Texas Department of State Health Services — Childhood Lead Poisoning Prevention Program

Lead is an element found throughout our environment and is highly toxic.

- High blood levels can cause abdominal pain, vomiting, constipation, change in appetite and irritability.
- Lead can damage the kidneys, stunt growth and affect balance. Long term exposure can cause learning difficulties, behavior disorders, and lowered IQ.

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Lead Poisoning in Children

- Young children absorb 50% of a lead ingestion while adults absorb only 10%.
- Lead poisoning is especially dangerous during the critical development of infants and children under age 7.
- Children <24 months old affected more than other age groups.

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How are children exposed to lead?

- Maternal fetal transfer
- Breastfeeding
- Exposure in the home and environment

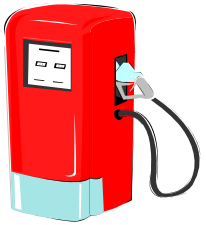
The primary source of lead exposure for children continues to be lead-based paint.

Lead in Paint

- Lead was banned as a paint additive in 1978
- Still found in older homes
- As old lead paint chips, flakes, or turns to dust, it contaminates surfaces in the home and exposed soil areas outdoors.

Typical sources of lead around the home

- Imported glazed pottery used for cooking, storing, or serving food
- Certain imported candies – shipped in small lead glazed containers
- Vinyl mini-blinds - sunlight leads to paint deterioration and lead dust
- Soil contaminated from years of auto emissions (lead gasoline banned in 1978)



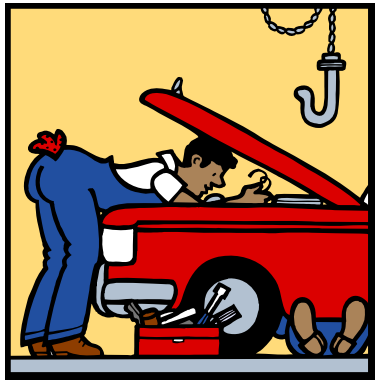
- *Pencil "lead" is made of graphite ~ not lead!*

Dangerous Home Remedies

- **Greta** (yellow powder), **Azarcon** (bright orange powder) given for intestinal illness “empacho”
- **Pay-loo-ah –** red powder given for rash or fever in the Hmong community
- **Kohl -** a powder used both as a cosmetic eye makeup and applied to skin infections and the naval of a newborn child in the Arab American community
- Asian Indian community:
  Ghasard - brown powder given as an aid to digestion
  Kandu - red powder used to treat stomachache
  Bala Goli - a round, flat, black bean dissolved and used for stomachaches

Additional Sources of Lead

- Hobbies such as stained glass or furniture refinishing
- Activities such as bullet making, auto repair, and use of fishing weights
- Residue from clothing of parent who is exposed at workplace such as a transmission repair shop



Recalls for Lead Products

- Reebok charm – 3/23/06 (death of 4 yr old)
- Recalls October 4, 2007
  - Boy Scout badges
  - Sports aluminum water bottles
  - Key chains sold at Dollar General
  - Wooden alphabet blocks sold by KB Toys
  - Eveready toy flashlights
  - Children's room decorating kits – Toys R' Us

What Next?!

- Lead tests raise red flag for LIPSTICKS!
- Campaign for Safe Cosmetics found that more than half of 33 brand-name lipsticks tested contained lead.
- The lead levels in one-third of the lipstick samples exceeded 0.1 parts per million, which is the federal lead limit for candy.
- Use of lead-tainted lipstick by pregnant women could lead to lead exposure for the fetus.

Prevent Lead Poisoning!

- Wash their hands!
- Keep toddlers from chewing on painted surfaces or playing in the dirt outdoors
- Keep pets out of contaminated soil areas
- Family members should remove shoes and work clothes before entering the home

Drink Milk!

Lead can be stored in the bones for a long time. When the body uses lots of calcium (during pregnancy and childhood growth spurts), lead stored in the bone may be released into the blood.

Nutrition and Lead

- Lead intoxication can cause anemia
- Vitamin C helps the body to absorb iron.
- Regular meals and frequent snacks are important; an exposed child absorbs more lead on an empty stomach.

Blood Lead Screening

- Blood lead screening test (capillary draw) at 12 months and 24 months of age.
- Component of the THSteps exam
- Screening at other ages if determined high risk by parent questionnaire

Elevated Blood Lead Level: ≥10 µg/dL

How much is 10 Micrograms per Deciliter?

1. Measure out a deciliter of water (.42 of a cup) to represent blood.
2. To represent lead, use a packet of artificial sweetener – 1 gram.
3. Empty out the packet onto a flat surface and divide into one million piles of one microgram each.
4. Add ten piles (10 micrograms) into that deciliter of water.

***That's how LITTLE lead in a child's blood can possibly cause permanent developmental and neurological damage.*

Follow-Up Testing

A follow-up blood test should be done:

Level	Within
10-14	3 months
15-24	1-3 months
25-44	2 wks – 1 month
45+	*asap!*

Environmental Investigations

- Provider can request an environmental investigation for a child with a confirmed venous level of over 20

or

- Venous levels of 15-19 on each of two tests at least 3 months apart

Treatment for Lead Poisoning

- Level of <44 - remove the child from the source and start diet high in calcium and iron.
- Level >45 – chelating agent (DMSA) is an oral medication that binds to lead and mercury so that it can be excreted in the urine.
- Level >69 – chelating agent (EDTA) given as a continuous infusion for 3-5 days. Considered emergency medical treatment

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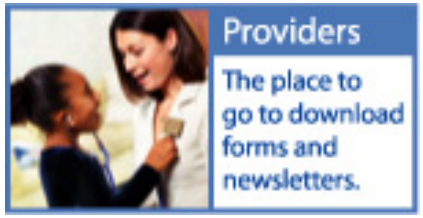
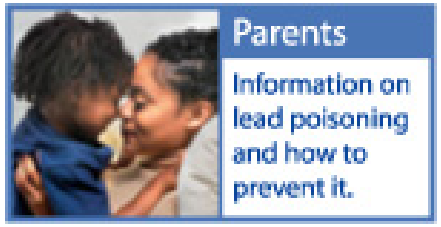
Lead Poisoning is Entirely Preventable...

The key is to find and eliminate the sources of the exposure.





Texas Department of State Health Services - Childhood Lead Poisoning Prevention Program
1100 W. 49th Street • Austin, Texas 78756 • 800-588-1248 • 512-458-7699

www.dshs.texas.gov/lead

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Contacts in Region 1

Roy Ramos – DSHS, THSteps – HSR 1

(806) 767-0

Roy.ramos@dshs.state.tx.us

Sheena Embry – DSHS, Environmental – HSR 1

(806) 767-0363

Sheena.embry@dshs.state.tx.us