



Poison HOTLINE

1-800-222-1222

July 2016



Did you know

According to data from the National Poison Data System (NPDS) the number of poisoning exposures involving teenagers has increased. This increase is seen despite the U.S. census of teenagers decreasing.

Besides the increase in sheer number of exposures the severity of exposures has also worsened. According to NPDS data fewer teenage poisoning cases are able to be treated at home and more require hospital admission.

Iowa Poison Control Center data reflects the same increase in poisoning exposures and admissions in teenagers.

Herbicides

Herbicides are chemicals that are used widely across Iowa and the rest of the nation to help control unwanted vegetation. Since Iowa is a large agricultural state herbicides are frequently used and subsequently result in human exposures. When calling the poison control center we encourage the caller to provide us with the full product name, chemical name, and EPA number. The four main types of herbicides are described below.

Chlorophenoxy compounds (e.g. 2,4-D) can cause mild irritation to the exposed tissue in minor exposures. In large ingestions, uncoupling of oxidative phosphorylation occurs which leads to fever, tachycardia, and metabolic acidosis. These compounds are also striated muscle toxins, CNS neurotoxins, and possibly peripheral neurotoxins.

Glyphosate (e.g. Round-Up®) typically produces mild dermatitis in most cases. Symptoms of acute toxicity are many times attributed to the more toxic surfactant that is in the product which can lead to severe GI irritation, hypotension, and pulmonary edema.

Diquat (e.g. Spectracide Weed & Grass Killer®) ingestions of less than 1 gram can cause an initial burning of mouth and throat followed by nausea, repeated vomiting, abdominal pain, and diarrhea. Transient renal failure may occur requiring hemodialysis. Toxicity can affect all organs and death has been reported in ingestions with as little as 1.5 grams.

Paraquat (e.g. Gramoxone®) is highly toxic and thus has restricted use. It can only be sold and used by certified applicators. Paraquat can be fatal in small amounts; 10 mL of a 20% solution can cause death in an adult. Paraquat concentrates in the lungs causing diffuse pulmonary fibrosis. In these cases, supplemental oxygen accelerates oxidative lung damage and significant hypoxemia should be treated with the lowest amount of oxygen needed to achieve a PO₂ of about 60 mmHg.

For further treatment advice and recommendations in exposed persons please contact the Iowa Poison Control Center at 1-800-222-1222.

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Help

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