Lead in Drinking Water

1. How does lead get into drinking water?

The Safe Drinking Water Act sets an action level of 15 or less ppb (parts per billion) of lead in drinking water at consumer's homes. Drinking water in New Mexico does not naturally contain lead, but lead can get into the water, if lead leaches out of any lead-containing components in the plumbing. Parts of the water system that may contain lead include, but are not limited to:

- Lead pipes in the water delivery system of older communities
- Lead pipes in the house plumbing (can be found in houses built before 1940)
- Lead solder found in copper pipes (can be found in homes built between 1930 -1986
- Faucets and fittings that contain leaded-brass
- Some water meters

The amount of lead that leaches out of the plumbing depends on the acidity of the water, how long the water sits in the pipes, the water temperature, the age and the amount of lead in the pipes and fixtures. New Mexico's water is usually alkaline or hard, as it contains a lot of dissolved minerals. These minerals, over time, form a mineral scale or coating on the inside of pipes and fixtures. Once this coating forms, there is a protective barrier between any metal in the plumbing and the water. However, water can become less alkaline (or more acidic) and corrosive to the plumbing pipes and fixtures because of chemicals added to the water for disinfection. This can remove the protective mineral scale in older plumbing an/or prevent the scale from forming in newer plumping fixtures.

2. Who is at risk and what are the health effects of lead in drinking water?

Lead is toxic to the human body. It is a chemical element that your body does not need at all.

- Children under 6, infants and developing fetuses are especially harmed by lead.
  Low doses of lead affects the developing brain of children/babies and can cause lowered IQ, learning disabilities, and problems with attention and behavior. Higher amounts of lead can cause anemia, hearing problems, kidney problems, insomnia, and stomach problems. Most children do not show any symptoms of lead poisoning. For more information on other sources of lead in the environment and ways to eliminate them see http://www.nsc.org/issues/lead/
- Pregnant women or women who may become pregnant can be affected by low levels of lead. The lead in their bodies can be passed to their developing fetus and affect the baby's development. Lead can also cause miscarriage, premature birth and low birth weight.
- Adults are affected by lead at much higher levels than children/babies or pregnant women. Adults with high lead levels can suffer from high blood pressure, anemia, kidney, hearing, memory, and reproductive problems

3. Should I have my water tested for lead?

Water systems are routinely tested for lead at the water treatment facility, but this does not tell you about the condition of **your** household drinking water as lead may be picked up along the water delivery system**.**

- Drinking water analysis is available from several labs in New Mexico. See the New Mexico Environment Department's web site for a list of certified labs.
  http://www.nmenv.state.nm.us/dwb/Certified_labs.html
- Home test kits are available for testing water for lead, but these are not endorsed by the Environmental Protection Agency (EPA).
- For more information about testing your water, call the EPA's safe drinking water Hotline at 1-800-426-4791

4. If there is lead in the water, how can I find out if there is lead in my body?

The only way to know for sure if you have lead in your body is by having a **blood** test for lead.

- If you have lead in your water, children under the age of six should have a blood test for lead. If you are Medicaid eligible, your child should be routinely tested for lead at 12 and 24 months of age, regardless of whether or not you have lead in your water. This is a required test.
  If you have private insurance and have lead in your water, ask your health care provider to test your child's blood for lead. If you child's lead level is elevated, case management will be provided by the New Mexico Department of Health, Lead Poisoning Prevention Program.
- Pregnant woman or women who may become pregnant should also be tested.

5. How can I reduce my exposure to lead in my water?

Eating a diet high in vitamin C, iron, and calcium and low in fat may help reduce the harmful affects of lead in your body. Additionally you can take the following measures:

- Use only **cold water** for drinking, cooking, and especially for preparing formula, cereal, or juice for babies. Hot water will leach more lead out of the system than cold water.
- Run the cold water tap in the morning for 30 seconds to a minute to flush out any water that sat in the pipes and fixtures all night. Also flush out the system if you have not used the tap for more than 6 hours, Do **not** use this flushed out water for drinking, cooking or for your pets. This water can be collected in a bucket and used for plants.
- Get in the habit of running the cold water tap for 5 second before each use, if you use the tap infrequently throughout the day..
- If you wish, you may purchase bottled water for drinking, cooking and preparation of baby food and formula, and for your animals..
- Remove the lead from your water by installing a treatment system such as reverse osmosis or distillation. These systems can be quite expensive. A less costly alternative might be to install a point of use filter that is certified to remove lead. This filter can be placed on a single tap in your home, (e.g. PUR®).* Another suggestion is to purchase a pour through pitcher with a filter that will remove lead from water, (e.g. Brita®).* Be sure that you change the filter as often as the manufacturer recommends. The filter will not be effective after a certain number of uses. Check with the National Sanitation Foundation website for information about exactly what impurities are removed by a particular device before investing money in any water treatment system or filter. See http://www.nsf.org/consumer/drinking_water/dw_treatment.asp?program=WaterTre
- If you think that the lead contamination is coming from leaded-brass in your water faucet, a new faucet can be installed. Check the package to be sure you are buying a plumbing fixtures that has **zero- or ultra low-lead levels. Read the label carefully. New faucets meeting the NSF 61 standard** will have NSF 61/9 stamped on cardboard box.** For more information on particular fixture contact NSF at 1-800-NSF-MARK or go to http://www.nsf.org/Certified/PwsComponents/

*The New Mexico Department of Health does not endorse any product mentioned in this fact sheet. The names of products are included as examples, for your convenience

The Safe Drinking Water Act (SWDA) was passed in 1974. The 1986 amendment banned the use of lead solder in plumbing and called for "lead free" plumbing fixtures. **A "lead-free" fixture was defined as one that had 8% or less lead in it. But even this low amount of lead can be leached out of the faucets into the water for the reasons mentioned in Question 1. Faucets are now manufactured that contain less lead. Additionally, the 1996 amendments to the SDWA established a voluntary standard for the amount of leachable lead from faucets/ plumbing devices. (Section 9 Standard 61: Drinking Water the American National Standards Institute/National Sanitation Foundation (ANSI/NSF) System Components-Health Effects). For more information see http://www.nsf.org/business/newsroom/plumbing99-1/

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