

Safe Gardening in New York City

How to Reduce Your Exposure to Contaminated Soil

Gardening is a great way to spend time outside, be active and grow fresh fruits and vegetables. Unfortunately, garden sites in cities may contain chemicals or other pollutants in the soil. These contaminants may be in the soil naturally or may have come from past activities such as manufacturing, construction and pesticide use. Know the health risks of contaminated soil and follow these tips to safely grow and eat plants.



Sources of Contaminated Soil

Common chemicals and pollutants in New York City's soil include polycyclic aromatic hydrocarbons (PAHs), pesticides and metals such as lead and arsenic.

Soil is more likely to be contaminated if it is near:

- Old structures painted with lead paint*
- Busy roads or highways
- Elevated train lines
- Bridges
- Landfills*
- Gas stations*
- Car repair shops*
- Dry cleaners*
- Power plants*
- Other manufacturing or industrial areas*

*Existing or sites where they once existed

Exposure and Health Risks

You can become exposed to chemicals or pollutants in soil by:

- Eating food grown in contaminated soil.
- Putting your hands in your mouth after touching contaminated soil or soil-covered surfaces.
- Breathing in dust from digging in contaminated soil.

Contaminated soil can pose different health risks depending on the type of chemicals or pollutants in the soil, the length of time exposed and the health of the person exposed. Young children are at higher risk because they are still developing, and are more likely to put their hands in their mouths and swallow soil.



Tips for Safe Urban Gardening

- Wear gloves while gardening.
- Use clean soil and compost. Consider testing if using existing soil.
- Use raised garden beds (i.e., boxes containing clean soil that are built over existing soil). The boxes should be built with untreated and unpainted wood, stone or concrete. Place a layer of semipermeable landscape fabric on top of the original soil before adding clean soil.
- Use ground cover (e.g., wood chips, mulch, grass) on any areas with exposed urban soil (e.g., play areas, seating areas, pathways). Ground cover helps reduce exposure to the soil underneath.



- In the fall or spring, add compost to the top of each raised garden bed and spread new ground cover on areas with exposed soil if needed.
- Control pests safely. If you use pesticides, only use ones that have been approved for the plant on which you apply it. Apply the pesticide by carefully following all the instructions on the label.
- After gardening
 - Wash your hands with soap and water and have children who play or work in the garden do the same.
 - Wash tools.
 - Change your clothes and remove your shoes before entering your home.
 - Wash fruits and vegetables well. You can also peel root and tuber vegetables (e.g., potatoes, carrots, onions) before eating.



Resources

For more information, call **311** or visit [nyc.gov/health](https://www.nyc.gov/health) and search for **urban gardening**.

Urban gardening:

- NYC Parks GreenThumb: [nyc.gov/parks/greenthumb](https://www.nyc.gov/parks/greenthumb)
- NYC Urban Agriculture: [nyc.gov/agriculture](https://www.nyc.gov/agriculture)
- Cornell University's Healthy Soils, Healthy Communities: Visit [cornell.edu](https://www.cornell.edu) and search for **healthy soils**.
- National Pesticide Information Center: Visit [npic.orst.edu](https://www.npic.orst.edu) and search for **soil and pesticides**.



Free soil and lumber for raised beds (GreenThumb community gardens only):

- NYC Parks GreenThumb: Visit [nyc.gov/parks/greenthumb](https://www.nyc.gov/parks/greenthumb) and search for **lumber request**.
- PUREsoil NYC: Visit [nyc.gov/oer](https://www.nyc.gov/oer) and search for **pure soil**.
- NYC Compost Project: Visit [nyc.gov/dsny](https://www.nyc.gov/dsny) and search for **community composting**.

Soil testing:

- Urban Soils Lab at Brooklyn College: Visit [brooklyn.cuny.edu](https://www.brooklyn.cuny.edu) and search for **urban soils**.
- Cornell University's Healthy Soils, Healthy Communities: Visit [cornell.edu](https://www.cornell.edu) and search for **healthy soils**.
- NYC Urban Soils Institute: [usi.nyc](https://www.usi.nyc)