

# Acetone - ToxFAQs™



## What is acetone?

Acetone is a man-made chemical that can also be found naturally in the environment. It is a colorless liquid with a distinct smell and taste. It evaporates easily in air, is flammable, and dissolves in water. Acetone is used by humans to dissolve other substances and produce plastics, paints and coatings, cleaning products, and personal care products. Other man-made sources of acetone are vehicle exhaust, tobacco smoke, and landfills. Acetone is also released naturally by plants, trees, insects, microbes (germs), volcanic eruptions, and forest fires, and can be found naturally in many fruits and vegetables. Low levels of acetone are produced naturally by the human body, and some health conditions can cause these levels to increase.

## What happens to acetone in the environment?

- Most acetone in the environment exists as vapor in the air, and it can travel long distances this way.
- About half of the total acetone in air is broken down by sunlight or other chemicals within 22 days.
- Acetone moves from the air into water and soil by rain and snow, and moves quickly from water and soil back into the air. It does not bind to soil or build up in animals.
- Acetone can enter surface water as manufacturing waste and seep into groundwater from landfills.
- Acetone is broken down by microbes or chemicals in water and soil.

**A strong scent of acetone and irritation in your eyes, nose, and throat are warning signs of moderate exposure. Noticing these signals can help you avoid exposure to damaging levels of acetone.**

## How can I be exposed to acetone?

- Low levels of acetone are in the air, so most people are exposed to very small amounts through breathing, but these are rarely at levels that are harmful to your health.
- Workers in certain industries, such as commercial painting, plastic manufacturing, household cleaning, and beauty salons, may be exposed by breathing air with higher levels of acetone in the workplace.
- You may be exposed by drinking water or eating food that is contaminated with acetone.
- Exposure may occur by smoking tobacco products or breathing in secondhand tobacco smoke.
- You may be exposed to acetone by using products that contain acetone (such as nail polish remover) or being in enclosed environments where these products are used.

## How can acetone affect my health?

If you are exposed to acetone, it enters your blood, which carries it to all organs in the body. When there is only a small amount, your liver breaks it down into harmless chemicals. Breathing or swallowing high amounts of acetone over a short period of time can cause headaches, confusion, nausea, racing pulse, changes in the size and amount of blood cells, unconsciousness (passing out), or coma. Breathing a moderate to high amount of acetone can also cause nose, throat, lung, and eye irritation. Skin contact with acetone can cause your skin to become dry, irritated, and cracked. The effects of long-term acetone exposure have been mostly studied in animals, and include kidney, liver, and nerve damage; birth defects; and male infertility. It is not known if long-term exposure to acetone affects people in these ways.

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## Can acetone cause cancer?

The [U.S. Environmental Protection Agency \(EPA\)](#) has concluded that there is not sufficient evidence to assess whether acetone is carcinogenic (causing cancer) to humans.

The [International Agency for Research on Cancer \(IARC\)](#) and [National Toxicology Program \(NTP\)](#) have not classified acetone for carcinogenicity.

## Can I get a medical test to check for acetone?

There are tests available to measure the amount of acetone in your breath, blood, and urine. While these tests can tell you how much acetone is in your body, it's important to remember that the amount of acetone that occurs naturally in the body varies from person to person. These tests cannot predict whether you will experience any health problems as a result of the exposure.

Tests for acetone exposure must be performed within 2–3 days after you have been exposed, because acetone leaves your body within a few days of entering it. These tests are usually not performed at your doctor's office; your doctor takes blood or urine samples and sends them to a testing laboratory.

## How can I protect my family from acetone exposure?

**Always follow directions on the label when using and storing products that contain acetone.**

- Do not use products that contain acetone near open flames or hot surfaces.
- Store products that contain acetone in a cool, well-ventilated place, away from direct heat.
- If you spill a product that contains acetone, open a window to make sure you get proper ventilation and fresh air as the acetone evaporates.

**Always supervise children and when using consumer products that contain acetone.**

- Never allow children to drink a product that contains acetone. Keep these products away from children.

**If you or a member of your household smokes cigarettes, ensure proper ventilation in your home.**

- Avoid smoking tobacco products inside if possible.
- Open windows when possible to reduce the concentration of acetone in the air in your home.

## 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 Acetone: <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=5&tid=1>

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](http://www.atsdr.cdc.gov/DRO/dro_org.html)

