



Lead in Home Water Systems

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Why is lead a health risk?

While many lead-based products have been phased out, any faucets or plumbing components installed before 2014 may contain up to 8% lead content. Lead can be found in lead-based paint, some imported products like toys or canned food, and in certain circumstances, air, soil, and in plumbing pipes and fixtures which can leach into drinking water. Inhaling or swallowing lead can build up in the body over time, and too much lead build up can damage the brain, nervous system, hearing, red blood cells, and kidneys. Drinking water with lead contamination is especially problematic for infants who drink formula made with tap water, children under the age of 12, and pregnant women and nursing mothers, as lead in drinking water can be passed to unborn children and breast-fed babies. In most cases it is safe to shower or bath in water that has elevated lead levels, as human skin does not absorb lead.

What are the most common sources of lead in water?

Lead is a common metal which exists throughout our physical environment and we are exposed to small amounts each day, often without noticeable health effects. Groundwater in Minnesota typically does not contain detectable levels of lead. The most common way that lead enters the water system is due to water passing through lead plumbing components where it is able to dissolve into the water. The longer that water sits stagnant in these plumbing components, the more lead dissolves. The following are common plumbing features that contribute to lead in water.

- **Lead pipes** – Elevated lead levels are most often found in older homes that haven't renovated the water system. Water systems that were installed prior to 2014 may have up to 8% lead content, and water systems built prior to the 1950s are likely to have even higher lead concentrations.
- **Lead solder** – Used in the past to connect copper pipes, banned in 1985. Most often found in homes built prior to 1985 that haven't renovated the water system.
- **Brass components** (faucets, coolers, valves) – While brass usually contains low concentrations of lead, it is still possible for lead to dissolve into the water, especially in the first few months of use. The amount of lead in these fixtures has been limited, but it is still a source of contamination. Even brass fixtures that don't have a brass color can contribute lead to drinking water. This should be a consideration for water systems that were installed prior to 2014, as they may have components that contain up to 8% lead content.
- **Lead service line** – The service line is the pipe that brings water from the main water line under the street into your home. Older water systems may include lead service lines. You can find out if you have a lead service line by contacting your public water supplier, or online at the following link:
<https://www.mprnews.org/story/2016/06/24/npr-find-lead-pipes-in-your-home>
- **Older wells** – Older wells that were constructed prior to the adoption of the well code may have been constructed using a lead well packer.

My house has city water, should I still test for lead?

Yes, the sources of lead in household drinking water in Dakota County are likely lead service lines or the plumbing and faucets inside the home that contain lead whether you drink city water or well water. Houses built prior to the 1950s are more likely to have been constructed with lead service lines and pipes. However, the EPA's *Lead in Drinking Water Act* did not go into effect until 2014, which means that water systems built prior to 2014 may contain drinking water plumbing and faucets with up to 8% lead content. Learn more about the *Lead in Drinking Water Act* here:

<https://www.epa.gov/dwstandardsregulations/use-lead-free-pipes-fittings-fixtures-solder-and-flux-drinking-water>

How much lead is too much?

There is no safe level of lead, and it is vital that we minimize our lead exposure to as little as feasibly possible. The current state and federal guidelines call for a maximum contamination level of lead in drinking water of 15 parts per billion. The number of people with reported high levels of lead in their water in Minnesota has been decreasing since the 1990s due to lead product restrictions and water system renovations to remove lead service lines and plumbing.

What data does Dakota County have?

Dakota County has found that 29% of water samples collected at kitchen faucets had lead detected; 1% are over the maximum contamination level of 15 parts per billion. The source of lead is not the aquifer but the plumbing and/or faucet in the home.

Learn more at the following websites:

- Environmental Protection Agency: <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>
- Minnesota Department of Health basic information: <https://www.health.state.mn.us/communities/environment/water/contaminants/lead.html>