

### What is d-phenothrin?

d-Phenothrin is an insecticide belonging to the pyrethroid family. Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers. d-Phenothrin is used in homes, commercial settings, gardens, pet products, and mosquito control programs.

d-Phenothrin was first registered in the United States in 1976. It is a colorless to yellow-brown liquid with a faint odor.

### What are some products that contain d-phenothrin?

d-Phenothrin is used in a variety of products to control a wide range of insects. d-Phenothrin can be formulated in insecticide products as aerosols, liquid sprays, and dusts. d-Phenothrin can also be used in products applied by aircraft or truck-mounted sprayers for mosquito control.

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 discuss a pesticide problem, please call 1-800-858-7378.

### How does d-phenothrin work?

d-Phenothrin can kill insects by direct contact or if they eat it. It disrupts their normal nervous system function. It is less toxic to mammals due to their higher body temperature, larger body size, and lower sensitivity to the chemical.

### How might I be exposed to d-phenothrin?

You can be exposed to d-phenothrin if you touch it, eat it, or breathe it in. As an example, it could be breathed in if a fine mist or dust containing d-phenothrin gets in the air you breathe. Exposure to d-phenothrin can be limited by reading and following label directions.



**Chrysanthemum flower**

### What are some signs and symptoms from a brief exposure to d-phenothrin?

d-phenothrin is low in toxicity when eaten, breathed in, or applied to skin or eyes. When d-phenothrin gets on the skin, it can cause skin sensations like tingling, itching, burning, or numbness at that spot. These sensations usually go away within 48 hours. d-Phenothrin can also be mildly irritating to skin and eyes. Reported symptoms from eating or breathing in d-phenothrin are rare, but can include nausea, vomiting, throat irritation, headaches, and dizziness.

d-Phenothrin can also affect pets if they eat, breath, or touch enough of it. Cats in particular may be more sensitive to this ingredient. d-Phenothrin can cause vomiting, diarrhea, excess salivation, twitching, tremors, or seizures if eaten or applied to the skin. d-Phenothrin can also cause allergic skin reactions and skin sensations.

### What happens to d-phenothrin when it enters the body?

In animal studies, d-phenothrin was rapidly absorbed when eaten, but poorly absorbed when applied to the skin. When fed to rats, d-phenothrin was broken down and excreted within 48 hours. In another study, about 96% of an oral dose was broken down and excreted within 6 days.

### Is d-phenothrin likely to contribute to the development of cancer?

The evidence from animal studies indicates that d-phenothrin does not cause cancer. The U.S. EPA classifies d-phenothrin as Not Likely to Be a Human Carcinogen by all routes of exposure.

### Has anyone studied non-cancer effects from long-term exposure to d-phenothrin

Yes, in some long-term studies in laboratory animals scientists observed changes among certain organ systems when exposed to high doses of d-phenothrin for long periods of time.

### Are children more sensitive to d-phenothrin than adults?

[Children may be especially sensitive to pesticides](#) compared to adults. It is currently unknown whether children have increased sensitivity specifically to d-phenothrin. When pregnant rats and rabbits were fed d-phenothrin, their offspring showed signs of sensitivity.



### What happens to d-phenothrin in the environment?

d-Phenothrin breaks down in the environment primarily through exposure to UV light. The half-life in the soil ranges from 1-2 days in upland conditions, and up to 2 months in flood conditions. In the air, d-phenothrin breaks down rapidly with a half-life of 38-72 minutes. On plant surfaces d-phenothrin has a half-life of less than 1 day. d-Phenothrin binds tightly to soil and is not very soluble in water, so it is unlikely to contaminate groundwater.

### Can d-phenothrin affect birds, fish, or other wildlife?

d-Phenothrin is practically non-toxic to birds, but very highly toxic to fish and other aquatic animals. d-Phenothrin is highly toxic to honey bees.

### Where can I get more information?

For more detailed information call the National Pesticide Information Center, between 8:00 AM and 12:00 PM Pacific Time (11:00 AM to 3:00 PM Eastern Time), Monday - Friday, at 1-800-858-7378 or visit us on the web at <http://npic.orst.edu>. NPIC provides objective, science-based answers to questions about pesticides.



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