



**Contra Costa
Lead Poisoning
Prevention Project**

[www.cchealth.org/
lead-poison](http://www.cchealth.org/lead-poison)

[fix-lead@
hsd.cccounty.us](mailto:fix-lead@hsd.cccounty.us)

Lead-Safe Urban Gardening

Good nutrition helps reduce a child's absorption of lead.

Lead poisoning is a serious problem for children because it causes brain damage, behavior and school problems and other health problems.

The main source of lead exposure for adults and children is paint on pre-1978 buildings. Lead dust from deteriorated paint may be inside a home and outside in the soil. Children should not have contact with soil contaminated with lead in play areas, yards and gardens.



How to reduce lead exposure in a vegetable garden

While a low level of lead is naturally present in all soil, most soil in urban areas has an increased lead level due to past use of leaded gasoline and lead paint on buildings built before 1978. Lead paint that has flaked off or that was scraped, sanded or disturbed during renovations any time in the past may still be contaminating the soil.

Protect young children from bare soil

- ❖ Cover all bare soil in pathways, play areas and non-growing areas. Don't track dirt inside.

Carefully choose the garden location

- ❖ Consider all possible historic sources of lead and other contaminants on your property.
- ❖ Avoid planting in or using soil from locations next to buildings built before 1978.
- ❖ Consider using raised beds. Make sure all containers are made from lead-free materials.

Test or assume there is lead in the soil

- ❖ Have your soil tested or assume it is contaminated and bring in clean soil.
- ❖ There is no universally-accepted safe level of lead in vegetable garden soil. **However, children should not be regularly exposed to soil that has 80 ppm or more of lead.**



Children in the Garden

If your children help in the garden, limit their direct contact with the soil, provide hand-washing stations, clean garden toys, don't track dirt inside and wash all vegetables before tasting.

At-risk children should be tested for lead at age 1 and 2, or up to age 6 if not previously tested. Talk to their doctor about your child's risk level.



Tips for a Safer & Healthier Garden

- ❖ **Cover bare soil in beds and in non-growing areas** such as pathways to reduce children’s exposure to soil, and to reduce soil splash, dust and tracking of soil into the home. Different materials are available such as stones, wood chips, grass, or pavers for paths. Leave gardening shoes outside.
- ❖ **Use or build raised beds and bring in new soil.** Have your soil tested to verify low lead levels. Add in new compost or other organic materials often.
- ❖ **Do not use pressure-treated lumber** or painted materials to create raised beds or greenhouses. Also, avoid use of railroad ties, telephone poles, tires, old cast iron bathtubs, old painted lumber, old painted windows, or other painted recycled products.
- ❖ **Maintain a good soil nutrient balance, with a pH near neutral (6.5 to 7.5).** Plant lead concentrations typically decrease with increasing soil pH. Use of phosphate-containing soil amendments such as triple superphosphate can reduce plant uptake of lead.
- ❖ **Always wash hands after gardening and handling livestock.**
- ❖ **Avoid bringing soil and livestock waste into your home after gardening** by washing garden tools and harvested vegetables and changing your shoes before going indoors.
- ❖ **Thoroughly wash and/or peel garden produce** and don’t sample from the garden. This is especially important for leafy greens and root vegetables, which are more likely to have soil particles on their surfaces.
- ❖ **Don’t drink from the hose.** Hoses and hose connectors can contain lead and other toxins.

Lead In Soil Guidelines

Consider these guidelines when establishing a vegetable garden. Be aware that test results can vary greatly in different locations within the same yard. Hire a certified risk assessor.

10-50 parts per million (ppm)	This is the naturally present level of lead in most surface soil.
80 ppm or greater	Precautionary standard. The California EPA has determined that children should not be regularly exposed to soil that has 80 ppm or more of lead. Recommend remediation or raised beds.
400 ppm or greater	This is the Federal & California hazard level for bare soil in play areas. For bare soil in non-play areas, California agencies set the hazard level at 1000 ppm or greater, Federal agencies at 1200 ppm or greater.

For a list of labs that can test soil samples for lead, please go to: www.cchealth.org/lead-poison

For more information on home gardens and lead, see: <http://anrcatalog.ucdavis.edu/pdf/8424.pdf>

Adapted from “Lead-Safe Urban Gardening”, published by **Get the Lead Out**, a Bay Area Coalition of Lead Poisoning Prevention Leaders. For more information go to: www.getleadout.org.

Where does lead in soil deposit on crops?

- ❖ *Below-ground crops* (potatoes, radishes, beets, carrots) take up the most lead and lead in soil adheres to the vegetable skin.
- ❖ *Leafing crops* (lettuce, kale, spinach) take up some lead and may have lead-containing dust on the edible leaves.
- ❖ *Above-ground crops* (strawberries, beans, squash, tomatoes, fruit trees) are the least likely to take up lead, but may have lead-containing dust on the edible parts.

Resource Links

California Master Gardener Program:
<http://camastergardeners.ucdavis.edu>

Bay-Friendly Gardening:
www.stopwaste.org