

Mercury (Hg)



Mercury is a transition metal that is liquid at room temperature and has a typical metallic silvery appearance. Mercury is found in nature as a part of mineral cinnabar, which has a bright red colour and was used as a red pigment and even as a medicine as far back as 10000 years ago. Because we now know about its toxic properties, the use of mercury is steadily declining.

Hg

Mercury



Atomic number
protons/electrons

80

Neutrons

(most common isotope)

120

Atomic weight

(amu)

200.6

Atomic radius

(pm)

132

Functions/Health effects:

Mercury has no positive role in the health of human body, its presence has exclusively adverse health effects. It has high affinity for accumulation in the fat tissue and remains there for a very long time. Mercury is known to cause damage to the brain and other organs, depending on the form of exposure.

Sources:

Mercury is released into the environment by industrial pollution, which ultimately leads to its presence and concentration in the seas and oceans. There, the mercury is converted by bacteria into its organic form, which is eventually ingested by fish and shellfish. Fatty fish such as tuna and shark are one of the largest sources of mercury in the form of methylmercury and other organometallic compounds. Mercury in this form is the most toxic, and these compounds are some of the worst neurotoxins ever discovered.

Although the concentrations of mercury in fish and seafood may seem small and are measured in parts per million (ppm), the danger lies in the ability of mercury to accumulate over time in the body and brain.

Did you know that?

Dental amalgams for tooth fillings are created by mixing elemental mercury with another metal in powder form, usually silver. Many people thus have had mercury in their mouths since childhood, however, mercury in this form is stable and non-toxic.

In 1996, a professor of chemistry, Karen Wetterhahn, accidentally dripped two drops of dimethylmercury onto her glove. This small amount was more than enough to cause her health to deteriorate to the point where she died within a few months.

Food
division

