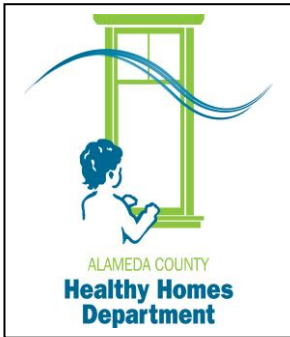


A Key to Healthy Housing

LEAD-SAFE URBAN GARDENING



In the Bay Area, soil is often contaminated with lead. Lead poisoning is a serious problem because it causes brain damage, behavior problems and other health problems. The primary source of lead exposure is paint from pre-1978 buildings. Lead dust may be inside a home and outside in the soil. Children should not have contact with contaminated soil.



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 the prior use of leaded gasoline and lead paint on buildings built before 1978. Lead paint that has flaked off or was scraped, sanded or disturbed during renovations any time in the past, is often 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. ***But, children should not be regularly exposed to soil that has more than 80 parts per million of lead.***



Good nutrition helps reduce children's absorption of lead.

Children in the Garden

If your garden is accessible to children, 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.

All children should be tested for lead exposure at 12 and 24 months, and more often, if necessary. Talk to their doctor about your child's risk level.

Lead Hazard Repair Grants Available

for owners of pre-1978 residential properties in Alameda County

Testing and grants to address lead hazards

For more information, call **(510) 567-8280**.

Tips for a Safer & Healthier Garden

- ❑ **Cover bare soil in both growing and 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. Avoid the 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 – 7.5).** Plant lead concentrations typically decrease with increasing soil pH. Use of phosphate-containing soil amendments such as triple super-phosphate can reduce plant uptake of lead.
- ❑ **Always wash hands after gardening and handling livestock.** Children and adults, who play or work in the garden or with livestock should wash their hands often.
- ❑ **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.

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 lead 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	The California EPA has determined that children should not be regularly exposed to soil that has 80 ppm or more of lead. Recommendations: cover bare soil to protect children. <i>Recommendation: cover bare soil to protect children, plant in raised beds with new soil and follow the tips listed above.</i>
400 ppm or greater	Federal & California agencies set this as the “hazard level for bare soil in <u>play areas</u> ”.
1000+ ppm or greater	Federal & California agencies consider this the hazard level for bare soil in <u>non-play areas</u> .

Carefully choose 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.

**For a list of local labs that can test soil samples, please go to our website at:
www.achhd.org or call 510.567.8280.**

**Related Resources:
Alameda County Master Gardeners
<http://acmg.ucdavis.edu/>
510.665.2195**