

Oregon Lead Poisoning Prevention Program

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ADULT LEAD EXPOSURE

What Does my Blood Lead Test Mean?

Adult lead poisoning commonly occurs from exposure to lead 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 (fishing, hunting, fixing cars, remodeling, working with lead solder).

People with high levels of lead in their bodies often do not seem sick. The symptoms that occur are very general and can be caused by conditions other than lead poisoning. 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 a person has lead poisoning. A blood lead test gives a picture of the amount of lead circulating in the blood (blood lead level or BLL). Blood lead tests tell how many micrograms (millionth of a gram) of lead are in each deciliter (tenth of a liter) of blood. This is written as $\mu\text{g/dl}$. A blood lead test is mainly an estimate of recent exposure to lead.

Your medical provider may also recommend that an additional type of lead test be performed on the same sample of blood, of if you have already had an elevated blood lead test result. This type of test may be called either an erythrocyte protoporphyrin (EP), free erythrocyte protoporphyrin (FEP) or zinc protoporphyrin (ZPP) test. This test does not measure the amount of lead in the blood, but is a measure of an actual harmful effect that lead has had on the body in the past 3-4 months. However, increases in EP/ZPP are not detectable until BLLs reach 20 to 25 $\mu\text{g/dL}$. An increase in EP or ZPP usually lags behind an increase in BLL by two to six weeks.

The public health action level for adults is 25 $\mu\text{g/dL}$ or higher (also called an elevated blood lead level or EBLL). However, there is no safe level of lead and the majority of adults have blood lead levels less than 3 $\mu\text{g/dL}$. **Everyone should strive to maintain the lowest achievable blood lead level.**

Blood Level	Action
<10 $\mu\text{g/dL}$	There is no safe level of lead and most people can attain a level of 5 $\mu\text{g/dL}$ or less. Pregnant or women likely to become pregnant should try to maintain lead levels below 10 $\mu\text{g/dL}$ and as low as possible.
> 10 $\mu\text{g/dL}$	Identify and reduce lead exposure sources. Review work or hobby habits and personal protective equipment.
\geq 25 $\mu\text{g/dL}$	Oregon Lead Poisoning Prevention Program provides education and case follow-up. Identify and reduce lead exposure sources. Review work habits and protective equipment. Important to talk to your medical provider and continue to have your blood tested for lead.
\geq 40 $\mu\text{g/dL}$	Above actions plus: Medical exam and evaluation advised. OSHA requirements may apply. Retest in 1-2 months. Workers of reproductive age may need special counseling.
50-59 $\mu\text{g/dL}$	Remove from work with lead. Immediate medical evaluation indicated. Medical treatment may be needed if you are having symptoms due to lead exposure. Retest in one month.
\geq 80 $\mu\text{g/dL}$	Above actions plus: urgent medical evaluation indicated. OSHA requirements may apply.

What should I do if I have an elevated blood lead level?

Lead is a powerful poison and some absorbed lead 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 or increasing blood lead level shows that lead is building up in your body faster than your body can eliminate it.

Reduce Your Exposure: The most important step is to identify and reduce source of exposure. Your health care provider, local health department, and Oregon Lead Poisoning Prevention Program can help you do this. Find out if your work or hobbies involve lead. Ask your employer if you work with lead and check the Material Safety Data Sheets (MSDS) for materials you work with.

Reduce the risk of exposure to lead and protect yourself and your family:

- Do not eat, smoke or drink when you are working with lead. 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 to avoid taking lead dust home.
- 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.

Eat a healthy Diet: A healthy diet will reduce the amount of lead your body absorbs, and will also increase the portion of lead naturally excreted from your body.

- Eat small frequent meals rather than three large meals each day. Food in the stomach helps lead to pass through without being absorbed.
- Eat a diet high in calcium and iron and low in fat. Maintaining adequate levels of calcium and iron will help lead to pass through your body without being absorbed. Calcium rich foods include milk, cheese, yogurt, beans (legumes), nuts, broccoli, certain cereals and calcium-fortified orange juice. Foods high in iron include beef, spinach, raisins/prunes, dried beans/peas, nuts, green leafy vegetables, and cereal/bread fortified with iron.

How can I learn more about preventing lead exposure?

Oregon Adult Lead Poisoning Prevention Program at 971-973-0440 or www.healthoregon.org/lead

Oregon Occupational Health and Safety Administration at (800) 922-2689 or www.orosha.org.