

Chloromethane - ToxFAQs™

What is chloromethane?

Chloromethane, also called methyl chloride, is a colorless gas that can be manmade or occur naturally. It is found all over the environment since it is produced by rotting wood, marine animals, and fungus. It is manufactured and used in products such as silicones, and can also be formed by burning manmade products, such as cigarettes or plastics. More than 50 years ago, chloromethane was used to cool refrigerators but it was replaced with other chemicals once it was discovered that chloromethane was a health risk to people if it leaked from the refrigerator.



What happens to chloromethane in the environment?

- Chloromethane enters the air primarily from natural sources and to a lesser extent from human activity (e.g., plastic and vegetation burning).
- It can last in the air for years and can be transported through the air.
- Chloromethane is released into rivers and lakes; however, most of it evaporates quickly from water.
- In soil, chloromethane usually evaporates into the air or washes into the groundwater below.
- Chloromethane does not accumulate in plants, animals, or fish.

How can I be exposed to chloromethane?

- Most people breathe in chloromethane at low levels, but if you are in an urban area, you may breathe in more.
- Chloromethane found in soils can become a vapor and enter your home usually through a basement; this is known as vapor intrusion.
- If you live near a hazardous waste site or work with chloromethane, you may be exposed to higher levels when compared to the general public.
- If you smoke cigarettes or own an old refrigerator that uses chloromethane as a refrigerant, you can be exposed if it leaks.
- Drinking water may contain small amounts of chloromethane.
- Skin contact with chloromethane is possible from contaminated water or soil, but is also unlikely.

General population exposure to chloromethane is expected to be low. Individuals who smoke cigarettes, live near hazardous waste sites, or work with chloromethane may be exposed to higher levels in air.

How can chloromethane affect my health?

Chloromethane can affect your brain and nervous system if you breathe in a large amount. It may cause dizziness, headaches, difficulty speaking, loss of consciousness, or coma.

Breathing large amounts of chloromethane may also cause liver and kidney problems. Exposure to chloromethane in the air can also affect your heart rate and blood pressure.

Studies in animals show that exposure to chloromethane in the air may also cause reproductive effects like decreased male fertility and poorly formed sperm. Inhalation exposure to high concentrations during pregnancy also caused delayed bone formation and heart defects in some animal species, but not others.

Chloromethane

Can chloromethane cause cancer?

Information on whether chloromethane can cause cancer is limited. Some studies have reported that certain genetic factors may make some people more likely to get cancer if they are exposed to chloromethane. However, there is not enough information to be sure.

The [Department of Health and Human Service \(HHS\) National Toxicology Programs \(NTP\)](#) has not evaluated the carcinogenic potential of chloromethane.

The [U.S. Environmental Protection Agency \(EPA\)](#) has determined that chloromethane is not classifiable as to human carcinogenicity.

The [International Agency for Research on Cancer \(IARC\)](#) has determined that chloromethane is not classifiable as to human carcinogenicity.

Can I get a medical test to check for chloromethane?

Tests for chloromethane exposure are not reliable. Instead, if a suspected exposure above background levels was expected (e.g., potential exposure at work), medical professionals may evaluate you for symptoms of chloromethane exposure, such as headaches, dizziness, or a sweet smell on your breath. If you think you have been exposed to chloromethane, call your doctor, nurse, or poison control center right away.

How can I protect my family from chloromethane exposure?

- Avoid exposure to air, water, or dirt contaminated with high amounts of chloromethane.
- Do not let children play near factories or hazardous waste sites where chloromethane could be released.
- If you work with or handle chloromethane, wear personal protective equipment to minimize your contact with the chemical. Do not let chloromethane stay on your skin or get in your eyes.
- To lower exposure in your house, do not smoke.
- If you have a refrigerator that is very old, it may use chloromethane. Consider replacing the refrigerator with a newer model, particularly if you notice any refrigerant leaking.

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 Chloromethane:

<https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=587&tid=109>

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

