

Lead in the Water

by Neil Perry

Will our new home come with a dangerous level of lead? That question is being asked to home inspectors more and more by homebuyers as they become aware of the serious dangers of lead, most recently in a home's water supply.

There is no question that lead can pose a serious health threat. It is particularly dangerous for pregnant women, young children and infants. Research has shown that lead exposure can be linked to many a variety of issues in kids:

- Reduced I.Q.s
- Attention Disorders
- Delays in Physical Development
- Behavioral issues
- Damage to brain development and growth

Not only is lead dangerous to the very young, it can pose health risks for adults as well, such as kidney problems, increased risk of cardiovascular death, and high blood pressure.

Water Supply Lead Dangers

One way lead can become present in a home is via the water supply. We all remember the water crisis in Flint, Mich., and it's important to realize that this was not an isolated incident.

USA Today reports have identified 2,000 additional water systems spanning all 50 states where testing has shown excessive levels of lead contamination over the past four years. The water systems, which report lead levels exceeding Environmental Protection Agency standards (15 ppb), collectively supply water to six million people (*Young and Nichols; USA Today*).

The EPA reports that scores of major cities in our country still utilize lead piping to supply water to homes, schools and businesses. It will take time and money to address this lead pipe issue on a municipality level, and as you can surmise, that will not happen quickly enough. The pipes carrying water to homes, daycare centers and schools can begin to corrode, leaching lead into a home's drinking water. Interestingly, water that has a high acidity level or low mineral content is especially corrosive to pipes and fixtures.



Neil Perry is an independent consultant serving the home inspection industry. Neil serves as a consultant to ANDalyze, the water testing company based in Illinois. ANDalyze Inc. provides hand-held, portable testing units to the Home Inspector marketplace capable of onsite, instant analysis of lead in a home's water supply. <http://www.andalyze.com/>



In-Home Lead Dangers

Most water pipes today are made of copper. However, homes built before 1986 may still have pipes with lead solder connections, so the potential for lead becomes very high. The Centers for Disease Control and Prevention estimates that as many as four million households in our country have children who may be exposed to unsafe levels of lead.

Each municipality issues a water quality report at least once a year, and in some instances twice annually. Home inspectors can receive a copy of the Consumer Confidence Report (CCR) by visiting the EPA website www.epa.gov/ccr.

Inspectors are most likely checking the municipality's water report card already but you should also test the water supply once it enters the home. While the water may be safe to drink as it enters the home, once it gets into a home's piping it can pick up unhealthy levels of lead from old fixtures, or pipes that were assembled using lead solder. This is particularly important if a home was built over 30 years ago. Each water outlet should be tested.

You can test for lead in water in a couple of ways. Inspectors who test for lead gather up water samples from each primary water outlet in a home and send them to an approved laboratory for analysis. While the process is a little slow and cumbersome, it will effectively determine if a home has safe water. A faster and less expensive approach is to use a mobile water testing system. This approach has the inspector test the water in a home from every outlet and allows the inspector to provide immediate feedback as to lead levels in the water system.

If lead is detected in a home, inspectors should refer their clients to a reputable plumbing contractor to learn how to remediate the lead problems discovered in one or more of the water outlets. These plumbing contractors or larger plumbing firms can walk a new homebuyer through the remediation process and provide an estimate for services. **WRE**