

# Environmental Lead Hazards

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## Lead Health Effects

- Children – Learning disabilities, behavioral changes, colic, anemia, kidney disease, convulsions
- Adults – Increase in Blood Pressure, GI disturbances, muscle weakness, impotence in males, decreased fertility in females, mental status changes (irritability)

## Multimedia Contaminant

- Major source of environmental lead: gasoline and paint...and numerous smaller sources (e.g. Jewett)
- It's in the air we breathe, the water we drink, and the food we eat
- It's also in soil and indoor dust and becomes a source of incidental exposure from mouthing activity (especially for children)
- All these sources of exposure are captured by obtaining a blood lead level

## Blood Lead Measurement

- Performs double duty
  - Serves as a marker of exposure
  - Serves as marker of effect
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- EPA has developed a tool (bio-kinetic model) to estimate blood lead levels based on exposures from air, water, food, soil and dust → allows us to set levels in soil that maintain blood leads at below a level of concern (e.g., 400 ppm for bare soil in residential yards)

## Home Grown Produce

- Benefits of home grown produce
  - Economic - cuts down on grocery bill
  - Aesthetic – folks take pride in growing their own produce
  - Health – fruits and vegetables are healthy food sources → and so that they remain healthy...

## Recommendations for safe Gardening

- Lead is generally not well taken up into produce (especially fruiting parts – tomatoes, peppers, peas) .... but, root (carrots, potatoes) and leafy green (spinach, lettuce vegetables tend to have higher lead content and more residual lead on the surface

## Gardening Recommendations

- Wash all produce thoroughly (peel root vegetables)
- Apply peat moss, compost, manure to bind lead and lime to reduce solubility
- Practice good housekeeping – don't track soil into the house!
- Consider raised gardens if you haven't planted yet