

Health Dangers from Lead



What workers should know

If you work with lead you need to:

- ➔ Find out how much lead is in your blood.
- ➔ Talk to your doctor about lead and your health.
- ➔ Take steps to protect yourself at work.

What health damage can lead cause?

Studies show that lead in adults, even at low levels, can:

- ➔ **increase blood pressure**— may increase your chances of having a heart attack or stroke.
- ➔ **decrease brain function**— making it more difficult to think, learn, and remember.
- ➔ **decrease kidney function**— making it more difficult to get rid of toxic waste products through your urine.
- ➔ **harm the physical and mental development of your baby** before it's born.
- ➔ **increase chances of having a miscarriage.**

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Health damage from lead:

- * **Can be permanent.**
- * **Can be occurring even if you have no symptoms.**
- * **May not show up until many years later.**

You may work with lead if you:

- Make or repair radiators
- Make or recycle batteries
- Recycle scrap metal or electronics
- Melt, cast, or grind lead, brass, or bronze
- Make or glaze ceramics
- Work at a shooting range
- Remove paint or coatings
- Remodel homes and buildings
- Tear down buildings, bridges, or tanks
- Cut, weld, or saw lead-containing metal
- Use solder

This is not a complete list. If you are unsure if you work with lead, ask your employer.

How does lead get into my body?

Lead gets into the body through the air you breathe. You can also swallow lead without knowing it if lead dust gets onto your hands or face or on food you eat.

How do I know how much lead is in my body?

Get a blood lead level test. This test measures the amount of lead in a person's blood. Blood lead test results are reported as micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$ or mcg/dL). The typical blood lead level for adults in the U.S. is less than $1 \mu\text{g}/\text{dL}$. Even if you feel fine, you should get tested.

*** Know your number.**

What level of lead is harmful?

Some of the harmful effects of lead have been seen at very low levels. Scientists and doctors now recommend that blood lead levels (BLL) be kept below $5 \mu\text{g}/\text{dL}$.

*** Blood lead levels should be kept below 5.**

Will my health be damaged?

No one can predict for sure whether your health will be damaged at a low blood lead level. Your risk (chance) of suffering from health damage increases with the amount of lead in your blood and the length of time you have been exposed. Even low levels over years or decades can cause damage. In a pregnant woman, low levels over short periods of time (days to weeks) can harm the baby. It will also depend on whether you have any health conditions that place you at higher risk of damage from lead.

If your blood lead level is $5 \mu\text{g}/\text{dL}$ or higher, the most important thing you can do is take steps to lower your exposure in the future. Information on how you can protect yourself is on pages 4 and 5.



*** Can lead at work harm my family?**

YES. You take lead dust from your job to your family when you wear your work clothes and shoes home. Lead dust can get in your car. It can get on furniture, floors, and carpets.

Your child can swallow this lead dust and be poisoned. The steps you take to protect yourself will also keep you from bringing lead home to your family. See pages 4 and 5 for more information on what you can do.

What should I tell my doctor?

Your doctor needs to know if you work with lead. Your doctor can order a blood lead level test if you need one.

Tell the doctor:

- ➔ What you do at work.
- ➔ How long you have been at your job.
- ➔ Any lead jobs you've had in the past.
- ➔ If you've ever had a blood lead level test.
- ➔ If you've had to be moved to a different job or be off work because your lead level was high.
- ➔ If you think working with lead is making you sick.

Women should also tell their doctor if they are pregnant or considering becoming pregnant.

Ask the doctor if you:

- ➔ Have any medical conditions that may make you more sensitive to the effects of lead.
 - High blood pressure
 - Kidney disease
 - Brain or nerve disease
 - Other conditions
- ➔ Need any follow-up medical tests to see if lead is affecting your health.

My blood lead level has been high for years. Should I find other work?

Whether you continue to work with lead is a personal decision. It is often a tough decision to make. When making this decision, consider:

- ➔ Are there steps you can take to lower your exposure to lead? See pages 4 and 5 for steps you can take to protect yourself.
- ➔ Do you have any health conditions that may make you more sensitive to the harmful effects of lead?
- ➔ If you have a medical condition that places you at higher risk, can you transfer to another job without lead at the same company?
- ➔ If you change jobs will you receive the same salary and benefits? If not, can you and your family afford a lower paying job?



What can I do to protect myself?

Make sure you don't accidentally swallow lead.

- ➔ Wash your hands and face with soap and water before eating or drinking and before leaving work.
- ➔ Do not eat, drink, or smoke in the work area.
- ➔ Take a shower and wash your hair before leaving work or as soon as you get home.
- ➔ Change into clean clothes and shoes before you leave work. Keep dirty work clothes and shoes separate from clean street clothes in a locker or a plastic bag.
- ➔ Use wet cleaning methods. Wet wipe surfaces and mop or HEPA vacuum the work area daily.



Strip back paint before cutting or welding.



Attach power tools to a HEPA vacuum.

*** Get tested at least every 6 months.**

Lower the amount of lead you breathe in.

- ➔ Use work methods that keep dust and fume levels down.
- ➔ Use local exhaust ventilation if you have it and position it correctly.
- ➔ Ask your employer for a respirator to wear while you work with lead. If you already wear a respirator, ask if there is another type of respirator that will protect you better. If you use a respirator, your employer has to pay for a doctor to evaluate whether you can wear one safely. Your employer must also provide you with a fit-test to make sure that the respirator fits you well.

Get a blood lead level test at least every 6 months.

- ➔ Ask your employer for a blood lead level test. If you have significant lead exposure at work, your employer must provide you with a test and pay for it.
- ➔ Ask your personal doctor for a test if your employer doesn't provide one.

What your employer should do to protect you

The best thing that your employer can do is to get rid of lead and lead-containing materials. If it's not possible to get rid of the lead, your employer should take steps to keep the amount of lead in the workplace as low as possible. Your employer should:

- Train you to work safely with lead.**
- Provide wash-up and shower facilities.**
 - ➔ If you work in construction these may be portable wash stations and portable showers.
 - ➔ Your employer should provide you sufficient time to wash up before breaks, lunch, and going home.
- Provide clean areas for eating and changing.**
- Provide work clothes and work shoes** that stay at the job site.
- Provide a HEPA vacuum or tools for wet cleaning** the work area.
- Install local exhaust ventilation** whenever possible.
 - ➔ If there is already local exhaust ventilation your employer should check it regularly to make sure it works well.
- Provide you with the right tools to keep lead dust and fume levels down** such as power tools attached to a vacuum and long-handled torches.



Use a long-handled torch.

- Separate lead work areas from non-lead work areas.**
 - ➔ In construction, plastic sheeting can be used to isolate dusty work from the surrounding area.
- Provide you with a respirator** to give you even more protection.



Use P-100, N-100, or R-100 filters.

- ➔ If you use a respirator, your employer has to pay for a doctor to evaluate whether you can wear one safely. Your employer must also provide you with a fit-test to make sure that the respirator fits you well.

- Provide you with a blood lead level test** at least every six months.