

# Minerals in food

## Calcium

 *For more information see Calcium.*

It is about 1200 g in the body, mainly in the bones. Its serum concentration of *'is 2.4-2.7 mmol / l'* and is due to a balance between absorption from food, excretion urine and storage (release) in the bones. Its metabolism is regulated by PTH, thyroid hormones and adrenal hormones, sex hormones and vitamin D. Calcium function in the body: Calcium is part of bone and teeth, reduces neuromuscular excitability, is important for the proper functioning of the cardiac conduction system, necessary for clotting, is important in the prevention of colorectal cancer (bile acid binding). Calcium source: milk and dairy products, cereals, legumes, vegetables, poppies, hard drinking water. Daily requirement: 800 mg / day, in pregnant and lactating women 1800 mg / day.

### Lack

The result is osteomalacia, osteoporosis, rickets, increases neuromuscular excitability, tachycardia, blood clotting disorders, increases the risk of colon cancer.

## Phosphorus

 *For more information see Phosphorus.*

### Function

Together with calcium, it forms a skeleton and dental tissue, is part of phospholipids, phosphoproteins, nucleic acids, enzymes and a carrier of macroergic bonds. The level of phosphoric acid in the blood is normally 0.65-1.62 mmol / l;

### Source

Milk and dairy products, yeast, meat (parenchyma, organs), legumes.

### Recommended daily dose

1200 mg / day.

### Lack

Isolated phosphorus deficiency is virtually non-existent. Mostly, its deficiency is associated with a lack of calcium, which results in diseases such as osteoporosis, rickets, imbalance of biotransformation processes, disorders of energy transfer.

## Magnesium

 *For more information see Magnesium.*

### Function

Mg is an important intracellular cation, part of many enzyme systems, reduces neuromuscular irritation. The level of magnesium in the blood is in the range of 0.66-0.94 mmol / l;

### Source

Vegetables (part of chlorophyll), potatoes, legumes.

### Recommended daily dose

300-400 mg / day.

### Lack

Damage and spasms of the vascular wall, disorders of elasticity membranes, increases neuromuscular excitability, tetanie, increases sensitivity to noise stimuli.

## Sodium (EC) and potassium (IC)

 *For more information see Sodium.*

 *For more information see Potassium.*

## Function

They maintain equilibrium osmotic conditions.

## Source

Sodium is found in table salt and salted dishes.

Potassium can be found in vegetables, fruits, legumes, nuts.

## Recommended daily dose

Potassium: 2.5-4.0 g.

Sodium: daily intake should not exceed 5 g.

## Lack

The cause is a lack of fluids and their loss through sweating, diarrhea, manifestations - dehydration, hypotension, apathy, convulsions.

## Surplus

At <sup>+</sup> - hypertension, stomach cancer (with excessive salt intake) - irritates the gastric mucosa, increases cell proliferation and facilitates the action of carcinogens from food.

K <sup>+</sup> - decreased heart rate, slowed neuromuscular activity, high intake reduces BP.

# Links

## Related Articles

- Trace elements
- Trace elements in food
- Types of food
- Dietary fats
- Carbohydrates in food
- Proteins in food
- Microorganisms in food
- Contaminants in food
- Nutritional recommendations

## Použitá literatura

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