

2,4-D - ToxFAQs™

What is 2,4-D?

2,4-D is the chemical 2,4-dichlorophenoxyacetic acid.

2,4-D is the active ingredient in many products used in the United States and throughout the world as an herbicide to kill weeds on land and in the water.



How can I be exposed to 2,4-D?

You may be exposed to 2,4-D when applying products that contain 2,4-D if you breathe it in or get it on your skin.

You may also be exposed to 2,4-D while walking or playing on very recently treated lawns, gardens, golf courses, parks, or other grassy areas.

When workers make 2,4-D or apply it to weeds, they may have higher exposures.

You are unlikely to be exposed to high levels of 2,4-D in food, water, or soil.

How can 2,4-D affect my health?

Respiratory (nose and lungs) and nervous system effects were seen in people who purposely or accidentally swallowed large amounts of 2,4 D. These serious effects are not likely to happen at the levels of 2,4-D that are usually found in the environment.

One way to learn about whether 2,4-D will harm people is to do studies on laboratory animals. Animals given large oral doses of 2,4-D showed harmful effects on the blood, liver, kidney, and thyroid gland. These doses were generally much higher than levels usually found in the environment.

The levels of 2,4-D found in the environment are lower than levels known to cause health problems.

How can 2,4-D affect children?

Some studies of animals given 2,4-D during pregnancy found low body weights in the offspring. Some changes in behavior were also seen in the offspring. However, the doses given to the animals were much higher than levels that would normally be a human exposure.

2,4-D

Can 2,4-D cause cancer?

A few studies of farmers or professional applicators of herbicides containing 2,4-D reported increased risk of lymphatic system (part of the immune system) cancers, especially Non-Hodgkin's lymphoma (NHL). These workers were exposed to higher amounts of 2,4-D than most people.

2,4-D did not appear to cause cancer in studies of rats, mice, or dogs given 2,4-D orally for up to 2 years.

The U.S. Environmental Protection Agency (EPA) considers 2,4-D to be not classifiable as to human carcinogenicity (causing cancer in people) because they do not have enough human and animal data. The International Agency for Research on Cancer considers 2,4-D to be possibly carcinogenic to humans.

Can I get a medical test to check for 2,4-D?

Tests are available to measure levels of 2,4-D in blood, urine, and body tissues. **These tests are not usually available in the doctor's office.** However, a sample taken in the doctor's office can be sent to a special laboratory. Because 2,4-D leaves the body rather quickly, **these tests are useful only for a few days after the exposure.** These tests cannot predict if you will develop health problems from an exposure to 2,4-D. If you think you have been exposed to 2,4-D, talk to your doctor or nurse right away.

How can I protect myself and my family from 2,4-D?

Workers involved in the production or use of 2,4-D should take protective measures to limit breathing and skin exposure to 2,4-D.

Stay away from people when they are using 2,4-D.

Read and follow all directions and precautions when using 2,4-D products and protect yourself with clothes.

Do not walk barefoot on an area that has been recently sprayed with products containing 2,4-D.

Do not let children or pets play in areas that have recently been sprayed.



For more information:

Call **CDC-INFO** at 1-800-232-4636, or submit your question online at:

<https://wwwn.cdc.gov/dcs/ContactUs/Form>

Go to ATSDR's Toxicological Profile for 2,4-D at:

<https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=1481&tid=288>

Go to ATSDR's Toxic Substances Portal: <http://www.atsdr.cdc.gov/substances/index.asp>

Find & contact your ATSDR Regional Representative at: http://www.atsdr.cdc.gov/DRO/dro_org.html