

Frequently Asked Questions: General Information on Lead

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What is lead?

Lead is a naturally occurring metal found in the earth's crust. Lead has been mined, processed, and used in commercial and household products for thousands of years. In the past lead was used in paint, gasoline, pottery, water pipes and other products. When lead gets into the body it is a poison and harms people. Once lead enters the human environment, there is no way to destroy it or make it harmless. Therefore, we must control exposure to lead.

What is lead poisoning?

Lead poisoning occurs when lead builds up in the body. Children and adults can get lead poisoning by breathing or swallowing dust that contains lead. Your body does not have a use for lead. When it is absorbed, it affects almost every body system. Even small amounts can be harmful. No one knows exactly how much lead it takes to cause health problems.

A piece of lead as small as a grain of sand is enough to poison a child.
(Centers for Disease Control, 1991)

Who can get lead poisoning?

Anyone can get lead poisoning. Lead is most dangerous to young and unborn children because their bodies and brains are still growing and developing. Lead can interfere with normal brain development, resulting in permanently reduced IQ and behavioral problems. Young children are more at risk for exposure to lead because children explore their environment by putting their toys, hands and other objects in their mouths. Any of these objects could have lead dust on them. If children put objects with lead dust in their mouths, they can become lead poisoned. In addition, they spend a lot of time on the floor where sources of lead are likely to be found. Young children also absorb lead more easily than adults. Lead poisoned children may suffer life-long problems as a result of their exposure at a young age.

Where do lead hazards come from?

Paint

Lead was used in paint until 1978 when its use was limited in household paint. Many buildings built before 1978 have lead-based paint inside and outside. Nationwide, it is estimated that over 37 million homes contain lead-based paint (Housing and Urban Development). Housing built before 1950 is more likely to contain lead-based paint. Lead paint in good condition is not

usually a problem except in places where painted surfaces rub against each other and create dust, such as where windows open and close. Chipping, peeling or chalking lead paint is a common source of lead dust and may be a hazard. Lead-based paint may also be found on older toys, furniture and playground equipment.

Dust

Lead dust is the main cause of lead poisoning in children. Windows, doors, steps and porches are common friction surfaces that can create lead dust. Lead dust can gather on floors, carpets, toys and other objects that children may put into their mouths. Lead dust is increased during remodeling or repainting. Home renovations and remodeling contribute to nearly half of the childhood lead poisoning cases in Oregon.

Soil

Soil and dirt around homes and apartment buildings may contain lead. Soil may contain lead from lead-based paint or from exhaust fumes from cars. Children may come into contact with lead by playing in bare dirt. Lead in the soil may collect on the surface of vegetables planted in gardens. Outside play areas and food gardens should be located away from houses and buildings and away from areas that could be contaminated by heavy car traffic.

Pottery

Imported, old, handmade or poorly glazed ceramic dishes and pottery may have lead in the glaze. Lead may also be found in leaded crystal, pewter and brass dishware. Acidic foods stored in improperly glazed or metallic containers create the greatest health risk. Acidic foods or drinks (such as orange, tomato and other fruit juices, tomato sauces, wines, and vinegar) may cause an increase in the release of lead from these types of tableware. You cannot always tell by looking at a dish whether it contains lead. The only way to know for sure is to have the tableware tested for lead. If it is unknown whether a particular tableware item contains lead, the item should not be used to store, cook or serve food or beverages. If any tableware begins to show a dusty or chalky gray residue after washing, discontinue using the item. Purchase dishes with labels that state the item is lead-free or suitable for food use.

Workplaces & Hobbies

Lead can also be brought into the home from the workplace or through hobbies. Welding, auto or boat repair, the making of ceramics, stained glass, bullets, and fishing weights are hobbies that may use lead. Other hobbies that carry a potential for exposure to lead include furniture refinishing, home remodeling, painting, and target shooting at firing ranges. By following a few simple precautions, hobbyists can reduce the risk of exposure to lead and protect themselves and their families. People who work in a lead environment may bring lead dust into their car or home on their clothes and bodies, exposing family members. Good hygiene needs to be observed to avoid bringing lead dust into the home from the work place.

Water Pipes & Solder

Most well or city water does not naturally contain lead. Lead in drinking water is not a common source of lead poisoning in Oregon. Lead may get into drinking water from household plumbing. Lead solder that connects the pipes or brass faucets may contain lead. Lead from solder is most commonly found in homes built between 1970 and 1985. Lead may get into the water when water sits in pipes for several hours or overnight. If this happens, the water you use for drinking, cooking or mixing baby formula can cause lead poisoning. If lead in plumbing is suspected, water from a hot water tap should not be used for drinking or food preparation. Before any water is consumed, the cold-water tap should be flushed for several minutes each morning, or after sitting for several hours, until there is a noticeable change in temperature of the water.

Food

In recent years, lead has been found in candy imported from Mexico. Laboratory testing done in California found lead in some Mexican candy, the wrappers and the clay pots that some of the candy comes in. Candy with chile powder and tamarind were most often associated with lead.

Home Remedies & Cosmetics

Some families may use home remedies to cure sick people. Some home remedies may contain up to 100% lead and are very dangerous to children. Azarcon, a bright orange powder, and Greta, a yellow powder, may be used in the Hispanic community for indigestion or upset stomach. Similar remedies are known as Liga, Alarcon, Rueda, Maria Luisa, Coral, and Albayalde. Pay-loo-ah, Ghasard, Bali Goli, and Kandu are remedies containing lead that may be used in some Asian communities. Certain cosmetics, especially those from the Middle East, India, and Asia, may also contain high levels of lead. Cosmetics known to contain lead are Kohl, Suma, and Cerise. These are commonly used as eyeliner. Kohl (or alkohl), which is used in Middle Eastern and East Indian cultures, is also applied to skin infections. Manufactured cosmetics generally do not contain lead.

LEAD POISONING AND CHILDREN

How can my child be exposed to lead?

Most children are exposed to lead from household dust containing lead from lead-based paint. Prior to 1978, and especially before 1950, lead was a common additive to house paint. Homes painted with lead-based paint are an ongoing risk as painted surfaces break down over time and when paint is disturbed in remodeling by sanding and scraping. Windows, doors, steps and porches are areas where surfaces may rub together and make lead dust.

Lead-based paint can also be found in soil around homes as a result of peeling and chipping paint and remodeling activities, such as sanding and scraping of paint. Soils near roads may contain lead dust from automobile exhaust deposited before leaded gasoline was phased out. People track this soil into homes where children play on the floor, or children may play in bare soil contaminated with lead.

Lead can also be found in lead pipes or solder, imported or older ceramics and pottery, certain hobbies, and folk medicines. Parents who work in lead-related industries can bring lead home on their clothing, exposing children to the hazard.

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What are symptoms of lead poisoning in children?

Signs of lead poisoning are not always easy to see. Children can be poisoned by lead and may not look or act sick. Many children who are lead poisoned look and act healthy. Sometimes the vague symptoms may be mistaken for other illnesses such as stomach upset or flu. Because of this, lead poisoning may go unrecognized. A blood lead test is the only way to find out if a child has lead poisoning.

Some possible signs and symptoms of lead poisoning in children are:

- Tiredness or loss of energy
- Hyperactivity
- Reduced attention span
- Irritability or crankiness
- Poor appetite
- Weight loss
- Trouble sleeping
- Constipation
- Aches or pains in stomach

How can lead poisoning affect my child?

Children can get lead in their bodies by swallowing or breathing in dust that contains lead. Lead is a poison that affects every organ and system in the body. There is no function or need for lead. Very high levels of lead exposure can cause coma, seizures and death. Even a little lead can make children slower learners. Exposure to lead can cause:

- Brain damage and lower intelligence
- Behavior and learning problems
- Impaired speech and language
- Slowed growth
- Kidney and liver damage
- Hearing damage

How can I find out if my child has been exposed to lead?

Your health care provider will ask you some questions to see if your child is at risk for lead poisoning. The only way to know for sure if your child has been exposed to lead is to have their blood tested. Blood tests are used to find out how much lead is in a child's blood. The test is simple. A health care provider takes blood from your child and a lab will test the blood.

Is my child at risk for lead poisoning?

A “yes” or “I don’t know” answer to any of the eight following questions means that your child could be at risk for lead poisoning and should have a blood lead test.

- Does your child live in or regularly visit a home, child care, or other building built before 1950? (*Call your county tax assessor if you do not know when your home was built*).
- Has your child lived in or regularly visited a home, childcare or other building built before 1978 with recent or ongoing painting, repair and/or remodeling?
- Is your child enrolled in or attending a Head Start program?
- Does your child have a brother, sister, other relative, housemate or playmate with lead poisoning?
- Does your child spend time with anyone that has a job or hobby that may involve lead?
Examples: painting, remodeling, auto radiators, batteries, commercial recycling, auto repair, soldering, making sinkers, bullets, stained glass, pottery, going to shooting ranges, hunting or fishing.
- Do you have pottery or ceramics made in other countries, or leaded crystal or pewter that are used for cooking, storing or serving food or drink?
- Has your child ever taken any traditional home remedies or used imported cosmetics?
Examples: Azarcon, Alarcon, Greta, Rueda, Pay-loo-ah, or Kohl
- Has your child been adopted from, lived in or visited another country?
- Do you have concerns about your child's development or behavior?

What does my child's lead test mean?

The amount of lead found in a child's blood is called a blood lead level. Blood lead tests tell how many micrograms (millionth of a gram) of lead are in each deciliter (tenth of a liter) of a child's blood ($\mu\text{g}/\text{dl}$). A blood lead level will tell if a child has been exposed to lead in the last 3-4 months.

To find out how much lead is in a child's blood, a small amount of blood is taken from a child's arm, finger or heel. Taking blood from a child's finger or heel is called a finger or heel-stick or a capillary test. Sometimes the blood from a capillary test may be contaminated by a small amount of lead on the child's hand or foot. This may cause an inaccurate or false elevated test result. Blood taken from an arm vein (venous blood test) is a more reliable test.

Is lead poisoning preventable?

Lead poisoning is preventable if hazards are detected and removed. The warning signs of lead poisoning are not always noticeable, so parents need to carefully check their child's environment for possible sources of lead. Parents can help protect their children from lead poisoning by reducing exposure to lead in the environment, and by promoting good nutrition and healthy habits.

How can I protect my child?

- Find out when your home was built. Homes built before 1978 may have been painted with lead-based paint.
- Frequently inspect your home for signs of chipping, peeling or deteriorating paint. Clean up paint chips immediately and keep paint in good condition. Look for painted areas where surfaces may rub together and create lead dust.
- Use lead-safe work practices or hire a lead-safe professional for maintenance, renovations, painting and repair.
- Clean areas where children play. Regularly wet-wipe floors, windowsills, porches and other surfaces to remove lead dust. Carefully clean friction or impact surfaces such as windows, doors, and cabinets.
- Wash children's hands often, especially before meals and after playing outside.
- Wash toys, stuffed animals, bottles and pacifiers often to remove lead dust.
- Clean or remove shoes before entering the home to avoid tracking in soil that may contain lead.
- Have children play on grass instead of bare soil. Provide a sandbox with lead-free sand.
- Inspect painted playground equipment for peeling or chipping paint.
- Only use non-toxic art supplies.
- Use cold water for drinking, cooking, or making baby formula. Run the water for 15-30 seconds until it feels noticeably colder.
- Do not use imported, old or handmade pottery to cook, store or serve food or drinks.
- Do not use home remedies or cosmetics that may contain lead.
- Don't bring lead dust from hobbies or work places into the home. If you work with lead in your job or hobby, change clothes and shower before you go home or into your vehicle. If possible wash work clothes at work. If you must wash the clothes at home, carry them in a plastic bag and then wash them separately from those of other family members.
- Provide regular healthy meals and snacks. Meals or snacks high in iron, vitamin C, and calcium may help children absorb less lead.
- If your child is at risk, have their blood tested for lead exposure.

How can a healthy diet fight lead poisoning?

A well-balanced diet is very important. Children with empty stomachs absorb more lead than children with full stomachs. Provide your child with four to six small healthy meals during the day. A diet rich in calcium and iron can reduce the amount of lead a child absorbs. Eating foods with vitamin C helps increase the amount of iron in the blood. Eating a variety of foods as part of a well-balanced diet helps a child grow up healthy and strong.

Healthy foods to fight lead

Foods High in Calcium	Foods High in Iron	Foods High in Vitamin C
Milk	Lean red meat	Oranges/ or juice
Yogurt	Fish and chicken	Grapefruit/or juice
Cheese	Dried beans and peas	Tomatoes/ or juice
Tofu	Tofu	Strawberries
Green leafy vegetables (spinach, kale, broccoli)	Iron-fortified cereal	Brussels sprouts

LEAD POISONING AND ADULTS

How are adults exposed to lead?

Adult lead poisoning commonly occurs from exposure to lead used in the workplace. Workers may inhale lead dust and fumes directly, or swallow lead dust while eating, drinking, or smoking on-the-job. Adults can also be exposed during certain hobbies and activities where lead is used.

Adults can be exposed to lead if they **work** in:

- Painting, remodeling or renovation
- Radiator, battery or automotive repair
- Ceramics making and glaze mixing
- Soldering or cutting metal
- Bridge construction and repair
- Jewelry making
- Demolition of old buildings
- Foundries and scrap metal operations

Adults can be exposed to lead if they have the following **hobbies**:

- Using and making/melting fishing sinkers
- Making bullets or shooting in indoor firing ranges
- Welding, auto or boat repair
- Making of ceramics, stained glass, or jewelry
- Furniture refinishing, home remodeling or painting

People who work in lead related industries or have hobbies involving lead may bring lead dust into the home on their clothes and bodies exposing family members. Good hygiene needs to be observed to avoid bringing lead dust into the home from the work place. By following a few simple precautions, hobbyists can also reduce the risk of exposure to lead and protect themselves and their families.

What are the symptoms of lead poisoning in adults?

People with high levels of lead in their bodies often do not seem sick. The symptoms that occur are very general and can happen for many reasons. Overexposure to lead can cause serious damage even if the person has no symptoms. A blood lead test is the only way to find out if an adult has lead poisoning. Lead is a powerful poison that stays in your body a long time. It can build up in your body to dangerous levels even if you are exposed only to small amounts of lead over a long period. An elevated blood lead level shows that lead is building up in your body faster than it can be eliminated.

Signs or symptoms that may be related to over-exposure to lead:

- Tiredness or weakness
- Irritability
- Trouble sleeping
- Headache
- Difficulty concentrating
- Aches or pains in stomach
- Loss of appetite
- Constipation
- Nausea
- Weight loss

How does lead affect adults?

- Impotency
- Brain and nervous system damage
- High blood pressure
- Digestive problems
- Kidney problems
- Anemia
- Reproductive system problems
- Hearing, vision and muscle coordination problems

How can I protect my family and myself?

- Do not eat, smoke or drink when you are working. Before breaks or eating, wash your hands and face to avoid swallowing lead dust.
- Keep your work area clean using wet cleaning methods or a vacuum with a high efficiency (HEPA) filter. Do not dry sweep or use compressed air to remove lead dust.
- Store your street clothes in your locker. Change out of your work clothes and shoes before going home.
- Shower and change into clean clothes and shoes before you leave your workplace or hobby area.
- If you wash your own work clothes, wash them separately from those of other family members.
- Keep your car or vehicle free of lead dust and contamination.
- Keep children out of work and hobby areas.
- If you work with lead, follow the health and safety instructions given in your workplace.
- If you are provided with a respirator, use it and clean it after use. Make sure you understand how to check to see that it fits correctly and is working properly.
- If you work with lead in your job or hobby, get a blood lead test.

How can I learn more about lead in the workplace?

Oregon office of Occupational Health and Safety Administration (OR-OSHA) rules require that employers protect workers on the job from the hazards of lead. These requirements cover not only workers directly engaged in lead-related jobs, but also any workers allied with or supporting

them (e.g., office staff) or who may be affected by the activities of the workers, such as employees working in a building being renovated.

For more information about lead in the workplace and OSHA's lead standards and regulations contact Oregon Occupational Health and Safety Administration (OR-OSHA) toll-free at (800) 922-2689 or on their website at www.orosha.org

MAINTAINING A LEAD-SAFE HOME

I live in an older home are my children at risk?

In general, the older the home the more likely both the interior and the exterior were painted with lead paint. This is especially true for homes built prior to 1950, but lead-based paints were widely used up to the time they were banned for residential purposes in 1978. Also, the presence of lead paint does not necessarily mean that it presents a hazard. To present a health threat, it must somehow enter the body. Paint that is well cared for generally does not pose a danger. However, even in well-maintained homes, friction and impact surfaces, such as door jambs or sliding windows, can create fine lead dust that can be inhaled or swallowed.

How can I tell if lead is a hazard in my home?

The surest method is to use the services of a certified lead-based paint inspector or a risk assessor. An inspector can tell you if there is lead in the home; a risk assessor can tell you the extent of the hazard. Home test kits for lead are available, but may not always be accurate. Consumers should not rely on these kits to determine if lead is a hazard in their home. The home test kit can only tell you if lead is present on a surface. It **cannot** tell you how much lead there is, if there is a lead paint hazard, or what needs to be done to repair the hazard.

How can I safely remodel or paint my home?

Handle with care. Once released into the environment, lead doesn't break down, and its dust can be invisible to the eye and still cause lead poisoning. Whether you are planning to do the work yourself, or to hire a professional, it is important that you educate yourself about how 'lead-safe' remodeling can be done. If you are going to hire a professional painter or remodeler, ask to see the contractor's Lead-Based Paint Renovator License before the work starts. Any person removing or stabilizing paint on housing or child care settings built before 1978 must have this license. To find Lead-Safe Contractors, visit the Construction Contractors Board website: www.oregon.gov/CCB

What kind of professional lead paint services are available in Oregon?

There are several types of services available. The Lead-Based Paint Program (LBPP) certifies lead-based paint Inspectors, Risk Assessors, Supervisors, Project Managers, and Workers. LBPP can provide you with a List of Certified Lead-Based Paint Professionals. These professionals are trained in abatement, which means they can permanently remove lead hazards from a property.

The Oregon Lead-Based Paint Program can supply you with a [list](#) of accredited firms and individuals who can perform these services.

What if my neighbor's home is being professionally painted and paint chips and dust are getting in my yard and home?

Any professional removing or stabilizing (painting/remodeling) more than 6 square feet of lead-based paint must:

- (1) Obtain a Lead-Based Paint Renovation License;
- (2) Distribute the EPA [Renovate Right](#) pamphlet before work begins;
- (3) Use lead-safe work practices

The Construction Contractors Board (CCB) regulates these professionals and actively enforces violations of unsafe work practices. Contact the CCB at 503-378-4621.

The Lead-Based Paint Program at the Oregon Health Authority regulates lead paint work done at schools, or performed by landlords and maintenance workers at apartments. To file a complaint, call the Lead-Based Paint Program at (971) 673-0440 or the LeadLine a toll-free phone service at 1-800-368-5060. You can also submit a complaint at lead.program@dhsosha.state.or.us.

The Lead-Based Paint Program can provide a list of certified lead inspectors and risk assessors, if you need to test for lead contamination in your home or in the soil. A list of certified specialists in cleaning up lead contamination is also available.

What if I live in an older rental property?

When you rent a property built before 1978 the landlord is required to have you sign a standard Disclosure form, as required under Federal law. The landlord is also required to give you a pamphlet entitled "[Protect Your Family from Lead in Your Home](#)". According to the Federal law, the landlord is only required to disclose to you any knowledge that he/she has of lead-based paint (LBP) in the house or apartment. If he/she has no knowledge of LBP, he/she is not required to conduct an inspection or make a special effort to find out if lead based paint is present. The only obligation is to disclose current knowledge.

Lead-based paint is usually not a hazard if it is in good condition and is not on a window, door, or other area where the surfaces may rub together and create lead dust. Chipping, peeling, cracking or damaged paint is a hazard and needs attention. If you see any chipping paint or other lead paint hazards, notify your landlord.