

Public Education for Lead Purdue University Water Works

Introduction

The United States Environmental Protection Agency (EPA), the Indiana Department of Environmental Management (IDEM), and Purdue University Water Works are concerned about lead in your drinking water. Although most samples taken from this facility have very low levels of lead, some samples have lead levels above the action level of 15 parts per billion (ppb) or 0.015 milligrams of lead per liter of water (mg/L). Under federal and state law we are required to have a program in place to minimize lead in your drinking water. This program includes collecting water quality parameter samples, corrosion control treatment, source water treatment, and public education. We are also required to replace each lead service line that we control if the line contributes lead concentrations of more than 15 ppb after we have completed the comprehensive treatment program. This brochure explains the simple steps you can take to protect yourself by reducing your exposure to lead in drinking water.

Health Effects of Lead

Lead is a common metal found throughout the environment in lead-based paint, air, soil, household dust, food, certain types of pottery, porcelain and pewter, and water. Lead can pose a significant risk to your health if too much of it enters your body. Lead builds up in the body over many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to young children and pregnant women. Amounts of lead that won't hurt adults can slow down normal mental and physical development in growing bodies. In addition, a child at play often comes in contact with sources of lead contamination--like dirt and dust--that rarely affect an adult. It is important to wash children's hands and toys often, and try to make sure they only put food in their mouths.

Lead in Drinking Water

Lead in drinking water, although rarely the sole cause of lead poisoning, can significantly increase a person's total lead exposure, particularly the exposure of infants who drink baby formulas and concentrated juices that are mixed with water. The EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

Lead is unusual among drinking water contaminants in that it seldom occurs naturally in water supplies like rivers and lakes. Lead enters drinking water primarily as a result of the corrosion, or wearing away, of materials containing lead in the water distribution system and household plumbing. These materials include lead-based solder used to join copper pipe, brass and chrome plated brass faucets, and in some cases, pipes made of lead that connect houses and buildings to water mains (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2 percent lead, and restricted the lead content of faucets, pipes, and other plumbing material to 8.0 percent.

When water stands in lead pipes or plumbing systems containing lead for several hours or more, the lead may dissolve into your drinking water. This means the first water drawn from the tap in the morning, or later in the afternoon if the water has not been used all day, can contain fairly high levels of lead.

Steps You Can Take in the Home (or anywhere else) to Reduce Exposure to Lead in Drinking Water

Let the water run from the tap before using it for drinking or cooking any time the water in a faucet has gone unused for more than six hours. The longer the water resides in the plumbing the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeably colder, usually about 15 - 30 seconds. Although toilet flushing or showering flushes water through a portion of your homes plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking. Flushing tap water is a simple and inexpensive measure you can take to protect your health. It usually uses less than one or two gallons of water. To conserve water, fill a couple of bottles for drinking water after flushing the tap, and whenever possible, use the first flush water to wash the dishes or water the plants.

Try not to cook with or drink water from the hot water tap. Hot water can dissolve more lead more quickly than cold water. If you need hot water, draw it from the cold tap and then heat it.

The steps described above will reduce the lead concentrations in your drinking water. However, if you are still concerned you may wish to purchase bottled water for drinking and cooking.

You can consult a variety of sources for additional information. Your family doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. State and local government agencies that can be contacted include:

- Chris Marks at 496-7205 can provide you with information about your facility's water supply;
- Indiana State Department of Health at (317) 233-1232 or the Tippecanoe County Health Department at (765) 423-9221 can provide you with information about the health effects of lead.