

Manganese (Mn)



Manganese belongs to the group of transition metals, such as iron or nickel. It is a very hard and brittle element with a typical grayish-white metallic appearance. Although manganese is present only in trace amounts in our bodies, it is the 12th most abundant element in nature. Industrially, manganese is used in the production of hard alloys, to give glass a purple color, and as an oxidizing agent in chemistry.

Mn
Manganese

[Ar] 3d⁵ 4s²

Atomic number
protons/electrons

25

Neutrons
(most common isotope)

30

Atomic weight
(amu)

54.94

Atomic radius
(pm)

139

Functions/Health effect:

Manganese is a cofactor required for many enzymes involved in metabolism of cholesterol, glucose, and amino acids, reactive oxygen forms uptake, reproduction, bone formation and blood clotting. Our bodies contain about 10 to 20 micrograms of manganese, about half of which is found in our bones. Manganese supplements can prevent osteoporosis as well as have some other health benefits.

Sources:

Good sources of manganese are mussels, oysters, nuts, rice, legumes, and leafy vegetables. Several forms of manganese supplements are available, often mixed with other essential minerals. Although manganese deficiency is rare, low intake is detrimental to our health and we absorb only about 5% of manganese from dietary sources.

The recommended daily dose for an adult is about 2.2 micrograms which can be found in about 50 g of hazelnuts or one medium-sized blue mussel.

Did you know that?

Manganese is too brittle to be used as a pure element and it's mostly used in alloys with other elements.

Manganese dioxide has been used as a pigment since the ancient times. The cave paintings in Gargas, which are 30,000 to 24,000 years old, are made from its mineral form.

Food
division

