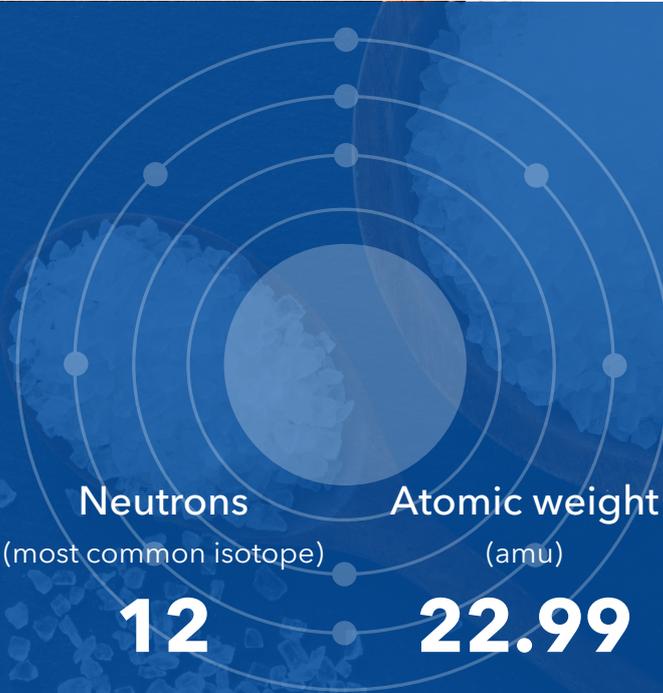


Sodium (Na)



Sodium belongs to the group of alkali metals, like lithium and potassium. Like all alkali metals, its high reactivity means that it does not occur in nature as a pure metal, but rather as salts, either in sea water or solid minerals. Sodium burns violently in water and is therefore stored in kerosene or mineral oil. It is the sixth most abundant element on Earth and the ninth most abundant in human body.

Na
Sodium



$[\text{Ne}]3s^1$

Atomic number
protons/electrons

11

Neutrons

(most common isotope)

12

Atomic weight

(amu)

22.99

Atomic radius

(pm)

166

Functions/Health effect:

Sodium is an essential mineral with a wide range of functions in the human body. Together with potassium, they make up an enzyme called sodium-potassium pump, which is crucial for managing energy balance at the cellular level. Sodium is responsible for pushing fluids inside the cell through osmotic pressure, while its counterpart, potassium, does the opposite.

High levels of sodium have a bad reputation for causing high blood pressure and other health problems. This is particularly true for people with heart problems. For these people, it's inevitable to monitor the sodium intake. However, sodium consumption generally does not pose an issue for a healthy person.

Sources:

As mentioned above, the most common source of sodium in nature is table salt or sea salt. Salt has been used since the ancient times as a way of preserving food when refrigeration was not available. Since sodium makes up 40 % of table salt, its consumption is generally sufficient without supplementation. However, eating a lot of processed and fast foods quickly adds up the amount of ingested sodium while not benefiting the body with other essential nutrients.

Salting food to taste and avoiding processed and fast foods is a great way to get adequate amounts of this important element in your diet. The recommended daily dose of sodium is less than 2.3 g per day. Since sodium is mostly taken in the form of salt or sodium chloride, this amount represents less than 6 g of table salt per day, or one small teaspoon of table salt.

Did you know that?

Sodium was first isolated in 1807 from caustic soda (sodium hydroxide) by Sir Humphry Davy. The abbreviation for sodium, Na, comes from Latin word natrium, which literally refers to soda, or sodium carbonate.

Sodium is widely used in low-pressure and high-pressure sodium vapor lamps which were commonly used as streetlamps and have a characteristic yellow hue. This colour is produced by vapor of sodium atoms, which emit this rich yellow colour when excited by electric current.

Food
division

