

Lead - ToxFAQs™

What is lead?

Lead is a metal found naturally in the earth's crust. It can be found in all parts of our environment, including air, water, and soil. Lead can combine with other chemicals to make different compounds.



Lead is used in the production of batteries, ammunition, and metal products (solder and pipes). Because of health concerns, the use of lead in paints, ceramic products, caulking, and pipe solder has been dramatically reduced. The use of lead as an additive to automobile gasoline was banned in 1996 in the United States.

What happens to lead in the environment?

- Lead is an element, so it does not break down.
- When lead is released into the air, it may be transported long distances before it lands and stays on the ground.
- Once on the ground, lead can often stick to soil particles.
- Lead in soil can get into groundwater, but the amount of lead that moves into groundwater will depend on the lead compound and soil type.

How can I be exposed to lead?

- Eating food or drinking water that contains lead.
- Drinking water from pipes that were soldered with lead can cause exposure.
- Spending time or living in homes with lead-based paints can result in exposure when the paint breaks down and forms dust, which can get on your hands, or into your mouth and nose and be swallowed.
- Spending time in areas where the soil is contaminated with lead.
- Working in a job where lead is used or participating in certain hobbies where lead is used, such as making stained glass.
- Using healthcare products from other countries, alternative treatments, or folk remedies.

Lead can cause health problems in almost every organ and system in your body.

How can lead affect my health?

The effects of lead are the same whether it enters the body by breathing it in or eating it. Lead can affect almost every organ and system in your body. The nervous system is the main target for lead poisoning in children and adults. Long-term exposure can result in decreased learning, memory, and attention, and weakness in fingers, wrists, or ankles. Lead exposure can cause anemia (low iron in the blood) and damage to the kidneys. It can also cause increases in blood pressure, particularly in middle-aged and older individuals. Exposure to high lead levels can severely damage the brain and kidneys and can cause death. In pregnant women, exposure to high levels of lead may cause a miscarriage. In men, it can cause damage to reproductive organs.

Lead

How can lead affect children?

Children are more vulnerable to lead poisoning than adults because their nervous system is still developing. Children can be exposed to lead in their environment and before birth from lead in their mother's body. At lower levels of exposure, lead can decrease mental development, especially learning, intelligence, and behavior. Physical growth may also be decreased. A child who swallows large amounts of lead may develop anemia, severe stomachache, muscle weakness, and brain damage. Exposure to lead during pregnancy can also result in premature births. Some effects of lead poisoning in a child may continue into adulthood.

Can lead cause cancer?

Several agencies and organizations both in the United States and internationally have reviewed studies and made an assessment about whether lead can cause cancer.

- The Department of Health and Human Services (HHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens (causing cancer in people).
- The U.S. Environmental Protection Agency (EPA) has classified lead as a probable human carcinogen.
- The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans, and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.

Can I get a medical test to check for lead?

A blood test is available to measure the amount of lead in your blood. Blood tests are commonly used to screen children for lead poisoning. Your doctor can draw blood samples and send them to appropriate laboratories for analysis. If you think you or anyone in your family has been exposed to lead, contact your doctor, nurse, or poison control center.

How can I protect my family from lead exposure?

- Avoid exposure to sources of lead.
- Do not allow children to chew or mouth surfaces that may have been painted with lead-based paint.
- If your home contains lead-based paint (built before 1978), or if you live in an area contaminated with lead, wash children's hands and faces often to remove lead dusts and soil, and regularly clean the house to remove lead dust and lead tracked in soil.
- Certain water pipes may contain lead, so if you know that pipes have lead solder, you should avoid drinking from that source.
- Check for lead in some products such as toys and jewelry and avoid such products.
- Lead is sometimes in candies imported from other countries or traditional home remedies; find out if yours has any lead and avoid using these products or giving them to children.
- You can learn more about preventing lead poisoning here: <https://www.cdc.gov/nceh/lead/faqs/lead-faqs.htm>

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 Lead](#)

CDC Lead Poisoning Prevention Program <https://www.cdc.gov/nceh/lead/default.htm>

Environmental Protection Agency <https://www.epa.gov/lead/protect-your-family-exposures-lead>

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

