

Chloromethane - ToxFAQs™



What is chloromethane?

Chloromethane, also called methyl chloride, 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 because it was learned 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 people in urban areas 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.
- People living near hazardous waste sites or who work with chloromethane may be exposed to higher levels when compared to the general public.
- People who smoke cigarettes or who own old refrigerators that use chloromethane as a refrigerant can be exposed if it leaks.
- You might drink or swallow small amounts of chloromethane that is in clean drinking water.
- Skin contact with chloromethane is possible from contaminated water or soil, but is also unlikely.

Cigarette smoking, living near hazardous waste sites, or working with chloromethane can expose you to dangerous 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.

Exposures to large amounts of chloromethane may also cause liver and kidney problems. It can also affect your heart rate and blood pressure. Individuals have died after inhaling chloromethane that leaked from old refrigerators.

Chloromethane can be very irritating if it is left on your skin or if it gets into your eyes.

Studies in animals show that chloromethane exposure may cause reproductive effects like decreased fertility and poorly formed sperm. It is unknown if developmental effects seen in animals, such as serious bone problems, would be seen in humans.

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 National Institute for Occupational Safety and Health \(NIOSH\)](#) considers chloromethane a potential occupational carcinogen.

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

The [International Agency for Research on Cancer \(IARC\)](#) has determined 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, 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.

Want 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](#)

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

If you have any more questions or concerns, you can also find & contact your ATSDR Regional Representative at http://www.atsdr.cdc.gov/DRO/dro_org.html