LEAD

What is lead?

Lead is a metal in the earth’s crust that is normally found with other metals such as zinc, silver, and copper. Lead has many uses including manufacturing of paint, batteries, and fishing weights. Lead-based solder which had been used to connect copper water pipes was banned in the 1980s, but may still be a source of lead in drinking water in older homes. In the United States, lead was used as a gasoline additive, but was banned beginning in 1973 and eliminated by 1996. In Mexico, the use of leaded gasoline has decreased since 1986 with unleaded gasoline introduced nationwide in 1991.

How does lead affect the environment?

All the soils in the world contain small amounts of naturally occurring lead with an average of 10 mg/kg (milligrams per kilogram). Higher levels of lead (contamination) are often due to human activity (e.g., leaded gasoline and mining). Generally, lead enters the environment through particles that contain lead residues. These particles may be deposited onto dirt or bodies of water.

How can we be exposed to lead?

Lead effects are similar whether you are exposed by breathing or ingesting particles containing lead (e.g., soils or dust particles). Although, scientific studies have identified that ingestion is the main route of exposure in humans. Children are most impacted by lead exposure because they often put their hands and/or toys in their mouths.
Lead and Our Health

brains and bodies are still developing and they can absorb more lead per weight in comparison with adults. If children ingest too much lead, they can have growth problems, stomachaches, headaches, muscle weakness, hearing problems, and brain damage. Even low amounts of lead can cause a lower intelligence coefficient, behavioral problems, and a decreased ability to pay attention or concentrate.

How can we reduce our lead exposure?

To reduce lead exposure you need to reduce the possible sources. Hand-washing reduces your exposure to lead and to clean toys used in soil or surfaces that may contain lead. Keep well informed about the toys that children play with and discard the ones that contain leaded paint or parts.

It has been shown that gastrointestinal absorption of lead is linked to calcium and iron deficiency and an excess of fat and proteins in the human body. Lead effects can be reduced by following a well-balanced diet and eating foods low in fat. It is also important to maintain a diet rich in iron and calcium.

If you suspect that you have been exposed to lead, consult with your doctor and ask to have a blood analysis. The blood analysis will determine if you have been exposed, estimate the amount of exposure, as well as when you were exposed. If there is any suspicion of exposure in young children (12-24 months) have a blood analysis done to determine their lead levels.

What options do we have to reduce our lead exposure at home?

Specific cleaning practices can reduce your lead exposure at home. It is better to use moistened brooms, mops, and cloths to clean your home and avoid redistribution of lead-containing dirt or dust. If possible, use rubber gloves and wash your hands when you finish cleaning. Discard the dirty mop water in the toilet, not in your kitchen sink or on the ground. It is also a good idea to investigate the history of your home to identify all possible sources of exposure. For example, if you know that your house paint contains lead, you should hire a professional to handle any remodeling work in your home. Some lead maybe in your tap water.

You can contact your local water provider to ask for the “consumer confidence report” which provides information on the quality of your drinking water. Older plumbing may be a source of lead. Contact a contractor to assess if you have any concerns. In Mexico, information on water quality can be found at the Comisión Nacional del Agua – CONAGUA Sistema Nacional de Información del Agua. To further reduce your lead exposure from tap water, use only cold water for drinking and cooking. If you have not used your tap water for more than 6 hours, let the water run for one or two minutes before you use it. You can also install a water filtration system to reduce lead levels in your tap water.

Children are most sensitive to lead exposure (specifically children 6 years old and younger) because their