

FAQs

1: Actaea pachypoda (doll's-eyes and toxic effect?)

Actaea pachypoda (**doll's-eyes**, white baneberry) is a species of flowering plant in the genus *Actaea*, of the family Ranunculaceae. Both the berries and the entire plant are considered poisonous to humans. The berries contain cardiogenic toxins which can have an immediate sedative effect on human cardiac muscle tissue, and are the most poisonous part of the plant. Ingestion of the berries can lead to cardiac arrest and death. The berries are harmless to birds, the plant's primary seed disperser.

2: Name a few poisonous seeds?

Datura as angel's trumpets Nutmeg (*Myristica fragrans*), Crab's eye, *Gossypium*, Indian pea (*Lathyrus sativus*, *Abrus precatorius*, *C. odollam* etc)

3: What are chemical compounds-Cerbera odollam known as suicide tree?

The seeds contain cerberin, a potent toxin related to digoxin. The poison blocks the calcium ion channels in heart muscle, causing disruption of the heart beat. This is typically fatal and can result from ingesting a single seed. Cerberin is difficult to detect in autopsies and its taste can be masked with strong spices, such as a curry. It is often used in homicide and suicide in India; Kerala's suicide rate is about three times the Indian average.

4: What is Gossypol, what is the chemical compound present in it?

Gossypol is a natural phenol derived from the cotton plant (genus *Gossypium*). Gossypol is a phenolic aldehyde that permeates cells and acts as an inhibitor for several dehydrogenase enzymes. It is a yellow coloured pigment.

5: Write castor oil bean toxin and its effect?

The seeds contain ricin, an extremely toxic and water-soluble ribosome-inactivating protein;. Also present are ricinine, an alkaloid, and an irritant oil.. Naturally

occurring lectin (a carbohydrate-binding protein. The United States investigated ricin for its military potential during World War I. . Cardiovascular features. Other features may include sweating, dizziness, difficulty in breathing, headache, and confusion. The main causes of death are ventricular arrhythmias and asystole, paralysis of the heart or of the respiratory center. The only post-mortem signs are those of asphyxia

6: Datura seed toxin historically used , its harmful effect?

All species of *Datura* are poisonous, especially their seeds and flowers. Containing the tropane alkaloids ,scopolamine, hyoscyamine, and atropine. Ingestion causes abnormal thirst, hyperthermia, severe delirium and incoherence, visual distortions, bizarre and possibly violent behavior, memory loss, coma, and often death; it is a significant poison to grazing . For this same reason, *Datura* has also been a popular poison for suicide and murder, particularly in parts of Europe and India. Because of the presence of these substances, *Datura* has been used for centuries in some cultures as a poison.

7: cerberin *odollam* tree (commonly known as the suicide tree) why? And what is chemical present and what are the symptoms?

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8: Do Apple Seeds Contain Poison?

Apple seeds contain amygdalin, a substance that releases cyanide into the ... apple seeds in small amounts do not contain enough cyanide to harm an adult.....

Substance that releases cyanide when it comes into contact with human digestive enzymes. The amount of amygdalin found in apple seed is generally very less.

9: Mention Ricin and its mode of action?

It is very toxic it works by getting inside the cells of a person's body and preventing the cells from making the proteins they need. Without the proteins, cells die. Eventually this is harmful to the whole body, and may cause death.

As with most chemicals, whether or not a person becomes ill after exposure to ricin depends on how much ricin the person was exposed to, how long the exposure lasted, what the exposure method was (inhalation, ingestion, or injection), and other factors. In general, when the dose is the same, being exposed to ricin by injection has the greatest potential for causing illness, followed by inhalation, and then ingestion: How toxic is ricin? How do people get sick from it

10: Explain Gossypol seed toxic effects?

Gossypol is toxic to erythrocytes in vitro by stimulating cell death contributing to the side effect of hemolytic anemia. Gossypol is a phenolic aldehyde that permeates cells and acts as an inhibitor for several dehydrogenase enzyme.

11: What is "Doll's eyes seed toxin?"

It belongs to the family: Ranunculaceae. The whole plant has been declared toxic for human consumption, the most poisonous part is the concentrated toxins in the fruit, which have sadly claimed a number of children's lives, as they also have a sweet taste. The berries contain a carcinogenic toxin, which has an almost immediate, sedative effect on human cardiac muscles and can easily cause a quick death.

12: Can ricin be "aerosolized" like anthrax? explain in detail?

- Yes, ricin in the form of a fine powder can be suspended in air.
- Ricin works by getting inside the cells of a person's body and preventing the cells from making the proteins they need. Without the proteins, cells die. Eventually this is harmful to the whole body, and death may occur.
- Effects of ricin poisoning depend on whether ricin was inhaled, ingested, or injected.

13: *Abrus precatorius*, called *kudri mani* explain its poisonous compounds?

Abrus precatorius, known commonly as jequirity, Crab's eye, rosary pea,

The plant is best known for its seeds, which are used as beads and in percussion instruments, and which are toxic due to the presence of Abrin. The toxic abrine is a dimer consisting of two protein subunits, termed A and B. The B chain facilitates abrin's entry into a cell by bonding to certain transport proteins on cell membranes, which then transport the toxin into the cell. One molecule of abrin will inactivate up to 1,500 ribosome per second.

The protein is denatured when subjected to high temperatures which removes its toxicity. This plant is also poisonous to horses. Symptoms of poisoning include nausea, vomiting, convulsions, liver failure, and death, usually after several days. The seeds have been used as beads in jewelry, which is dangerous; inhaled dust is toxic and pinpricks can be fatal. The seeds *are* unfortunately attractive to children.

14: *Areca catechu* and its poisons?

Areca catechu (commonly known as **betel nut palm**). The nut contains an alkaloid related to nicotine which is addictive. It produces, some stimulation, and lots of red saliva, which cannot be swallowed as it causes nausea. Withdrawal causes headache and sweats. Use is correlated with mouth cancer, and to a lesser extent asthma and heart disease

15: Explain what is the poisonous compounds present in Kidney bean (*Phaseolus vulgaris*).?

The toxic compound phytohaemagglutinin, a lectin, is present in many varieties of common bean but is especially concentrated in red kidney beans. The lectin has a number of effects on cell metabolism; it induces cell division, and affects the cell membrane in regard to transport and permeability to proteins.

It agglutinates most mammalian red blood cells types.

Symptoms, which include nausea, vomiting, and diarrhea. Onset is from 1 to 3 hours after consumption of improperly prepared beans, and symptoms typically resolve within a few hours.