

VITAMINS ARE THE MAIN COMPONENT OF NUTRITION IN THE DIET OF CLIMACTERIC WOMENS

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ABSTRACT

During the climacteric period, it is necessary to monitor adequate intake of vitamins, as well as macro- and microelements, which are biologically active substances. Vitamins belong to the group of regulatory substances involved in the normalization of metabolism and the regulation of metabolic processes. They act as biological catalysts of chemical reactions occurring in the body. Another important function of vitamins is their coenzyme role, participation in enzyme formation, and involvement in the functioning of enzymatic systems.

Keywords: Metabolic processes, metabolism, biologically active supplements, proper and balanced dietary regimen, diseases.

Introduction

During menopause, it is necessary to monitor the sufficient intake of vitamins, macro- and microelements, which are biologically active substances. Vitamins are among the regulatory substances that participate in the normalization of metabolism and the regulation of metabolic processes. They are biological catalysts of chemical reactions occurring in the body. The second important importance of vitamins is their coenzyme role, participation in the formation of enzymes and the functions of enzyme systems. It has been established that vitamins are associated with the function and development of tissues, systems and structural structures in the body. It is well known that vitamin D is involved in the formation of the body and other structures; vitamin A - in the development of covering tissues (epithelium); vitamin C - in the regulation of the connective tissue system.

Vitamin C - ascorbic acid - participates in many oxidative and regenerative processes in the body. It has been proven in experiments that it weakens the development of atherosclerosis;

under its influence, the amount of cholesterol in the blood clearly decreases, the accumulation of atheromatous masses in the blood vessels slows down. Vitamin R improves the use of ascorbic acid by the body, helping to reduce the permeability and thinness of capillaries. Vitamin A carotene increases the general resistance of the body and participates in the phenomenon of vision. Vitamins V1, V2 participate in the synthesis of the yellow enzyme produced by the ovaries, help the synthesis of visual purpura, have a positive effect on blood-forming organs. Vitamin K participates in the formation of prothrombin and contributes to normal blood clotting, vitamin V12 and folic acid participate in blood clotting, etc.

Vitamins play an important role in maintaining the body's immunobiological properties and resistance to harmful environmental factors, including infections. In modern conditions, vitamins are a necessary means of prevention during exposure to small amounts of chemicals, ionizing radiation, ultra-high-frequency fields, and other effects associated with occupational hazards.

Vitamin deficiency can be complete or partial. Complete vitamin deficiency (avitaminosis) can occur only when the body stops receiving vitamins from the diet. This applies to vitamins that are not synthesized in the human body and are not stored in it. Such vitamins include, for example, vitamin C. This is precisely why vitamin C deficiency is relatively widespread. In all other cases, partial vitamin deficiency (hypovitaminosis) occupies a special place, which is compensated for by the endogenous synthesis of a certain amount of vitamins or the use of accumulated reserves.

Avitaminosis is characterized by a clearly expressed clinical picture. The most famous avitaminosis are C-avitaminosis (scurvy, scurvy), B1-avitaminosis - alimentary polyneuritis (beriberi), PP-avitaminosis (pellagra), A-avitaminosis (hemeralopia, xerophthalmia), D-avitaminosis (rickets, osteoporosis) and others.

Hypovitaminosis is characterized by a vague clinical picture and can be considered as an initial form of avitaminosis. The occurrence of vitamin deficiency may be associated with insufficient intake of vitamins in the diet, as well as with internal factors (diseases of the digestive organs - stomach, intestines, liver, etc.) that prevent the normal absorption of vitamins that come with food.

The need for vitamins depends on age, gender, type of work, household conditions, level of daily physical activity, physiological state of the body, nutritional and caloric value of food and many other factors.

The need for vitamins does not decrease during menopause, their insufficient intake complicates the processes that contribute to the manifestation of CKD in the female body. For example, a lack of vitamin A (retinol) or its precursor - carotene - in the diet of women reduces vision and reduces the protective properties of the body. A lack of calciferol (vitamin D) leads to the development of osteoporosis, as it regulates the absorption of calcium into the body. The antioxidant tocopherol (vitamin E) is very important in maintaining the fading function of the ovaries. Also, riboflavin (vitamin B2) and pyridoxine (vitamin B6), which regulate all metabolic processes, play a very important role. Vitamin PP (niacin) deficiency can lead to nervousness and psychosis, while deficiencies of cyanocobalamin (vitamin B12), choline

(vitamin B4), inositol (vitamin B8), and folic acid (vitamin B9) can increase the likelihood and speed of the development of atherosclerotic processes.

Women in menopause, who for one reason or another cannot eat properly, should take microelement multivitamins, especially in the winter-spring period. They should buy and use special vitamin complexes from pharmacies, but it is important to pay attention to the fact that they contain at least 12 vitamins and 12 minerals. Unfortunately, the amount of vitamins in modern food products is decreasing from year to year, which is why there is a need to fill their deficiency by taking vitamin preparations.

Mineral elements participate in plastic processes and the construction of bone tissue, the main structural components of which are phosphorus and calcium. Mineral elements play a large role in the acid-base balance in the body, the normal salt composition of the blood, the formation of the structures of its individual elements, and the normalization of water-salt metabolism. The participation of mineral elements extends to all systems of the organism and the biochemical processes that take place in them.

Bone density begins to decrease in all women long before menopause. However, this process accelerates with the onset of menopause. During menopause, the concentration of estrogen in the blood decreases, an important factor regulating calcium metabolism in the female body disappears, as a result of which the “personal” calcium accumulated in the bones begins to be used. This is why osteoporosis targets postmenopausal women. Osteoporosis has been called the “silent thief”. This disease, which is accompanied by the gradual resorption of bones, does not cause any pain or complaints. They are detected only after a fracture occurs due to a decrease in density. Calcium is very important not only for maintaining normal bone mass, but also because blood vessels, blood, and tissues need this element. It slows down the growth of cancer tumors, removes cholesterol plaques, cleanses blood vessels, and increases the vital activity of the nervous system. Calcium absorption is directly related to phosphorus in the body, which is why this process is called calcium-phosphorus metabolism. If there is a lot of calcium in the diet and phosphorus is not enough, excess calcium is excreted from the body. To maintain normal absorption of phosphorus and calcium, the body needs not only these elements, but also a sufficient amount of vitamin D. The absorption of phosphorus largely depends on the presence of iodine, fluorine, cobalt, iron, and magnesium in the body.

The correct ratio of calcium and magnesium in the body is of great importance. On the one hand, magnesium is necessary for the body, because when it is insufficient, the amount of calcium in the walls of blood vessels increases, and the vessels become relatively fragile and prone to spastic contractions. However, an excess of magnesium has a negative effect on the absorption of calcium and phosphorus. Therefore, the ratio of calcium to magnesium in the diet should be 1:0.5.

In conditions of reduced bone mass, the role of manganese increases, it binds to the inorganic base of bone tissue, supporting the normal state of this tissue, and in this case, it plays an important role. The role of manganese increases. Smoking, drinking coffee, alcohol and consuming excess sugar make calcium absorption difficult.

Highly bioavailable sources of calcium and phosphorus include dairy products (cheese, cottage cheese, milk), through which more than 70% of calcium enters the body. Calcium is also found in green leafy salads, soy products, almonds, and hazelnuts.

In this regard, preference should be given to dairy products. Low-fat varieties of cheese and cottage cheese with fat removed should be on the table every day.

Vegetables and fruits can also be sources of minerals.

Subject of the study

Climax women aged 45 to 60 years living in Tashkent were the subjects of the study. The total number of climacteric women involved in the study was 500. In order to determine obesity, 500 climacteric women were examined. 966 women living in 2 districts of Tashkent were voluntarily involved in the random-control study with informed consent.

The study was conducted at the Department of “Child and Adolescent Hygiene and Nutritional Hygiene” of the Tashkent Medical Academy, at Family Polyclinic No. 4 in the Shaykhan-Tokhur district of Tashkent, as well as among women living in Tashkent (Almazor, Shaykhan-Tokhur, Yunusabad districts).

The main task of family polyclinics, in addition to providing medical care to the population, is to form a healthy lifestyle. A marketing Q&A session was held with medical staff from the Family Clinic on the prevention and treatment of menopause in women during menopause.

RESEARCH METHODS

The research, conducted using a questionnaire developed by the staff of the Department of “Hygiene of Children and Adolescents and Nutritional Hygiene”, examined the social conditions of women in menopause and other risk factors for impending menopause living in the Shaykhan-Tokhur and Almazar districts of Tashkent.

The medical and social research included: extracts from medical records (f.№025/u) and the history of the development of the disease (f.№030/u), and a thorough medical examination of women in menopause.

Summarizing the information on the importance of nutrition for women during menopause, we can single out the main rules of proper and rational nutrition:

1. Women's nutrition should be complete and include all nutrients in sufficient quantities - proteins, fats, carbohydrates, vitamins and mineral elements.
2. Nutrients should be in a balanced ratio, but it is necessary to take into account changes in metabolic processes that require a slight reduction in the energy value of the diet, a decrease in carbohydrates and fats in the diet, a decrease in the consumption of animal fats and other sources of cholesterol. To reduce the absorption of excess carbohydrates in the intestines, the diet should contain a large amount of fiber.
3. Women's diets should include milk and dairy products, fish and various seafood, meat, eggs, various cereals, bread (preferably made from wholemeal flour). A necessary and widely available component of the diet should be fruits and vegetables, especially leafy greens, which allow the body to be enriched with vitamins and minerals.

ЛИТЕРАТУРА

1. Saidova G. T., Sayfullayeva S. G., Boriboyev U. F. ANATOMICAL AND PHYSIOLOGICAL CHARACTERISTICS OF THE FEMALE BODY AND THE PRINCIPLES OF PROPER NUTRITION DURING MENOPAUSE (POSTMENOPAUSE) //Western European Journal of Medicine and Medical Science. – 2024. – Т. 2. – №. 1. – С. 36-40.
2. Саидова Г. Т. Современные сведения об этиологии и патогенезе менопаузы у женщин //Медицинский журнал молодых ученых. – 2025. – №. 15 (09). – С. 174-177.
3. Рассолова, Яна Валерьевна. "Формирование здорового образа жизни средствами физической культуры." Всероссийский научный форум студентов и учащихся. 2020.
4. Hayitov, Javoxir Vaxodirovich. "Nutrition of Children Playing Table Tennis in Sports Clubs of General Education Schools I." (2024).
5. Авакова К. А. Питание в пожилом возрасте: несложные правила хорошего здоровья //Диабет. Образ жизни. - М., 2006. - №4. – С. 24-25.
6. Хомутова, Елена Васильевна, and Марина Владимировна Игнашкина. "Здоровый образ жизни: укрепление здоровья." Наука-2020 4 (58) (2022): 12-17.
7. Шайхова, Г. И., and Ж. Б. Хайитов. "Гигиеническая оценка фактического питания детей-спортсменов, занимающихся шахматами." Медицинские новости 5 (308) (2020): 75-78.
8. Гуняев, Евгений Викторович, and Андрей Витальевич Алдошин. "Укрепление здоровья населения и профилактика заболеваний." Наука-2020 7 (52) (2021): 21-26.
9. Бурибоев Э. М., Азизова Ф. Л. Метабиологическое действие табачных изделий на иммунитет человека //Oriental renaissance: Innovative, educational, natural and social sciences. – 2022. – Т. 2. – №. 12. – С. 213-218.
10. Шайхова Г. И., Отажонов И. О., Рустамова М. Т. Малобелковая диета для больных с хронической болезнью почек //Экспериментальная и клиническая гастроэнтерология. – 2019. – №. 12 (172). – С. 135-142.
11. Хайитов Ж. Б. Қон айланиш касалликлари ва овқатланиш //ORIENTAL JOURNAL OF MEDICINE AND NATURAL SCIENCES. – 2025. – Т. 2. – №. 3. – С. 74-76.
12. Тихонович, Мария Игоревна. "Некоторые аспекты влияния спорта на жизнь и здоровье человека." Наука-2020 5 (59) (2022): 117-121.
13. Шайхова Г. И., Отажонов И. О., Азизова Ф. Л. Эрматов НЖ Пищевая и биологическая ценность соевой муки. – 2018.
14. Жалолов, Н., Ш. Я. Зокирходжаев, and Ф. И. Саломова. "Сурункали гепатит билан касалланган беморларнинг ҳақиқий овқатланишини баҳолаш.«." Тиббиётдаги замонавий илмий тадқиқотлар: долзарб муаммолар, ютуқлар ва инновациялар». In мавзусидаги халқаро илмий-амалий конференция.(2022, May). 2022.
15. Саломова Ф. И., Тошматова Г. О. Эпидемиология мастопатии и особенности заболеваемости женщин, страдающих мастопатией //Врач-аспирант. – 2012. – Т. 52. – №. 3.1. – С. 222-228.
16. Ermatov, Nizom, et al. "The effectiveness of red palm oil in patients with gastrointestinal diseases." International Journal of Pharmaceutical Research (09752366) 11.4 (2019).

17. Giri, Sabeena, and Sonam Bhatia. "Review on nutritional value and health benefits of palm oil." *Res Rev Drugs Drugs Dev* 2.2 (2020): 9-11.
18. Ниязова, О. А., and Ж. Б. Хайитов. "Гигиеническая оценка питания учащихся медицинских колледжей." *Прикладные информационные аспекты медицины* 21.3 (2018): 63-66.
19. Erdélyi, Aliz, et al. "The importance of nutrition in menopause and perimenopause—a review." *Nutrients* 16.1 (2023): 27.
20. Laudisio, Daniela, et al. "A practical nutritional guide for the management of sleep disturbances in menopause." *International journal of food sciences and nutrition* 72.4 (2021): 432-446.
21. Saidova, G. T., and S. G. Sayfullayeva. "HYGIENIC ANALYSIS OF DISEASES OBSERVED DURING CLIMAX PERIOD IN WOMEN." *Modern American Journal of Medical and Health Sciences* 1.2 (2025): 330-335.