

### What is Diazinon?

Diazinon is an insecticide that belongs to a group of chemicals known as organophosphates. Diazinon is used in agriculture to control insects on fruit, vegetable, nut and field crops. It is also used to make ear tags for cattle. Diazinon has been used in the United States since 1956. Before the cancellation of residential uses in 2004, diazinon was used for household insects, lawn and garden insect control and to control insects on pets.

### What are Some Products that Contain Diazinon?

Diazinon products are sold under many names and they are formulated as dusts, granules, liquids, concentrates, seed dressings and cattle ear tags. Always follow label instructions and take steps to avoid exposure. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 1-800-222-1222. If you wish to report an incident, please call 1-800-858-7378.



### How does Diazinon work?

Diazinon works by affecting the nervous system. Exposure to diazinon affects the chemicals that make the nervous system function properly. This results in a loss of control over the nervous system that eventually leads to the death of the insect.



### How Might I Be Exposed to Diazinon?

Since diazinon is only used in agricultural settings, the main way in which the general public could be exposed is through eating food treated with diazinon. Diazinon may also be present in surface or well water as a result of run-off and movement through the soil from areas where diazinon is used in farming.

Diazinon exposure can also happen if you get it on your skin or breathe it in. Unless you work in an agricultural setting where diazinon is in use, being exposed in these ways is not likely.

NPIC General Fact Sheets are designed to provide scientific information to the general public. This document is intended to promote informed decision-making. Please refer to the Technical Fact Sheet for more information.

### What are Some Symptoms from a Brief Exposure to Diazinon?

Diazinon exposure affects the nervous system of insects, people and pets in the same basic way. However, the signs and symptoms from exposure may be different. Symptoms of diazinon exposure can happen within minutes or 12-24 hours after the exposure. The signs and symptoms from a brief exposure can last several days or even weeks. During this time, the body is replacing the chemicals needed for proper nervous system function.

Diazinon exposure, whether from ingestion, skin contact or inhalation can result in nervous system health effects. These effects may include watery eyes, runny nose, drooling, loss of appetite, coughing, urination, diarrhea, stomach pain and vomiting. Larger exposures can cause more severe signs and symptoms, including head and body tremors, muscle spasms or stiffness, muscle weakness or paralysis, rapid heart rate, difficulty breathing, seizures, convulsions or coma. Overall, diazinon is fairly low in toxicity when inhaled, ingested or when it gets on the skin, so minor exposures are not likely to cause severe symptoms. However, small exposures to diazinon can cause mild skin or eye irritation.

### What Happens to Diazinon When it Enters the Body?

Diazinon that gets inside the body by being eaten, breathed in or getting it on the skin is rapidly transported around the body in the blood to the organs. Once diazinon reaches the liver and kidneys, it can then be removed from the body by elimination in the urine and feces. Most of the diazinon that enters the body is changed into other forms of the chemical, or metabolized, before the diazinon-based compound is removed from the body. These diazinon-based compounds, known as metabolites, can be found in urine tests of exposed animals or people.

### Is Diazinon Likely to Contribute to the Development of Cancer?

After feeding laboratory animals high doses of diazinon for most of their lives, researchers found no evidence of cancer in the test animals. As such, the US Environmental Protection Agency has classified diazinon as a “not likely human carcinogen”.

### Has Anyone Studied Non-cancer Effects from Long-term Exposure to Diazinon?

Long-term exposure to diazinon in humans can change the normal level of chemicals in the nervous system without any noticeable effect. Animal studies have also shown that long-term exposure to high doses of diazinon can lead to pancreatic damage as well as some reproductive or developmental effects in mothers or their offspring.

### Are Children More Sensitive to Diazinon than Adults?

Animal studies have shown that young rats were more sensitive to the nervous system effects of diazinon than adult rats. In general, [children may be especially sensitive to pesticides](#). Also, children have diets and physical differences that may increase their exposure to diazinon.



### What Happens to Diazinon in the Environment?

Diazinon applied to soils can last for weeks or even months depending on the soil environment. Diazinon has the potential to dissolve in water, move through soils and contaminate groundwater. It was commonly found in drinking water sources before the phase-out of residential uses in 2004. Since the phase-out, diazinon has been detected in drinking water sources much less often.

Bacteria, sunlight and other chemical reactions break down diazinon in the environment over time into other chemicals. After diazinon has been applied, some of the diazinon can escape into the surrounding air, a process called volatilization. Diazinon can be taken up by plants and moved throughout. The amount of diazinon in or on plants will decrease over time as the diazinon is broken down by the plant and by the environment.



### Can Diazinon Affect Birds, Fish, or Other Wildlife?

Diazinon is very highly toxic to birds, bees and most other insects. Studies show that diazinon is moderately toxic to fish and amphibians, and is only slightly toxic to earthworms.

### Where can I get more information?

For more detailed information see the Diazinon Technical Fact Sheet or call the National Pesticide Information Center 7 days a week, between 6:30 AM and 4:30 PM Pacific Time (9:30 AM to 7:30 PM Eastern Time) at 1-800-858-7378 or visit us on the web at [www.npic.orst.edu](http://www.npic.orst.edu). NPIC provides objective, science-based answers to questions about pesticides.

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