

Lead (Pb)



Lead is a soft and malleable metal with a silvery white or greyish appearance. It is one of the first metals to be known to ancient man. Although not considered abundant in nature, lead is easily mined and extracted from several minerals, mostly galena. Because of its many interesting and unique properties, lead is still used extensively despite its high toxicity. The consequence, however, is its rising concentration in our food chain.

Pb
Lead



Atomic number
protons/electrons

82

Neutrons

(most common isotope)

126

Atomic weight

(amu)

208

Atomic radius

(pm)

146

Functions/Health effects:

Lead, like other heavy metals, has no positive role in human health. On the contrary, even the smallest amounts are dangerous and pose a serious health risk, especially for children. Lead causes irreversible damage to the central nervous system and other organs and tends to bio-accumulate in the body. In children, lead may cause a lower IQ and severe behavioral problems for the rest of their life.

Sources:

Previous extensive use, industrial mining, old car batteries and other factors contribute to the rising levels of lead in the environment. Lead can be found in many plant foods, depending on its concentration in the soil. In some areas, lead might be present in the drinking water as well. Since there is no safe level of lead in the blood, especially baby foods are closely monitored.

Did you know that?

Romans used lead extensively not only for water pipes but also for storing wine. When the acidic wine reacted with air, it created lead acetate which has a sweet taste, also known as "sugar of lead". Wine was therefore sweeter but also very toxic.

The English words "plumbing" and "plumber" come from Latin word plumbum which stands for lead.

Lead is an effective X-ray shield thanks to its high density and atomic number.

Food
division

