



## Department of Health

Bureau of Environmental  
Health & Radiation  
Protection

# Lead Contamination in Gardens

Learn about the harmful effects of lead and tips on how to safely garden in soil that contains lead.

### What is lead?

Lead is a metal found in the earth's crust that is harmful to humans. In the past, lead was used in gasoline, paints, batteries, and ammunition.

Once lead is released into the environment, it sticks to dirt/soil and stays there for a long time. If soil that has lead in it is uncovered and open to the air, lead dust can enter the air. This dust can easily be breathed or swallowed.

### How can lead from garden soil enter my body?

Gardening can disturb soil and expose it to open air. This can create small amounts of lead dust which can easily be breathed in or swallowed. This dust can also fall onto above-ground vegetables like lettuce and spinach. In general, plants absorb very little lead into their tissues except for certain root vegetables like beets, carrots, turnips, radishes, potatoes, and rutabagas.

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Young children and toddlers tend to put objects and their fingers into their mouths. Children who help play in the garden may eat soil or eat plants from the garden that have not been washed.



### What kind of health problems can lead cause?

When people become sick from lead getting into their body it is called lead poisoning. The harmful effects of lead are the same whether you breathe it or swallow it. Lead can damage every organ system in the body, but its main targets are the brain, spinal cord, and nerves.

Some signs and symptoms of lead poisoning can include:

- Stomach pain.
- Poor appetite.
- Sleep disorders like insomnia.
- Kidney damage.
- Hearing problems.
- Damage to the male reproductive system.
- Memory problems.

### How can I protect myself and my family while gardening?

It is important to remove or contain sources of lead in and around the home. Test your garden soil if there are concerns that it contains lead.

***Fresh fruits and vegetables are an important part of your family's diet, and fresh produce from your very own garden can help provide vitamins and minerals. Good nutrition may reduce some of the toxic effects of lead.***



Follow the tips below to be sure that you can enjoy gardening safely if you know that your soil has been contaminated with lead:

- Always wash your hands with soap and water or take a shower after gardening to remove lead dust and soil. This is especially important before meals since keeping your hands clean will help prevent you from eating lead dust.
- Watch children in the garden closely and help them wash their hands when they are finished.
- Remove outerwear like shoes, gloves, and jackets outside home and bag up. Remove other soiled clothes, just inside the home, and bag up to keep from tracking soil inside. Wash your hands and if possible, shower when you come inside.
- Regularly clean your home of dust and soil that is tracked inside. Door mats can help lower the amount of soil that is tracked into your home. You can also remove your shoes before you enter your house.
- Plant your garden away from roads, driveways, and old painted structures that may have used lead-based paint.
- Grow crops in raised beds using lead-free soil.
- Plant crops like tomatoes, peppers, squash, cucumbers, peas, beans, corn, melons, strawberries, etc.
- Limit planting leafy vegetables like lettuce, spinach, and kale. If you grow leafy vegetables, remove the outer leaves and discard. Do not compost the outer leaves.
- Avoid planting root crops like carrots, beets, turnips, potatoes, and radishes. If you grow root crops, scrub them well and peel them before eating. Do not compost the peels.
- Wash all vegetables with a 1% vinegar in water solution (use 1 or 2 ounces of vinegar per gallon of water). Use a stiff brush to scrub vegetables before eating.
- Test your soil's pH. Lime your soil as recommended by the test to get a pH of 6.5. Lime can be found at farm and garden supply stores.

## References

Agency for Toxic Substances and Disease Registry (ATSDR). 2020. [Lead ToxFAQs](#).

## Where can I get more information?

Ohio Department of Health  
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