



SOIL LEAD STUDY



Project Background

- The Soil Lead Study is a project that works with residents in Detroit, Hamtramck, and Highland Park to understand how to reduce the amount of lead that residents are exposed to through their soils. The results below are based on a study of 142 samples of typical Detroit soils.
- The overall amount of lead found within soil is known as the "total lead". Total lead is different from "bioaccessible lead," which is the specific type of lead in soil that can be unsafe for human health. Bioaccessible lead has an active effect when introduced into the body. We can reduce the amount of lead that is bioaccessible by focusing on the overall chemistry of soil. Changing our soil's chemistry can turn bioaccessible lead into forms that are less harmful.

What We Learned

- Higher organic matter content (1%) decreased bioaccessible lead by ~8.6% on average
- Lower soil pH (0.1) decreased bioaccessible lead by ~10.7% on average
- The addition of controlled amounts of bone meal resulted in an average 9.8% decrease in bioaccessible lead
- With the addition of controlled bone meal, child blood-lead levels may decrease by ~0.1-1.0 ug/DL

What Can You Do?

- Cover bare soil with a physical barrier, like mulch, grass, clean soil, and/or compost
- Reduce the amount of lead in the dust in your home by:
 - Taking shoes off in the house
 - Mopping floors frequently
 - Vacuuming floors with a HEPA filter
 - Wiping surfaces with a wet cloth
 - Painting over chipping paint, especially if your home was built before 1978 because the paint can be lead-based

Why Do We Care?

- There are no safe levels of lead that can be in the human body, even if they are below the EPA standard for soil of 400 ppm. Our study works towards reducing this soil toxicity and we thank our anonymous participants for their contributions!
- The most common way that soil enters our bodies is through house dust. Typically, soil makes up about 1/2 of indoor dust
- There are an estimated 11,210 occupied parcels of land in Detroit, Hamtramck, and Highland Park that were identified as high-need in our study. We are working diligently to bring solutions to high-need areas. Reach out if you'd like to support our work!



Contact Us!

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