

The United States Environmental Protection Agency (EPA) and the New York State Department of Health are concerned about lead in your drinking water. Although most homes, school and businesses have very low levels of lead in their drinking water, some buildings have lead levels above the EPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water (mg/l). Under Federal Law, all public water suppliers are required to develop a program to minimize lead in your drinking water. The program includes:

- 1) Corrosion control treatment (treating the water to make it less likely that lead will dissolve into the water);
- 2) Source water treatment (removing any lead that is in the water at the time it leaves our treatment facility); and
- 3) A public education program.

All public water supplies are also required to replace each lead service line they control if the line contributes lead concentrations of more than 15 ppb after they have completed the comprehensive treatment program. If you have any questions about how your water system is carrying out the requirements of the lead regulation, please give them a call.

#### 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, porcelains 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 your children (especially under age 5), pregnant women and their fetuses. Amounts of lead that will not hurt adults can slow down normal mental and physical development in the growing bodies of children. In addition, a child at play often comes into contact with sources of lead contamination like dirt and dust that rarely affect an adult. If a child puts dirty fingers into his or her mouth (as most children do) some lead may be absorbed into the child's system. It is important, therefore, to wash children's hands and toys often and to 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 made with water. EPA estimates that drinking water can make up 20 percent or more of a person's total exposure to lead.

#### How Lead Enters our Water

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 your house to the watermain (service lines). In 1986, Congress banned the use of lead solder containing greater than 0.2% lead, and restricted the lead content of faucets, pipes, and other plumbing materials to 8.0%.

When water stands in lead pipes and plumbing systems containing lead for several hours or more, the lead in the pipes or solder may dissolve into your drinking water. This means the first water drawn from the tap in the morning or later in the afternoon after

you return from work or school, can contain fairly high levels of lead.

#### Steps You Can Take in the Home to Reduce Exposure to Lead in Drinking Water

Despite efforts mentioned earlier to control water corrosivity and remove lead from the water supply, lead levels in some homes or buildings can be high. You should take the following precautions, especially if the water will be consumed by young children or pregnant woman:

- 1) Flush Your System - Flushing tap water is a simple and inexpensive measure you can take to protect your family's health. Flushing usually uses less than one or two gallons of water and costs less than \$.23 per month.

To flush, 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 (6) hours. The longer water resides in your home's plumbing, the more lead it may contain. Flushing the tap means running the cold water faucet until the water gets noticeable colder, usually about 15 to 30 seconds. If your house has a lead service line to the watermain, you may have to flush the water for a longer time, perhaps one (1) minute, before drinking. Although toilet flushing or showering flushes water through a portion of your home's plumbing system, you still need to flush the water in each faucet before using it for drinking or cooking.

To conserve water, fill a couple of bottles with water after flushing the tap, and whenever possible use the first flushed water to wash dishes or water plants.

- 2) Use only cold water for cooking and drinking do not 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 from the cold tap and heat it on the stove.

- 3) Remove loose solder and debris from the plumbing materials installed in newly constructed homes, or homes in which the plumbing has recently been replaced. To do this, remove the faucet strainers from all taps and run the water from 3 to 5 minutes. Thereafter, periodically remove the strainers and flush out any debris that has accumulated over time.

- 4) Have your water tested. If you are still concerned you may want to have your water tested. Testing is the only way to determine if you have lead in your water because you cannot see, taste or smell lead in drinking water.

You may wish to have two (2) samples analyzed. The first should be a first draw tap sample. Draw one (1) liter of water that has stood motionless in the plumbing system for at least six (6) hours. The second should be a flush sample. After the first draw sample has been taken, allow the water to run for 30 to 60 seconds. Draw another one (1) liter sample. If the first draw exceeds the action level of 15 ppb or 0.015 mg/l but the flush sample meets the action level, then flushing your system as described above will be effective in reducing your lead exposure. If both samples exceed the action level, then you can take the steps described below. For more information on having your water tested, please call your local County Health Department.

- 5) Identify and replace lead materials with lead free ones. If your copper pipes are joined with lead solder that has been installed illegally since it was banned in 1986, notify the plumber who did the work and request that he or she replace the lead solder with lead-free solder. Lead solder looks dull grey, and when scratched with a key looks shiny. In addition, notify your State Department of Environmental Protection about the violation.

- 6) Determine whether or not the service line that connects your home or apartment building to the watermain is made of lead. The best way to determine if your service line is made of lead is by either hiring a licensed plumber to inspect the line or by contacting the plumbing contractor who installed the line. You can identify the plumbing contractor by checking the city's records of building permits. A licensed plumber can at the same time check to see if your home's plumbing contains lead solder, lead pipes or pipe fittings that contain lead.

The public water system that delivers water to your home should also maintain a record of the materials located in your distribution system. If the service line that connects your dwelling to the watermain contributes more than 15 ppb to drinking water after a comprehensive treatment program is in place, the water system is required to replace the line. If the line is only partially controlled by them, they are required to provide you with information on how to replace your portion of the service line, and offer to replace that portion of the line at your expense. They must also take a follow-up tap water sample within 14 days of the replacement. Acceptable replacement alternatives include copper, steel, iron and plastic pipes.

- 7) Have an electrician check your wiring. If grounding wires from the electrical system are attached to your pipes, corrosion may be greater. Check with a licensed electrician or your local electrical Code to determine if your wiring can be grounded in soil. Do not attempt to change the wiring yourself because improper grounding can cause electrical shock and fire hazards.

#### Additional Procedures

The steps described above will reduce the lead concentration in your drinking water however, if a water test indicates that the drinking water coming from your tap contains lead concentrations in excess of 15 ppb after flushing or after actions have been taken to minimize lead levels, than you may want to take the following additional measures:

- 8) Purchase or lease a home treatment device. Home treatment devices are limited in that each unit treats only the water that flows from the faucet to which it is connected, and all of the devices require periodic maintenance and replacement. Devices such as reverse osmosis systems or distillers can effectively remove lead from your drinking water. Some activated carbon filters may reduce lead levels at the tap however, all lead reduction claims should be investigated. Be sure to check the actual performance of a specific home treatment device before and after installing the unit.

- 9) Purchase bottled water for drinking and cooking.

#### For more Information

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:

Your City or County Department of Public Utilities can provide you with information about your community's water supply, and a list of local laboratories that have been certified by the State for testing water quality.

The Department in your City or County that issues building permits could be able to provide you with the names of the plumbing contractors that plumbed your home.

Your State Department of Public Health or your City or County Health Department can provide you with information about the health effects of lead and tell you how and where you can have your child's blood tested.