

LEAD Educator



KERN COUNTY CHILDHOOD LEAD POISONING PREVENTION PROGRAM

Spring/Summer - 2013



**Kern County
Childhood
Lead
Poisoning
Prevention
Program**

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~Contact Us~

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LEAD in the NEWS

Home Gardening and Lead

As spring and summer time approach, many families will begin preparing the back yard or community garden for summer time produce. Many gardeners are unaware of lead in the soil in the backyard. Lead is a heavy metal occurring in low levels in all soils. Lead naturally occurs in most soils ranging from 10 to 30 ppm. Some soils in the backyard have higher concentrations of lead due to contamination from various pollution sources including:

- Chipping, sandblasting, and peeling of exterior lead based paint from older buildings
- Automobile emissions from combustion of leaded gasoline (lead was added to gasoline as an anti-knock ingredient, but this practice was stopped in 1986 in the United States).
- Disposal of scrap containing lead, such as old lead pipes, roof flashing, or lead acid batteries

Recent studies show the lead content of some urban soils many range from 100 ppm to over 1,000 ppm. Elevated lead concentrations in soils in urban areas are often directly related to their distance from highly travelled roads and older buildings painted with lead based paints. Houses close to free-ways and other highly used roads or located in industrial zones may have soil lead concentrations in excess of 1,000 ppm. Soil next to older buildings painted with lead based paint that is flaking or has been scraped may have lead exceeding 3,000 ppm. So if the soil is contaminated, will the plants grow in lead contaminated soil? Yes.

Unlike many other heavy metals such as cadmium, copper, and nickel moderate concentrations of lead in the soil (<500 ppm) have no harmful effect on plant growth. Therefore, flowering plants can be grown safely in lead- contaminated soil. In fact it is a good idea to grow a ground cover such as grass, wild lilac, or a dwarf shrub, over lead contaminated soil to reduce the amount of lead-laden soil that can become airborne with

Lead Recalls and Resources Available Online:

<http://www.kernpublichealth.com/>

Double click on Child Health and Disability Prevention,
then click on Childhood Lead Poisoning Prevention

Lead Candy Information Available Online:

www.cdph.ca.gov/data/documents/fdblicic07.pdf

LEAD IT BE KNOWN...

Plants do not readily absorb large amounts of lead, and the amount they do absorb depends on the species and variety of plant, the chemical composition of the soil, the amount of lead in the soil, and the soil temperature. Because so many factors influence how much lead the plant absorbs it is difficult to predict how much lead a plant will contain based on the amount of lead in the soil. However, lead is generally slow to move within a plant (from roots to leaves), and most of the lead that does enter a plant accumulates in the fine roots and secondarily in the leaves, though there are some exceptions.

Fruits such as tomatoes, peppers, melons, okra, apples, and oranges, and seeds such as corn, peas, and beans generally have the lowest lead concentrations and are the safest portions of the respective plants to eat if grown in lead-contaminated soils. Other suggestions if you are worried about lead-contaminated soil:

- Breathing lead-laden dust while gardening is a greater risk than consuming well-washed vegetables grown in low to moderately contaminated soil.
- Consider covering contaminated soil with 8 to 12 inches of uncontaminated soil, which limits lead absorption by plants and reduces the hazard presented by inhaling and ingesting soil dust containing lead.
- You can also minimize the hazard from lead dust by applying a 4 to 6 inch thick layer of mulch around your plants. Covering the soil completely around the plants significantly reduces the dust and mud problems and lowers the risk of lead inhalation.
- Do not grow leafy vegetables or root or tuber crops (carrots, potatoes, beets, turnips) in lead-contaminated soils. Grow them in raised beds filled with clean soil, where the clean soil cannot become contaminated with paint flakes, chips, or dust.
- Fruits marketed as vegetables, such as tomatoes, peppers, beans, cucumbers, and squash, may be grown in lead-contaminated soil and will not accumulate significant concentrations of lead.
- Washing and peeling of vegetables greatly reduces the risk of ingesting lead deposited on surfaces of vegetables and fruits.
- Root and tuber vegetables, such as potatoes, beets, turnips, and carrots, may have lead-rich soil particles attached to their skin. It is essential to peel these vegetables if grown in lead-contaminated soils.
- Peeled root and tuber vegetables should also be washed with tap water after they are peeled, in order to rinse away any contaminants transferred to the outer flesh during the peeling process.
- Leaves, stems and fruits (the above-ground portions of a plant) can become superficially contaminated by dust enriched with lead. To reduce the risk of lead consumption, remove the outer leaves and rinse the produce thoroughly.

So, when taking to the summer garden beware of lead-tainted soil. Use raised beds, when appropriate, wash your fresh vegetables, and be aware of lead hazards before you plant.

Childhood Lead Poisoning Report Kern County July 2012 – December 2012

Number of New Cases – 4

Number of EBLLs 210

[9 of these were 15-19 mcg/dl, 17 were 10-14 mcg/dl
and 184 were 5-9 mcg/dl]

Primary Source: Chipping and peeling paint, dirt