

Fats in diet

Fats (lipids), composed of fatty acids in the form of triacylglycerols and phospholipids and free or esterified cholesterol , should cover 28-30% of the energy intake received.

Function

Fats are the most abundant source of energy. They have about 2 times higher energy value compared to carbohydrates. In excess, they are stored in the subcutaneous tissue and act as a thermal insulator. They are also carriers of fat- soluble vitamins and a source of unsaturated fatty acids.

Cholesterol is essential for the construction of cell membranes - especially in the growing organism. It is also used to produce steroid hormones , sex hormones and bile acids. However, *dietary* cholesterol is not essential nor beneficial. **Compound fats** (phospholipids , lipoproteins) are used in the structure of tissues and various specific functions of the organism.

Surplus/Excess

Excessive dietary fat intake causes:

1. Increased fat storage and consequent obesity .
2. Increased risk of incidence of some cancers (colorectal cancer , breast cancer , prostate cancer).
3. Immunosuppression.
4. It is involved in the hormonal imbalance of the body.
5. Increased cholesterol intake is involved in hypercholesterolemia and the subsequent development of atherosclerosis , coronary heart disease and chronic coronary heart disease .
6. Fat-containing foods provide suitable conditions for the production of mycotoxins and for the accumulation of lipophilic foreign toxic substances from the environment (PCBs, chlorinated pesticides, aflatoxins, polycyclic aromatic hydrocarbons, etc.).
7. Double bonds of unsaturated fatty acids are prone to oxidative changes that lead to peroxidation of cell membrane lipids and exposure of the body to oxidative stress . Therefore, a sufficient supply of antioxidant substances (vitamin C, E, A, β -carotene and other plant antioxidants) is necessary.

Shortage or lack of dietary fats

Lack of fat results in insufficient absorption of fat-soluble vitamins (vitamin A, D, E and K).

Links

Related articles

- Lipids
- Types of food
- carbohydrates in the diet
- Proteins in diet
- Minerals in food
- Trace elements in food
- Microorganisms in food
- Contaminants in food
- Nutrition recommendations
- Vitamins

References

- BENCKO, Vladimír. *Hygiena - učební texty k seminářům a praktickým cvičením*. 2. edition. Univerzita Karlova, 2002. 204 pp. ISBN 80-7184-551-5.



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