



# How do I prevent lead exposure?

Lead poisoning is 100 percent preventable. Proper ventilation, good housekeeping practices and basic personal hygiene practices will limit or eliminate the risk of lead exposure.

If you are casting at home, take the following precautions.

## Establish a casting area:

- Outdoors or, if indoors locate this area away from the kitchen or food handling or storage areas.
- Make sure this area is not carpeted and surfaces are easy to clean. Make your own floor sweeping compound from sawdust, peat, or dry dirt with an oil mixed in to make it clumpy. Dust this compound on the floor to prevent lead dust from becoming airborne.
- Use lots of ventilation that exhausts air up and out. Do not use a portable fan, it will only blow airborne lead dust around the room. Make sure that the air from this area is not being circulated throughout your home through your home heating and air conditioning system.
- Never eat, drink, chew gum or smoke or have these in your casting area because lead dust will settle on them and you will eat or inhale the dust.
- Use rubber gloves and a dust mask with special filters for lead when handling solid lead, bullets and dross. Store dross in a closed container.
- Melt lead below 900F. Lead melts at 621F. Fumes are released at 900F. Lead fumes can be breathed in and also settle on surfaces as lead oxide — the yellowish/brown dust formed when fumes mix with air.

- Do not sweep dry floors. Use a shop-vac with a HEPA filter to vacuum the floor, work surfaces and your clothes. Use this vacuum only in your casting area and **DO NOT** use the house vacuum.
- Wipe down your work areas after casting with lead removal wipes or decontamination cloths specifically made for lead removal.
- Keep children and women of childbearing age clear of this area. Children are more likely to come in contact with lead dust and get it in their mouths.
- Shower and wash hair after smelting or casting. Always wash hands after handling lead.

## Hand sanitizers are good for germs but are useless for lead.

Alcohol-based hand sanitizers do not remove lead from hands. While washing with soap and water is often a sufficient means of removing lead residue, there are more efficient cleaning products that can almost completely eliminate lead content from your skin. Decontamination towels, for example, remove 98 percent of lead residue from skin. In addition, there is hand wipe technology available that will indicate whether your handwashing method is effective.

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# Lead Safety »» For Hobbyists



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# How am I exposed to lead?

## Refinishing furniture

Refinishing furniture built before 1978 can be hazardous. Scraping and sanding the furniture can cause an airborne lead dust, which is easily inhaled. Once inhaled, lead enters the bloodstream and is distributed throughout the body. If the lead concentration is high enough, your health will be affected.

## Stained glass making

Stained glass containing lead is hazardous to both consumers and those involved in the process of making it. Soldering lead creates a poisonous vapor that is easily inhaled. You also can be exposed to lead when handling lead came or leaded solders and during dismantling of old stained glass pieces for restoration. Hazardous exposures other than lead can occur when using acid fluxes during soldering or when using a glass grinder. In each case you can cause damage to your lungs by inhaling fumes or powdered glass.

## Pottery and ceramics

Ceramics constructed using lead-containing frits and glazes expose you to lead when you mix the frits and glazes, spray, paint and otherwise handle the materials. There is also the potential for lead to leach out of these products into food and beverages where they can be ingested.



## Jewelry construction



As with stained glass making, jewelry construction can also involve lead soldering. When lead is melted, a lead vapor is created. When this toxic vapor is inhaled, lead enters the bloodstream and is distributed throughout the body. Operating the soldering iron at very high temperatures releases more fumes than at lower temperatures.

## How do I know if I have lead in my body?

### Have your blood tested

You can have lead poisoning and not have any symptoms. Contact your health care provider or local health department to get your blood tested. Your doctor can take a blood sample and test for lead. These tests give results in micrograms per deciliter of blood. They are a simple and inexpensive way for individuals to know if the precautions they are taking to keep their lead exposure down are working.



# A little lead never hurt anyone — or does it?

## How lead exposure harms you

Absorption of lead into your body will affect your health. Lead is stored in the blood, liver, kidney and bones. Frequent exposure to lead, particularly at high levels, can harm the nervous, digestive and reproductive systems, the brain and kidneys, and can interfere with the body's ability to make blood. When the nervous system is affected by lead exposure, you might become irritable, exhibit aggressive behavior, be depressed, have a loss of sensation in your fingers and face, or weakness in the fingers, wrists and ankles. You might also experience headaches, lose sexual function and become impotent. Other symptoms of exposure to high lead levels may include loss of appetite, joint pain, and changes in sleep patterns.

Lead exposure affects men causing reduced sexual function and impotence if lead levels reach high enough concentrations. Lead also can alter the structure of sperm cells potentially causing birth defects.

Pregnant women are especially vulnerable to lead exposure due to metabolic changes caused by the pregnancy. Lead passes through the placenta to the fetus potentially causing miscarriages and birth defects.

Adults absorb about 20 percent of the lead they ingest; children absorb about 70 percent of the lead they ingest. Exposing a child to lead may result in slow learning, slow growth, hearing loss and behavioral problems.

