

## Drug Toxicity

Drug toxicity refers to the level of damage that a compound can cause to an organism. The toxic effects of a drug are dose-dependent and can affect an entire system as in the CNS or a specific organ such as the liver. Toxicity is the degree to which a chemical substance or a particular mixture of substances can damage an organism. A toxic reaction occurs when insect or spider venom acts like a poison in the body. This type of reaction can occur from one bite or sting from a highly toxic insect or spider, or from multiple bites or stings from insects or spiders not normally considered poisonous. Your age, weight, and state of health also affect your outcome. Poisoning can cause short-term effects, like a skin rash or brief illness. In serious cases, it can cause brain damage, a coma, or death. Ethanol intoxication is the commonest type of acute poisoning and suicide by medical drug overdose is the commonest type of suicide by poisoning. Death from acute poisoning is most commonly the result of either smoke inhalation or illegal drug use. If so, you could be putting yourself at risk for an accidental overdose of an over-the-counter (OTC) pain or fever medicine. Pain relief medication is generally safe if taken as directed. But taking too much of these medicines can lead to liver damage, stomach bleeding, and kidney disease. The most toxic recreational drugs, such as GHB (gamma-hydroxybutyrate) and heroin, have a lethal dose less than 10 times their typical effective dose. By definition, a toxic relationship is a relationship characterized by behaviors on the part of the toxic partner that are emotionally and, not infrequently, physically damaging to their partner. A toxic relationship is characterized by insecurity, self-centeredness, dominance, control. Side effect is an undesirable physical symptom caused by taking a drug or undergoing a medical treatment or therapy. Side effects can range from relatively minor symptoms—such as drowsiness or an upset stomach—to serious effects such as liver damage, and sometimes even life-threatening or potentially fatal effects. The prognosis depends upon the length and degree of exposure and the severity of neurological injury. In some instances, exposure to neurotoxins or neurotoxi-

cants can be fatal. In others, patients may survive but not fully recover. In other situations, many individuals recover completely after treatment. Thallium's toxicity has led to its use (now discontinued in many countries) as a rat and ant poison. It has been called the "poisoner's poison" since it is colorless, odorless, and tasteless; its slow-acting, painful and wide-ranging symptoms are often suggestive of a host of other illnesses and conditions. Overmedication is an overutilization of medication wherein a patient takes unnecessary or excessive medications. Persons who feel that they are overmedicated tend to not to follow their physician's instructions for taking their medication. An allergy means your body sees the medicine as harmful. It rejects the drug with an allergic reaction. This may be mild or strong. It can happen a few hours after you take the drug or not until 2 weeks later. Drug toxicity may occur when a person has consumed a dose of a drug that is too high for them to handle. It may also occur when the person's liver and/or kidneys are unable to function properly and get the drug out of the bloodstream. This can cause it to build up over time until it starts to cause problems.] the toxicity depends on a variety of factors: dose, duration and route of exposure (see Module Two), shape and structure of the chemical itself, and individual human factors. Body by inhalation (breathing), ingestion (eating), or absorption, or by direct contact with a chemical. Humans, animals, or plants; a poison. Environmental toxins can impact the developing brain through various mechanisms. Some toxins, such as mercury, cause cell death and alter cell migration and cell proliferation (101, 104). Lead disrupts neurotransmission, synaptogenesis, and synaptic trimming (101, 104, 110). Natural toxins are chemicals that are naturally produced by living organisms. These toxins are not harmful to the organisms themselves but they may be toxic to other creatures, including humans, when eaten. Mycotoxins are toxic chemical products formed by fungi that can grow on crops in the field or after harvest. Store potential poisons in their original containers.