of the central nervous system. Since our knowledge of different regions of brain function and the neurotransmitters in the brain is limited, the explanations for the mechanisms of drug action may be vague. The known neurotransmitters are: acetylcholine which is involved with memory and learning; norepinephrine which is involved with mania-depression and emotions.

- **Drug Activity**  
  Page notifications Off Barbiturates and Benzodiazepines Drug Receptor Interactions picture_as_pdf Batch Donate Table of contents A very broad definition of a drug would include "all chemicals other than food that affect living processes." If the affect helps the body, the drug is a medicine. However, if a drug causes a harmful effect on the body, the drug is a poison. The same chemical can be a medicine and a poison depending on conditions of use and the person using it.

- **Drug Receptor Interactions**  
  Drugs interact with receptor sites localized in macromolecules which have protein-like properties and specific three dimensional shapes. A minimum three point attachment of a drug to a receptor site is required. In most cases a rather specific chemical structure is required for the receptor site and a complementary drug structure. Slight changes in the molecular structure of the drug may drastically change specificity.

- **Enzyme Inhibition**  
  Although activation of enzymes may be exploited therapeutically, most effects are produced by enzyme inhibition.

- **Hallucinogenic Drugs**  
  Hallucinogenic agents, also called psychomimetic agents, are capable of producing hallucinations, sensory illusions and bizarre thoughts. The primary effect of these compounds is to consistently alter thought and sensory perceptions.

- **Local Anesthetics**  
  Local anesthetics are agents that reversibly block the generation and conduction of nerve impulses along a nerve fiber. They depress impulses from sensory nerves of the skin, surfaces of mucosa, and muscles to the central nervous system. These agents are widely used in surgery, dentistry, and ophthalmology to block
transmission of impulses in peripheral nerve endings.

- **Misc Antibiotics**
  Antibiotics are specific chemical substances derived from or produced by living organisms that are capable of inhibiting the life processes of other organisms.

- **Narcotic Analgesic Drugs**
  Narcotic agents are potent analgesics which are effective for the relief of severe pain. Analgesics are selective central nervous system depressants used to relieve pain. The term analgesic means "without pain". Even in therapeutic doses, narcotic analgesics can cause respiratory depression, nausea, and drowsiness.

- **Penicillin**
  The penicillins were the first antibiotics discovered as natural products from the mold Penicillium.

- **Sulfa Drugs**
  Sulfonamides are synthetic antimicrobial agents with a wide spectrum encompassing most gram-positive and many gram-negative organisms. These drugs were the first efficient treatment to be employed systematically for the prevention and cure of bacterial infections.

*Thumbnail: Ritalin SR 20 mg, a brand-name sustained-release formulation of methylphenidate. Image used with permission (CC SA-BY 3.0; Sponge).*