



Food to increase hemoglobin

Eliseeva Tatyana, editor-in-chief on the edaplust.info website

E-mail: eliseeva.t@edaplust.info

Abstract. The article considers the optimal level of hemoglobin in the blood and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Food products are indicated to increase the level of hemoglobin, the scientific basis of nutrition for its normalization is considered.

Keywords: hemoglobin, low hemoglobin, raise hemoglobin, iron deficiency, healthy foods, recommendations

Regular consumption of whole foods with iron, folic acid, vitamin B12 maintains and increases hemoglobin levels. But for good assimilation, substances need a favorable environment and special components. We understand what signs iron deficiency anemia has, and what foods help get rid of it.

What is iron deficiency - the main symptoms and causes

Iron is a trace mineral that comes from food. ^[1] It is part of hemoglobin, which, in turn, is found in red blood cells and carries oxygen from the lungs to all tissues and organs. The lack of a microelement in the body leads not only to oxygen starvation - it performs many other functions:

- participates in metabolism;
- responsible for the process of hematopoiesis;
- promotes the synthesis of thyroid hormones;
- takes part in the formation of immune cells.

Iron deficiency is often observed in pregnant women, when the need for a trace element is especially important - its low concentration in the blood provokes premature birth, hypoxia, and low weight in newborns.

Symptoms and signs of low hemoglobin in the blood:

- dizziness with a sharp rise;
- chronic fatigue;
- chilliness of hands and feet;
- dry skin;

- pigmentation;
- hair loss;
- lack of holes on the nails;
- shortness of breath, tachycardia during sports and in everyday life;
- taste perversion - the desire to eat clay, chalk (contrary to popular belief, this is not associated with calcium);
- zaedy;
- early gray hair.

Women are more likely to experience a problem due to menstruation, but there are many other causes of low hemoglobin: donation, peptic ulcer, parasitic infections, low stomach acid, liver problems, urinary tract infections, hypothyroidism, lack of iron in the diet. Often, the problem leads to a lack of cofactors in the body - substances that contribute to the penetration of the mineral into the cell:

- B vitamins (especially folic acid and B12), C, E;
- minerals - magnesium, copper, zinc. ^[2]

These useful components greatly simplify the fight against anemia, so you need to add foods with their maximum concentration to your daily diet.

What tests should be done with low hemoglobin?

Additional tests that help determine iron deficiency:

- ferritin;
- mean volume of erythrocytes (MCV);
- serum iron.

The main indicator for detecting iron deficiency is ferritin. Hemoglobin decreases after its reserves are reduced. Although levels above 50 mcg/l are considered normal for adults, weight should be taken into account in the calculations - approximately 1 mcg/l per 1 kg of body weight. A high ferritin level indicates the presence of inflammation in the body. Two markers allow to identify the inflammatory process - ESR and C-reactive protein.

It is imperative to increase hemoglobin in order to resist bacteria and viruses, normalize the menstrual cycle, and protect against stroke and heart attack. Foods can contain two types of iron:

- **heme** (bioavailability 30-40%) - in meat, offal, fish, shellfish;
- **non-heme** (5-10% digestibility) - in plant foods such as cereals, legumes, nuts, seeds.

To increase hemoglobin in the blood, you need to focus on heme iron in your diet. It is important to exclude from the diet everything that prevents its absorption and promotes excretion - coffee, tea, dairy products.

Top 12 Foods to Raise Hemoglobin

1. Beef liver

36% of the daily value of iron in 100 g

The offal contains 1049% vitamin A, which is necessary for the absorption of Fe. It is also one of the best sources of choline, a nutrient for brain and liver health. ^[3]

2 eggs

Egg yolks are especially rich in choline and iron. Their moderate consumption - up to three homemade eggs and two store eggs per day - does not harm healthy people, does not increase cholesterol levels.
[four]

3. Oysters

17% in 100 g

Shellfish contain 24% of the daily value of vitamin C and 4.1% of B12. They are also an excellent source of the cofactor zinc at 27.5 mg. Substances help the immune system defend itself against viruses and bacteria, maintain the health of nerves and blood cells.

4. Beef

15% in 100 g

Iron deficiency is rare in red meat eaters. In one study, women who ate a serving of beef after aerobic exercise performed better than the supplement group. [5]

5. Broccoli

6% in 150 g

Cabbage contains 112% of vitamin C from the daily value. But what makes her the queen of cruciferous foods is folic acid, fiber, and the cancer-protective compounds indole, sulforaphane, glucosinolates. [6]

6. Spinach

15% in 100 g

Although the leaves contain non-heme iron, this deficiency is compensated by the high percentage of vitamin C, which increases the absorption of Fe. Consuming spinach with olive oil and other healthy fats helps the body absorb antioxidants and protect against cancer. [7]

7. Tofu

19% in 126 g

A soy product popular among vegetarians is an excellent source of thiamine, calcium, magnesium, and selenium. It also contains unique isoflavone compounds. They improve insulin sensitivity, reduce the risk of heart disease, and relieve menopausal symptoms. [8, 9]

8. Pumpkin seeds

14% in 28 g

Pumpkin seeds are full of nutrients. They not only increase hemoglobin, but also replenish magnesium and zinc, reducing the risk of diabetes and depression. [ten]

9. Tuna

8% in 85 g

Fish is high in niacin, selenium, B12, and omega-3 fatty acids, which promote brain health and boost immunity. Sardines and mackerel have the same rich composition. ^[eleven]

10. Asparagus

String green beans up to 11 mm in diameter contain more iron. This excellent source of antioxidants, flavonoids (quercetin, isorhamnetin, kaempferol), folic acid reduces the risk of chronic diseases and is especially useful during pregnancy. ^[12]

11. Quinoa

16% in 185 g

Pseudo-cereal is rich in protein and has higher antioxidant activity than other cereals available. ^[13]

12. Dark chocolate

19% in 28 g

Only real dark chocolate with a cocoa content of more than 45% is useful. The treat also contains prebiotic fiber, and its antioxidant activity is higher than that of blueberries and acai berries. ^[14, 15]

How to quickly increase hemoglobin with supplements - the safest and most effective dietary supplements

If the indicator in the analyzes is slightly lower, it is worth paying attention to the consumption of heme iron, increasing acidity and protein absorption. If the deficit is large, it is replenished with the help of nutraceuticals. It is important to take the mineral in the correct form in the evening on an empty stomach (at 17-18 hours) with cofactors. Usually, Fe is combined with vitamin C, and the need for other cofactors is checked by analysis. At the same time, the complex should not contain calcium, which slows down its absorption.

Iron comes in two forms, divalent and trivalent. Both species can form organic and inorganic compounds. The ideal form, which is absorbed by 70% regardless of acidity and rarely provokes side effects - organic ferrous salts. This group includes chelate forms, primarily bisglycinate and glycinate. To find them among pharmaceutical products, you should look for fumarate or ferrous gluconate in the composition.

Iron deficiency anemia is the most common type of anemia in the world. Its symptoms do not appear in everyone, so it is important to monitor the condition by regularly taking tests. It can be cured with the help of diet and nutraceuticals, which are best taken under the supervision of a nutritionist, nutritionist. The specialist will determine the safe dose of iron for low hemoglobin, select cofactors and tell you how to avoid side effects when taking nutritional supplements.

Literature

1. Iron, <https://www.hsph.harvard.edu/nutritionsource/iron/>
2. Iron nutrition and absorption: dietary factors which impact iron bioavailability, <https://pubmed.ncbi.nlm.nih.gov/3290310/>
3. A study of experimental anemia in dogs: the action of beef liver and iron salts on hemoglobin regeneration, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC434702/>
4. Dietary cholesterol provided by eggs and plasma lipoproteins in healthy populations, <https://pubmed.ncbi.nlm.nih.gov/16340654/>
5. Iron status in exercising women: the effect of oral iron therapy vs increased consumption of muscle foods, <https://pubmed.ncbi.nlm.nih.gov/1442656/>
6. Attenuation of Carcinogenesis and the Mechanism Underlying by the Influence of Indole-3-carbinol and Its Metabolite 3,3'-Diindolylmethane: A Therapeutic Marvel, <https://pubmed.ncbi.nlm.nih.gov/24982671/>
7. Iron bioavailability of rats fed liver, lentil, spinach and their mixtures, <https://pubmed.ncbi.nlm.nih.gov/19579971/>
8. Strong negative association between intake of tofu and anemia among Chinese adults in Jiangsu, China, <https://pubmed.ncbi.nlm.nih.gov/18589021/>
9. Extracted or synthesized soybean isoflavones reduce menopausal hot flash frequency and severity: systematic review and meta-analysis of randomized controlled trials, <https://pubmed.ncbi.nlm.nih.gov/22433977/>
10. Impact of daily consumption of iron fortified ready-to-eat cereal and pumpkin seed kernels (Cucurbita pepo) on serum iron in adult women, <https://pubmed.ncbi.nlm.nih.gov/18198398/>
11. Influence of the consumption of casein, or tuna in the raw, cooked or canned form, on the utilization of iron in the diet of weanling rats, <https://pubmed.ncbi.nlm.nih.gov/8197788/>
12. Influence of vegetative cycle of asparagus (Asparagus officinalis L.) on copper, iron, zinc and manganese content, <https://pubmed.ncbi.nlm.nih.gov/8577653/>
13. Effect of quinoa extract consumption on iron deficiency-induced anemia in mice, <https://pubmed.ncbi.nlm.nih.gov/33027334/>
14. Mineral essential elements for nutrition in different chocolate products, <https://pubmed.ncbi.nlm.nih.gov/27346251/>
15. Prebiotic evaluation of cocoa-derived flavanols in healthy humans by using a randomized, controlled, double-blind, crossover intervention study, <https://pubmed.ncbi.nlm.nih.gov/21068351/>

[An extended HTML version of this article](#) is available on the edaplus.info website

Food to increase hemoglobin

Eliseeva Tatyana, editor-in-chief of the project EdaPlus.info

E-mail: eliseeva.t@edaplus.info

Received 06.09.2021

Abstract. The article considers the optimal level of hemoglobin in the blood and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. Food products are indicated to increase the level of hemoglobin, the scientific basis of nutrition for its normalization is considered.