

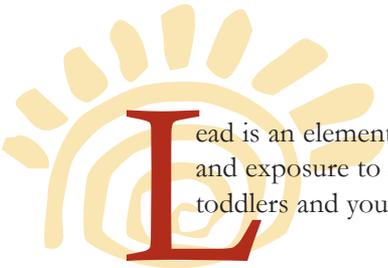


What all new parents need to
know about childhood lead
poisoning prevention...

A Guide for Educators:
Childhood Lead Poisoning—
and
How You Can Help Families Prevent It.

Texas Childhood Lead Poisoning
Prevention Program

Texas Department of State Health Services



Lead is an element found throughout our environment, and exposure to it is highly toxic – especially to babies, toddlers and young children.

Unlike other elements, iron or calcium for example, we have no biological need for lead and, in fact, there is no “safe” level in the body.

Exposure to lead harms a child in many ways. Lead can harm the kidneys, stunt growth and affect balance. Over the long term, children exposed to lead can experience learning difficulties, behavior disorders and a lower IQ.

Lead collects in the blood, tissues and bones, and can be detected by a blood test.

Although there are not always early symptoms, high blood lead levels can eventually cause symptoms such as abdominal pain, vomiting, constipation, change in appetite and irritability. Symptomatic lead poisoning is a medical emergency.



During 2000 through 2003 in Texas—

164,872 babies less than a year old had a blood lead test

2,032 of those babies had an elevated blood lead level

294 of those babies had an elevated blood lead level that required an environmental investigation

What to tell parents about how babies and children are exposed to lead:

■ **Maternal-fetal transfer (mother transfers lead to unborn baby):**

If a pregnant woman has a high level of lead in her own blood, she could transfer it to her unborn baby's blood through the placenta. Adults can be exposed in their home or workplace. Look at the "lead in the workplace" table in this brochure to see if you might be at risk – and take action if you are.

■ **Breastfeeding:**

There is some evidence that a mother with high lead levels can transfer lead to her baby through breast milk. If you are at risk for high lead levels or have been diagnosed with high levels, discuss breastfeeding with your doctor – it is important to weigh the risks and benefits.

■ **Exposure at home and in the environment:**



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

Lead was banned as a paint additive in 1978, but many older homes still pose a threat. As old lead paint chips, flakes, or turns to dust, it can contaminate surfaces in the home and exposed soil areas outdoors. Bare soil near high-traffic areas may also be contaminated by automobile emissions deposited before leaded gasoline was banned.

What to tell parents about nutrition and lead exposure:

Providing good nutrition is an important part of protecting your child from lead poisoning.

You already know how nutrition supports your child's growth and health. But regular meals and certain nutrients also help protect your child from absorbing lead in the environment.

- More lead is absorbed by an empty stomach – if your child eats regular, healthy meals and snacks, he will absorb less of any lead he may be exposed to.
- Minerals like iron, calcium, zinc, phosphorus and magnesium “compete” with lead for absorption in the body. Making sure your child's diet includes these minerals helps lessen lead absorption.
- There is some evidence of a relationship between blood lead levels and **iron** deficiency. Though more study about this relationship is needed, there is no question that it is important for your child to get enough iron (from dietary sources, not supplements).
- **Vitamin C** provides many health benefits, but is also important because it helps in the absorption of iron.
- Many children do not get enough **calcium**. It is especially important for lead exposed children to have adequate calcium intake since it is known to inhibit lead absorption.

All of these nutritional needs should be met through a well-planned diet, not supplements (unless ordered by your health care provider).



Lead levels in the blood are measured in micrograms per deciliter ($\mu\text{g}/\text{dL}$). Learning and developmental deficits can manifest in a child at levels as low as 10-15 $\mu\text{g}/\text{dL}$.

What to tell parents about hand washing and keeping lead out of the house:

It's important to keep your child's toys and hands clean and to wet-clean places where lead chips or contaminated dust can collect.

Here are some normal toddler behaviors that can expose children to lead paint chips and contaminated dust:

- Chewing on painted surfaces or eating non-food items
- Eating food that has fallen on the floor or onto a windowsill
- Picking toys or pacifiers up from the floor or a windowsill and putting them into their mouths
- Putting unwashed hands into their mouths or eating without washing their hands
- Playing with household pets that have picked up lead dust on their fur from the floor or outdoors
- Crawling on floors inside the house or playing in soil outdoors

Tips:

- Pay close attention to windows – the movement of the sash dislodges old paint. Doorways are another problem area.
- Wash your child's hands with soap and water often, and use household cleaner and lots of rinse water on hard surfaces.
- Help prevent lead dust from entering your home by using small washable rugs at each entrance and asking everyone to leave shoes at the door.
- Cover areas of lead paint with wallpaper or wallboard to keep your child away from it. Do not try to remove lead paint yourself!

Remember, a child's "environment" includes:

- the homes of caregivers, friends or relatives
- play areas
- school or daycare
- other places where a child spends a lot of time

What to tell parents about how lead in the workplace can transfer exposure to children:

Here are examples of some possible sources of lead exposure parents might come into contact with at work:

Ammunition	Explosives
Printing ink	Refrigeration/heating equipment
Industrial inorganic chemicals	Pottery products
Mechanical rubber goods	Metal cans
Tires and inner tubes	Metal foil and leaf
Vitreous table china	Adhesives and sealants
Paint removal/renovation	Ceramic wall and floor tile
Scrap and waste materials	Motor vehicle parts
Storage batteries	Valves and pipe fittings

If a parent works in an industry that exposes him or her to lead, it is important that they change clothes before returning home, and that they wash work clothes separately from other family laundry.

If you think a parent or other family member is being exposed to lead at work, encourage them to contact a health care provider for testing.

**Information on adult (age 15+) lead poisoning is available from the Texas Department of State Health Services:
<http://www.dshs.state.tx.us/epitox/adultlead.shtm>**



There are treatments for high levels of blood lead, but in all cases, the most important first step is to remove the source of lead exposure from the child.

How Children are Screened for Lead Exposure:

It is recommended that all children be tested for lead at age 12 months and again at age 24 months. (This testing schedule is *required* for children enrolled in Texas Health Steps.) This screening test is generally a simple finger prick that collects a small amount of blood. If a child is found to have an elevated blood lead level, a follow-up test will be scheduled, depending on how high the screening level is.

In addition to blood testing, at other ages healthcare providers may use questionnaires with the parent to help determine if a child is at risk in the home environment.

If a child's blood test reveals lead exposure, the immediate goal is to find and remove sources of exposure as quickly as possible. When warranted, an environmental investigation will be performed to determine the source of exposure. If a child has already become seriously ill, he may be hospitalized for treatment.



Some things to avoid around the house:

- glazed pottery not marked “lead free”
- certain imported candies – sometimes shipped in small lead glazed containers
- any remedies not recommended by a doctor – some home remedies are almost 100% lead and very dangerous
- water that may be lead contaminated from old pipes – use only cold water for cooking or drinking and let it run a few minutes before using (and keep a lead-free pitcher full in the refrigerator)
- hobbies that may contain lead products – such as working with stained glass or fishing weights



We Can Help

Here is how the
Texas Department of State Health Services

Childhood Lead Poisoning Prevention Program

helps providers and families manage lead exposed children:

Texas law requires that if a healthcare provider discovers any lead in a child's blood, it must be reported immediately to the Texas Department of State Health Services. By tracking every childhood lead poisoning case, the state can better identify risk factors for all children as well as offer individual follow-up to a family, based on their own child's test results and environmental situation.

Education is available from the state and from local health departments to help families learn how to reduce their child's blood lead level and prevent a recurrence – this means identifying and removing the sources of exposure as quickly as possible.

Depending on test results, parents are offered monitoring of the child, educational materials and help with locating and removing lead from the child's environment. Treatment options are offered if the case is extreme.

Please contact us if you have any questions about lead poisoning or would like to order printed materials.

1-800-588-1248

<http://www.dshs.state.tx.us/lead>



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