Dinitrocresols - ToxFAQs™

What are dinitrocresols?

Dinitrocresols are a group of man-made chemicals that do not occur naturally in the environment. There are 18 different dinitrocresols. The most relevant to human health and the environment is 4,6-dinitro-o-cresol (DNOC).

DNOC is a yellow solid with no smell. It dissolves slightly in water. Historically, it was used as a pesticide and weed killer. The EPA banned its use as a pesticide in 1991. In the 1930s, DNOC was used in diet pills for weight loss. However, due to bad effects on the people's health, its use was stopped. DNOC is now primarily used as an intermediate in pesticide manufacturing.

What happens to dinitrocresols in the environment?

In air, DNOC does not travel far from its source. It can be removed from the air by rain and snow. It does not easily evaporate into the air from water or soil. In most soil types, DNOC sticks to the soil and does not move very deep into the ground. It can runoff the land into nearby water sources where it will stick to the particles in the water that settle into the bottom sediment. Bacteria in the ground and water break DNOC down slowly. DNOC is not expected to accumulate (build up) in fish or other water animals.

How can I be exposed to dinitrocresols?

You may be exposed to dinitrocresols by drinking water or eating food that contains these chemicals. You may also be exposed by breathing contaminated air or touching contaminated soil near a DNOC-burning incinerator, manufacturing and formulating plants, or DNOC containing waste site.

How can dinitrocresols affect my health?

Most of the information on the health effects of dinitrocresols comes from old studies on patients who were taking diet pills containing DNOC before it was banned for this use.

At high levels, dinitrocresols increases heart rate, breathing rate, and body temperature.

Exposure to high levels of DNOC for short periods may cause convulsions, unconsciousness, and death. Exposure to lower levels may result in an increased basal metabolic rate (the rate that you use energy at complete rest), increased sweating, weight loss, heart rate, breathing rate, and body temperature.

Other effects from DNOC exposure may include difficulty breathing, headache, drowsiness, dizziness, and rashes. Yellowing of skin and the whites of the eyes may also occur.

Dinitrocresol

Can dinitrocresols cause cancer?

No studies have looked at cancer in humans or animals after exposure to dinitrocresols.

The U.S. Department of Health and Human Services (DHHS) has not determined whether dinitrocresols can cause cancer in people.

The U.S. Environmental Protection Agency (EPA)r has not determined whether dinitrocresols can cause cancer in people.

The International Agency for Research on Cancer (IARC) has not determined whether dinitrocresols can cause cancer in people.

Can I get a medical test to check for dinitrocresols?

There are tests available to measure DNOC or its breakdown products in blood and urine. These tests may require special equipment, and they may not be available at your doctor's office. They also cannot tell you if your health will be affected.

How can I protect myself and my family from dinitrocresols?

Most people do not need to take any special steps to avoid coming in contact with dinitrocresols. Keep children from playing in areas where pesticides were used in the past and near hazardous waste sites to avoid coming in contact with dinitrocresols.

Follow your state's health advisories that tell you about whether it is okay to eat fish or wildlife caught in contaminated areas.

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 Dinitrocresols: https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=1025&tid=218

Go to ATSDR's Toxic Substances Portal: https://wwwn.cdc.gov/TSP/index.aspx

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