VITAMINS

History of the discovery of vitamins

- In 1881 the Russian scientist N.I. Lunin discovered that mice die if they are fed a food mixture consisting of purified foods. If you add 1 ml of milk to the diet, the mice remain healthy.
- In the years 1911-1912. Polish scientist Kazimir Funk has isolated a preparation from bran and named it a vitamin. From this time, intensive study of vitamins began . Vitamins are denoted by the letters of the Latin alphabet A, B, C, D, E, F, P, etc. At present, most of the vitamins are isolated in pure form or synthesized and used as medicines.

Vitamins

- Nutrients that our body does not make on its own. Thus we must obtain them from the foods we eat, or via vitamin supplements.
- They are essential for providing good health and are necessary for many life functions.
- They are regulator molecules. They regulate normal growth and development.

Classification

- All vitamins are divided into fat and water-soluble.
- The first include vitamins A, D, E, K.
- Water-soluble are vitamins of group B: B1, B2, B5 (pantothenic acid), B6, B12, BC (folic acid), vitamins C, H (biotin), PP (nicotinic acid).
- Several of these vitamins (B1, B2, B6, B5, folic acid, vitamin K) are synthesized by the normal microflora (bacteria) of the intestine, but in a very small amount, significantly inferior to the daily needs of the human body.

Vitamin A

- **Vitamin A (retinol)** is found in foods of animal origin, especially its abundant in cod liver oil and cod liver and halibut. Plants contain provitamin A - carotene, which in the body of animals turns into vitamin A. It is necessary for the treatment of infectious diseases and for people whose work is related to vision stress (drivers, snipers, etc.).

Vitamins of group B

- Vitamins group This is a large group of vitamins, consisting of several species. The most famous are:

B_1
B_2
B_6
B_{12}

Vitamin B1

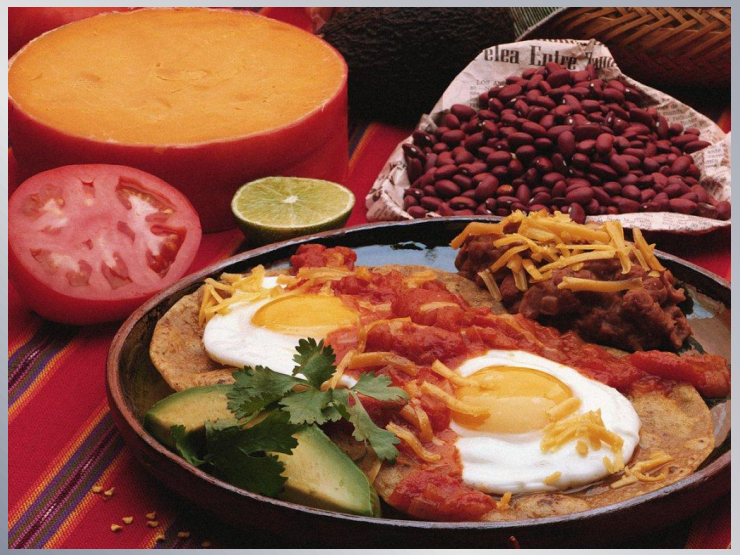
- **B1 Or thiamin**. It is contained in the skin of rice, brewer's yeast, liver, pork, nuts, whole grains of cereals. Thiamin is part of the enzymes involved in carbohydrate metabolism, and if it is deficient, not only carbohydrate, but also fat and protein metabolisms are disrupted

Vitamin B2

- It is called riboflavin. It is the catalyst of oxidation-reduction processes in all cells of the body.
- It is abundant in the liver, kidneys, yeast and other plant and animal products.

Vitamin B6

- Or pyridoxine. It participates in the exchange of amino acids (promotes the action of enzymes).
- It is found in rice bran, beans, yeast, kidneys, liver, meat.



Vitamin B12

- Vitamin B12 is called cyanocobalamin. It is important for the function of hematopoiesis, it is used as a medicinal preparation in the treatment of malignant anemia. Cobalamin is synthesized by bacteria of the intestine, in large quantities is contained in the liver of cattle and chickens.

Vitamin B15

- Vitamin B15 Or pangamic acid. It improves lipid metabolism, promotes better use of oxygen by body tissues - a means of eliminating hypoxia, or oxygen deficiency.
- This vitamin is found in the seeds of many plants.

Vitamin C

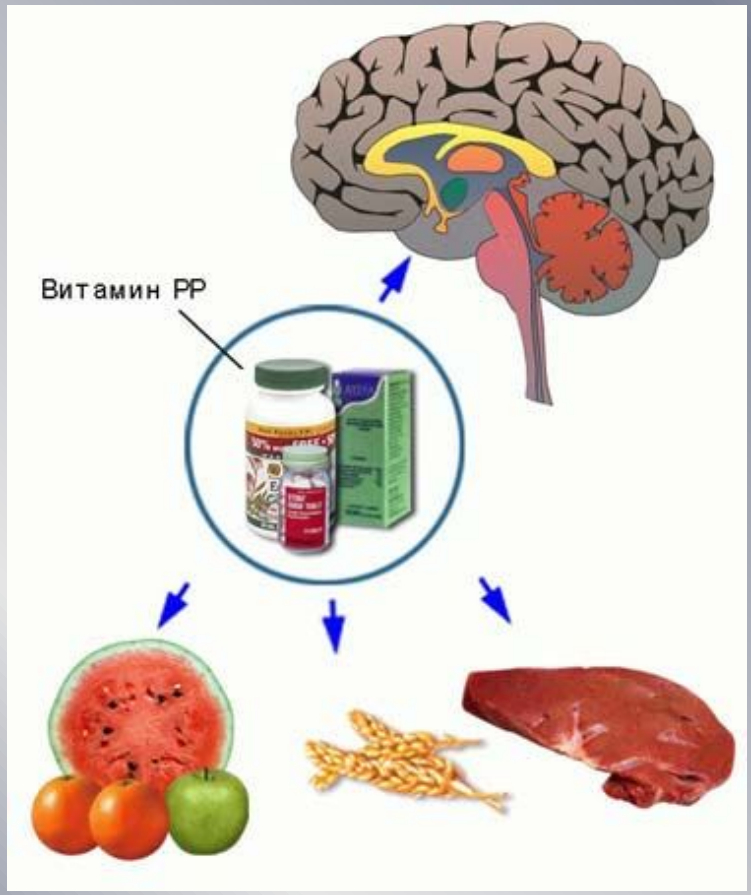
- Vitamin C (ascorbic acid) enters the body mainly with plant food. It is abundant in berries of dog rose, black currant, lemons, etc. It plays an important role in carbohydrate and protein metabolism (it participates in oxidation-reduction reactions, entering into the composition of enzymes).

Vitamin D

- Vitamin D (calciferol) is an anti-aromatic vitamin especially in fish oil.
- In plants and human skin there is a substance ergosterol, which under the influence of ultraviolet rays turns into vitamin D

Vitamin PP

- Vitamin PP (nicotinic acid) is part of the oxidation-reduction processes. In a small amount, nicotinic acid is synthesized by intestinal bacteria, but this is not enough and it must be supplemented with food. Especially a lot of vitamin PP is found in yeast, fresh vegetables, meat, but little in corn.



Vitamin K

- Vitamin K (phyloquinone) is called antihemorrhagic (hemorrhage - bleeding). Vitamin K is found in the green leaves of plants, as well as in those parts of plants that contain chlorophyll, a lot of it in berries of mountain ash, as well as in the liver.

Vitamin E

- Vitamin E (tocopherol) is involved in oxidation-reduction processes, in protein metabolism, muscle contraction, strengthens the walls of vascular tissue. It is soluble in fats, it does not decompose on boiling.
- It is found in both animal and vegetable products: egg yolk, liver, wheat germ, unrefined cottonseed, soybean, corn oil, dog rose, bananas, apples, pears, lemons and oranges.

The daily intake of certain vitamins

Vitamins	
Vitamin A	1-1,5mg
Vitamin B1	2-3mg
Vitamin B2	1-2mg
Vitamin B6	1,6-1,8mg
Vitamin B12	2-5mg
Vitamin C	75-100mg
Vitamin D	adult - 0.025 mg of the child - 0.07 mg
Vitamin K	1-2mg
Vitamin PP	15-25 mg