

Chlorophenols - ToxFAQs™

What are chlorophenols?

Chlorophenols are a group of man-made chemicals. There are different types of chlorophenol chemicals. Most chlorophenols are solid at room temperature. They have a strong taste and smell like medicine. Small amounts can be tasted in water.

Chlorophenols are used in a number of industries and products. They can be used for making pesticides, pharmaceuticals, and dyes. Some are used as disinfectants and to kill algae and fungus.



What happens to chlorophenols in the environment?

Chlorophenols can get into the environment when they are being made or being used as pesticides. Most chlorophenols released into the environment go into water. Small amounts of chlorophenols can enter the air.

In the air, sunlight helps destroy chlorophenols and rain washes them out of the air. Chlorophenols stick to soil and sediments (the dirt deposits) at the bottom of lakes, streams, and rivers. Low levels of chlorophenols in water, soil, or sediment are broken down and removed from the environment in a few days to weeks by microorganisms (natural types of bacteria).

How can I be exposed to chlorophenols?

Most people are not likely to be exposed to chlorophenols. It is possible that you could be exposed to very small amounts of chlorophenols from eating contaminated food or water or breathing contaminated air.

How can chlorophenols affect my health?

Chlorophenol exposure affects the nervous system.

Workers who were exposed to high levels of chlorophenols experienced tremors, convulsions (spasms), and central nervous system depression (drowsiness, lack of coordination). Animals that ate large amounts of chlorophenol or were exposed to it on their skin also developed nervous system problems.

Animals given high levels of chlorophenols in their food or water also developed liver damage and lost weight. When animals drank water with 2,4-dichlorophenol, their immune systems did not show a normal immune response when tested. Pregnant animals that were fed chlorophenols gave birth to fewer pups. Male mice fed chlorophenol for a short period of time had more abnormal sperm.

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Chlorophenols

Can chlorophenols cause cancer?

Some studies have shown that people exposed to chlorophenols for a long time may develop certain types of cancer. However, these people were also exposed to other chemicals at the same time. That makes it hard to tell which chemical may have led to the cancer.

Rats and mice that ate one type of chlorophenol (2,4,6-trichlorophenol) for a long period of time developed leukemia (blood cancer) and liver cancer.

The [U.S. Department of Health and Human Services \(DHHS\)](#) considers 2,4,6-trichlorophenol to be reasonably anticipated to be a human carcinogen (causing cancer in people).

The [U.S. Environmental Protection Agency \(EPA\)](#) has classified 2,4,6-trichlorophenol as probably carcinogenic to humans.

The [International Agency for Research on Cancer \(IARC\)](#) has classified 2,4,6-trichlorophenol as possibly carcinogenic to humans.

Can I get a medical test to check for chlorophenols?

There is no test to show if you have been exposed specifically to chlorophenols. Chlorophenols and their breakdown products can show up in urine tests. However, there are several other chemicals that also break down to chlorophenols in your body. This test cannot tell the exact amount you were exposed to or predict whether you will have health problems. If you think you have been exposed to chlorophenols, call your doctor, nurse, or poison control center.

How can I protect myself and my family from chlorophenols?

Most people don't need to take any special steps to avoid chlorophenols in their daily lives. Keep children from playing in areas where pesticides are used and near hazardous waste sites to avoid coming in contact with chlorophenols. Always check the labels on household products and store them safely in their original containers away from children.

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 chlorophenols: <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=941&tid=195>

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

