

What to Know About Soil Lead Test Results

This fact sheet provides information about how to interpret the results of soil lead testing, what those results could mean for possible exposure to lead and points you towards additional resources to learn more.

Your soil was tested with an X-ray fluorescence (XRF) instrument, which measures how much lead is in the soil sample. Lead in soil is measured in parts per million (ppm).

Here are some things to keep in mind about your soil test result:

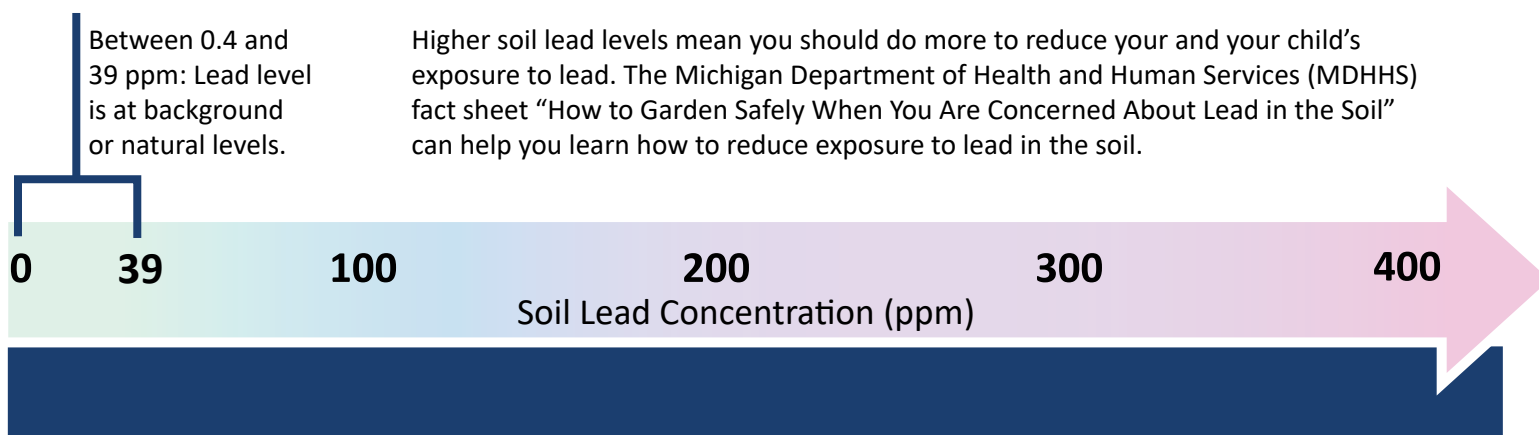
- Lead is naturally present in soil. In Michigan, a naturally occurring level (also called the background level) is commonly between 0.4 ppm and 39 ppm.
- A test result that is higher than 39 ppm does not necessarily mean there has been contamination or that there is a risk to your health.
- You could see a range of results for different samples, or even from one sample, because:
 - The amount of lead in soil in one part of your yard could be different than the amount of lead in another part of your yard.
 - The amount of lead in one part of one sample could be different than another part of that sample.
 - The condition of the soil, such as the amount of water or organic matter in the sample, could affect how much lead is detected.
 - The samples were taken from different depths. Amounts of lead can be different at the surface than deeper in the ground.



Soil test results and lead exposure

When soil lead levels are higher, the possibility that you will be exposed to lead is higher, too.

When you garden, you can accidentally swallow soil. Most often, this can happen because you accidentally swallow lead that is in the soil that gets on your hands or homegrown fruits and vegetables. In general, the more lead there is in soil or the more often people contact that soil through activities such as gardening, the more lead they can swallow, and their blood lead levels may increase.



Why do soil lead levels matter to health?

Swallowing lead can cause health problems and can be a serious issue for children because their bodies and nervous systems are still developing. Too much lead can cause problems with:

- Learning
- Behavior
- Speech
- Hearing

For a more complete list about possible health effects of lead exposure, visit MDHHS's webpage, "[Lead and Your Health](https://bit.ly/lead-and-health)" (URL: bit.ly/lead-and-health).

To limit the amount of lead getting into your body or your child's body, **MDHHS recommends you always use gardening practices that help limit contact with the soil.** The MDHHS fact sheet, "How to Garden Safely When You Are Concerned About Lead in the Soil" provides suggested practices for keeping lead out of your body. Those practices include wearing gloves while gardening, mulching to reduce soil and dust getting on fruits and vegetables, locating gardens away from heavily traveled streets and avoiding tracking soil into the house.



More resources

Urban Gardening

For more information about lead in soil, visit the following websites:

- Environmental Protection Agency. 2011. [Reusing Potentially Contaminated Landscapes: Growing Gardens in Urban Soils](https://bit.ly/EPAUrbanSoils) (URL: bit.ly/EPAUrbanSoils)
- Michigan State University Extension. 2022. [Lead Concerns for Gardeners: Mitigating Risk](https://bit.ly/MSULeadandGardening) (URL: bit.ly/MSULeadandGardening)

Soil Testing

One organization that provides soil lead testing is Pennsylvania State University. You can find the fee schedule and contact information on the [PSU Environmental Soil Testing website](https://agsci.psu.edu/aasl/soil-testing/environmental) (URL: agsci.psu.edu/aasl/soil-testing/environmental). (There may be other labs that offer soil testing. MDHHS does not endorse this lab or any other.)

Lead Exposure and Children

For more information on blood lead levels visit the Center for Disease Control and Prevention's webpage on [Blood Levels in Children](https://bit.ly/Child-Lead-Blood) (URL: bit.ly/Child-Lead-Blood).

For more Michigan-specific information about lead testing, lead exposure and blood lead testing, visit these MDHHS websites:

- For information about [blood lead tests](https://michigan.gov/mileadsafe/learn/blood-lead-testing) (URL: michigan.gov/mileadsafe/learn/blood-lead-testing).
- For information about [lead exposure and abatement](https://michigan.gov/mileadsafe) (URL: michigan.gov/mileadsafe).

If you have any questions about lead in the soil around your home, please call the MDHHS Environmental Health Hotline at 800-648-6942.

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