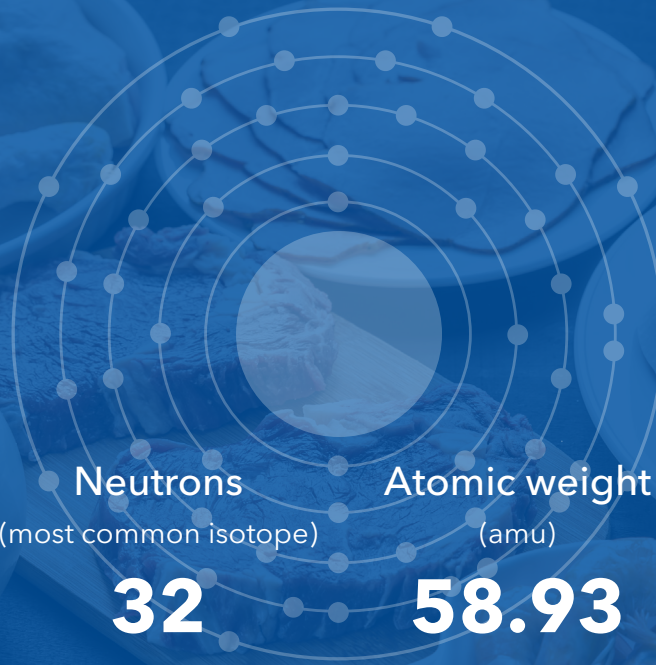


# Cobalt (Co)



**Cobalt** is a lustrous blue-gray element belonging to the group of transition metals. It occurs in nature as a part of several minerals mostly together with nickel and copper. When alloyed with nickel and iron, it makes an alloy with exceptional magnetic strength, and the addition of tungsten creates wear-resistant high-speed cutting tools. Cobalt is also used in making blue pigment, which has been known to mankind since ancient Egypt.

Co  
Cobalt



[Ar] 3d<sup>7</sup> 4s<sup>2</sup>

Atomic number  
protons/electrons

**27**

Neutrons  
(most common isotope)

**32**

Atomic weight  
(amu)

**58.93**

Atomic radius  
(pm)

**126**

## Functions/Health effect:

Cobalt is the central atom of vitamin B12, which is crucial for the proper function of the nervous system, the formation of healthy red blood cells and DNA synthesis. Because of this vitamin's vital role in the body and its relatively common deficiency in vegan diets, many forms of vitamin B12 supplements are available, collectively called "cobalamins". There are several forms of cobalamins and their bioavailability varies.

## Sources:

Cobalt as a part of bio-available vitamin B12 is only found in animal products, fortified foods, or food supplements. It is the only vitamin which is known to be absent in plant-based diets. Although plants contain trace amounts of cobalt, it is not bioavailable. Unlike plants, animals need vitamin B12 and they produce this cobalt-containing vitamin by bacteria in their intestinal tract.

The recommended daily dose of vitamin B12 for an average man is 2.4 mg. For example, a 100 g portion of beef liver contains 70 mg of B12, which is almost 3,000% of the daily dose, while spinach contains none.

## Did you know that?

The radioactive isotope of cobalt, cobalt-60, is used to create gamma rays which are used to treat cancer and to sterilize medical supplies.

The origin of cobalt's name comes from German miners who named it after deadly goblins, kobolds. When smelting cobalt ores that contain arsenic, they breathed the fumes and often fell ill or died.

Food  
division

