

Lead in Soil

What is lead?

Lead is a naturally occurring, bluish-gray metal present in small amounts in the earth's crust. It is found in all parts of our environment and in people. When lead is released into the air, it may travel long distances before settling to the ground. When lead contacts soil, it usually sticks to soil particles. Lead never breaks down. Common uses include making batteries, ammunition, metal products, and x-ray shielding.

Health concerns

Children exposed to lead may have more health, learning, and behavior problems. Adult exposure to lead may result in high blood pressure, kidney damage, and fertility problems.

There is no safe level of lead exposure. If you are concerned about being exposed to lead, consider having a blood lead test. Blood lead testing is the best way to find out if you are being exposed to lead. Information about lead poisoning prevention can be found on the Minnesota Department of Health website at: [Lead \(https://www.health.state.mn.us/communities/environment/lead/index.html\)](https://www.health.state.mn.us/communities/environment/lead/index.html)

Main sources of lead exposure:

- Soil lead
- Lead-based paint
- Dust
- Folk-medicine
- Food
- Water

How does lead get into soil?

- Past use of leaded paint: Lead in old paint chips falls to the ground and becomes mixed with the soil near house foundations and other painted structures. Wind and water erosion can move lead contaminated soil into other areas of the property
- Past use of leaded gasoline: Until the mid-1980s, lead released into the air from vehicle exhaust fell into the soil and is still found near major roadways or intersections in urban areas
- Past and current industrial lead use
- Lead-arsenic compounds once used in pesticides and fertilizers

How can people be exposed to lead in soil?

While it is possible to inhale contaminated dust, accidental ingestion of contaminated soil is the main exposure concern. Normally, most dust particles are filtered by the respiratory system and swallowed. Accidental ingestion of contaminated soil may occur when ordinary activities leave soil residue on fingers and hands, increasing the chance that contaminants could be swallowed.

Children who live and play in a contaminated area can have more exposure than adults. Young children are more likely to be exposed because of their frequent hand-to-mouth activity.

Dust from contaminated soil can be tracked into the home on shoes and pets. The dust can end up on indoor surfaces and toys that children touch and put in their mouths.

How to reduce exposure to lead in soil

Give children a safe play area

- Play areas and gardens should always be located away from buildings and fences with peeling or chipping paint.
- Build a sandbox with a bottom and fill it with clean sand. Cover it when not in use to keep out soil dust and other contaminants.
- Cover bare contaminated soil with sod, wood chips, mulch, sand, or with a permanent surface such as a deck or patio.

Keep hands clean

- Wash children's hands and faces frequently. Clean toys or objects children put in their mouths.
- Wash hands before feeding children, eating, or drinking.

Reduce dust in the house

- Remove shoes and store them in the entryway of your home to prevent tracking soil inside.
- Mop floors, wash windowsills, and dust with a damp cloth. Check around windows for chipping or peeling old paint, and repair if needed.
- Change the furnace filter every three months.

Reduce outdoor activities that stir up dust

- Seed or sod bare areas of your yard. Bushes and grass help keep soil in place and reduce the amount of dust in the air.
- Minimize mowing over areas of sparse lawn during dry weather.
- Avoid digging or disturbing soil. Keeping the soil moist will reduce dust.

Take special care when gardening or harvesting produce

- Use gardening gloves to prevent ingestion of soil residue from fingers or hands.
- Wash all plants used for traditional or cultural purposes carefully.
- Thoroughly wash and peel home-grown produce before eating or cooking them. If possible, grow produce in raised bed gardens filled with clean soil.

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