

Cadmium (Cd)



Cadmium is a toxic heavy metal belonging to the group of transition metals. It occurs in nature as a part of many minerals. It has many industrial uses, mainly in the production of batteries, pigments, and electroplating. It is one of the most toxic metals for humans, even in very low doses. Careful monitoring of cadmium and other heavy metals is therefore paramount in ensuring healthy environment for our future wellbeing.

Cd
Cadmium

[Kr] 4d¹⁰ 5s²

Atomic number
protons/electrons

48

Neutrons

(most common isotope)

66

Atomic weight

(amu)

112.41

Atomic radius

(pm)

144

Functions/Health effects:

Exposure to cadmium in any form can lead to a number of health problems, including kidney damage, lung damage, and cancer. Cadmium is considered a carcinogen by world health agencies. Long-term exposure to even low levels of cadmium can cause chronic lung disease, brittle bones, and organ toxicity for reproductive, skeletal, nervous, and other systems.

Sources:

Some plants, such as tobacco, poppy seeds and certain types of grains, are known to accumulate cadmium from the soil. Crops grown in cadmium-contaminated soils may also contain high levels of this metal. Fish and shellfish, although considered healthy foods, tend to contain high levels of cadmium. The amounts of cadmium in most food products are usually negligible though, and do not pose a health risk.

However, people who smoke or live in areas with heavy industrial pollution may be at increased risk for cadmium exposure.

Did you know that?

Cadmium is used in rechargeable batteries, solar panels and as a pigment in certain types of plastic. Because of the potential health risks, many countries and industries are phasing out the use of cadmium in these applications.

Food
division

