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Assignment

A **toxin** is a poisonous substance produced within living cells or organisms;[1][2] synthetic toxicants created by artificial processes are thus excluded. The term was first used by organic chemist Ludwig Brieger(1849–1919),[3] derived from the word toxic.[4]

Toxins can be small molecules, peptides, or proteins that are capable of causing disease on contact with or absorption by body tissues interacting with biological macromolecules such as enzymes or cellular receptors. Toxins vary greatly in their toxicity, ranging from usually minor (such as a bee sting) to almost immediately deadly (such as botulinum toxin).

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Toxins are often distinguished from other chemical agents by their method of production—the word toxin does not specify method of delivery (compare with venom and the broader meaning of poison—all substances that can also cause disturbances to organisms). It simply means it is a biologically produced poison. According to an International Committee of the Red Cross review of the Biological Weapons Convention, "Toxins are poisonous products of organisms; unlike biological agents, they are inanimate and not capable of reproducing themselves", and "Since the signing of the Constitution, there have been no disputes among the parties regarding the definition of biological agents or toxins".

When used non-technically, the term "toxin" is often applied to any toxic substance, even though the term toxicant would be more appropriate. Toxic substances not directly of biological origin are also termed poisons and many non-technical and lifestyle journalists follow this usage to refer to toxic substances in general.<sup>[clarification needed]</sup> In the context of quackery and alternative medicine, the term "toxin" is used to refer to any substance alleged to cause ill health. This could range from trace amounts of potentially dangerous pesticides, to supposedly harmful substances produced in the body by intestinal fermentation (auto-intoxication), to food ingredients such as table sugar, monosodium glutamate (MSG), and aspartame.

Poisons, Effects, and Occurrence

Arsenic

Cause and cure cancer,

Poisonous in high doses,

Treat blood cancer acute promyelocytic leukemia,

Also, a part of chemotherapy drug anthracyclins,

Pesticides, building products

Foxglove Strengthen the heart, controls rhythm, improves circulation,

poisonous leaves cause low blood pressure, irregular heartbeat

Biennial plant, tall dramatic spikes of

tubular flowers

### Radiations

Murder the cancer cells

Damage the DNA of cancer cells

Lethal in high doses (blistering and darkening of skin,)

High energy radiations, X-ray, gamma

rays, radioactive substances

### Yew Plant

Potentially toxic treatment of cancer is in yew tree, poisonous

to humans, contain a chemical to treat lung and breast cancer at

cellular level

Paclitaxel – treat lung, breast, AIDS related kaposi's sarcoma

Seeds, leaves, bark

Mercury In past used to prepare remedies like teething powder, infant's

purgative formula

### Botulinum

toxin - Botox

Respiratory failure. It is a neurotoxin - enters the nerves and

destroys vital proteins. Bacteria.

Overdose is another cause of converting medicine to poison. Risks associated with overdose depend upon type of substance, amount taken and characteristics of body. It

includes cases of intentional and unintentional poisoning. Medicines commonly causing poisoning are sedative, hypnotic medicines, psychotropic drugs (Benzodiazepines (tranquilizers),

antidepressants, antipsychotics, neuroleptics (schizophrenia), psychostimulants, pain killers (paracetamol, NSAIDs), narcotics and hallucinogens.