



## REMEDIES AND RECOMMENDATIONS CORONARY HEART DISEASES

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### ABSTRACT

*Prevention of coronary heart disease is a series of complex measures aimed at preventing the onset of the disease, the development and occurrence of possible (predictable) complications, which can be even fatal. Prevention of coronary heart disease is indicated for both sick people and healthy people who are at risk of developing the disease. Patients diagnosed with coronary heart disease are shown non-drug treatment, which is a complete or partial elimination of risk factors. Risk factors are any predisposing factors that increase the likelihood of developing or worsening a disease. Risk factors for coronary heart disease are fundamentally divided into removable and non-removable.*

**Relevance.** Primary prevention ischemic heart disease (ischemic heart disease)- this is a prevention of the development of the disease in healthy individuals and individuals weighed down by various risk factors, and the secondary one is the prevention of the progression of the disease and the development of complications in the course of CSD in people who already have this disease. Tertiary prevention refers to the implementation of actions aimed at delaying the progression of heart failure (HF). Priority for primary prevention, according to the European guidelines, are healthy individuals who are at high risk of developing coronary artery disease or other atherosclerotic diseases due to a combination of risk factors, including smoking, high blood pressure and lipid levels (elevated total cholesterol and low lipoprotein density (LDL)), low content of high density lipoproteins and increased - triglycerides,

Secondary prevention should also include lifestyle changes (smoking cessation, avoiding secondhand smoke, eating healthy to reduce weight, lower blood pressure and cholesterol levels; control blood glucose, increase physical activity). If active lifestyle changes fail to achieve target levels of risk factors, drug therapy should be added. It is also imperative to correct high blood pressure and glucose levels. The most unfavorable combination of risk factors is the so-called metabolic syndrome (MS), which is a complex of interrelated disorders of carbohydrate and fat metabolism, as well as the mechanisms of regulation of blood pressure and endothelial function. The basis of these disorders is a decrease in the sensitivity



of tissues to insulin - insulin resistance. The main components of MS are abdominal-visceral obesity, hypertriglyceridemia, hyperinsulinemia and arterial hypertension. With a combination of these factors, there is an accelerated development of atherosclerosis. To diagnose MS, they most often resort to measuring waist circumference, determining the level of triglycerides in blood serum and insulin on an empty stomach, and monitoring blood pressure. When MS is detected, preventive and therapeutic measures should be aimed at the entire set of risk factors and include weight loss, adequate control of glycemia and dyslipidemia, and normalization of blood pressure. The tactics of managing patients with AH and MS has a number of features: The main components of MS are abdominal-visceral obesity, hypertriglyceridemia, hyperinsulinemia and arterial hypertension. With a combination of these factors, there is an accelerated development of atherosclerosis. To diagnose MS, they most often resort to measuring waist circumference, determining the level of triglycerides in blood serum and insulin on an empty stomach, and monitoring blood pressure. When MS is detected, preventive and therapeutic measures should be aimed at the entire set of risk factors and include weight loss, adequate control of glycemia and dyslipidemia, and normalization of blood pressure. The tactics of managing patients with AH and MS has a number of features: To diagnose MS, they most often resort to measuring waist circumference, determining the level of triglycerides in blood serum and insulin on an empty stomach, and monitoring blood pressure. When MS is detected, preventive and therapeutic measures should be aimed at the entire set of risk factors and include weight loss, adequate control of glycemia and dyslipidemia, and normalization of blood pressure. The tactics of managing patients with AH and MS has a number of features: To diagnose MS, they most often resort to measuring waist circumference, determining the level of triglycerides in blood serum and insulin on an empty stomach, and monitoring blood pressure. When MS is detected, preventive and therapeutic measures should be aimed at the entire set of risk factors and include weight loss, adequate control of glycemia and dyslipidemia, and normalization of blood pressure. The tactics of managing patients with AH and MS has a number of features:

- immediate initiation of treatment with antihypertensive drugs in combination with non-drug measures (diet, physical activity);
- orientation towards achieving optimal or normal blood pressure (below 130/85 mm Hg), since it has been proven that blood pressure stabilization at this level and below gives a real organoprotective effect;



- more frequent use of combinations of antihypertensive drugs, due to greater resistance to lowering elevated blood pressure in such patients. The following goals need to be achieved in the fight against risk factors,

According to the WHO, three main risk factors contribute most to the risk of sudden death: arterial hypertension, hypercholesterolemia (dyslipidemia) and smoking.

**Arterial hypertension (AG)** is often referred to as the "mysterious and silent killer". Mysterious - because in most cases the causes of the development of the disease remain unknown, silent - because in many patients the disease is asymptomatic and they do not know that they have high blood pressure (BP) until some complication develops. In order to correctly determine the risk of developing arterial hypertension and, as a result, coronary artery disease, you need to know and control your blood pressure level, and, if necessary, undergo an examination that will help clarify carbohydrate and fat metabolism disorders and the degree of damage to target organs (vessels, heart, kidneys, brain).

**Dyslipidemia** - an imbalance in the content of "bad" and "good" fat fractions in the blood towards an increase in "bad" and / or a decrease in "good" fats. "Bad" fats, with an increased amount of which greatly increases the risk of developing atherosclerosis and coronary artery disease, include cholesterol, low and very low density lipids, and triglycerides. To "good" fats, i.e. preventing the development of CVD, are high-density lipids. With the exception of a small number of individuals with hereditary hypercholesterolemia, cholesterol levels are usually associated with malnutrition. A balanced diet requires eating plenty of fruits and vegetables, healthy breads, lean meats, fish, and legumes, along with low-fat or no-fat foods. Soft margarine, sunflower, corn, canola or olive oils should be used.

**Balanced diet** - This is a balanced, regular (at least 4 times a day) diet with limited salt intake. Research scientists have shown that if you limit your salt intake, the risk of myocardial infarction and other cardiac events can be reduced by 25%. It is very useful to increase the intake of foods containing potassium and magnesium (seaweed, raisins, beets, apricots, zucchini, pumpkin, buckwheat).

**Healthy food selection** - food should be varied, energy intake should be optimal to maintain ideal weight;

- the consumption of the following foods should be encouraged: fruits and vegetables, whole grains and breads, low-fat dairy products, lean meats, fish;
- eat products containing fish oil and w-omega, which have special protective properties;
- the total fat content should be no more than 30% of the total energy composition, and the saturated fat content should not exceed a third of all fats consumed; the amount of cholesterol consumed should be less than 300 mg / day;
- on a low-calorie diet, saturated fats should be replaced partly by carbohydrates, partly by monounsaturated and polyunsaturated fats from vegetables and marine animals.

In the diet, it is recommended to limit the consumption of animal products rich in cholesterol and saturated fats: fatty meats, lard, butter, sour cream, egg yolk, fatty cheese, sausages, sausages, all offal, fish caviar, shrimp, squid. It is recommended to replace animal fat with vegetable fat, since the latter is rich in anti-atherogenic unsaturated fats. Another important principle of anti-atherogenic nutrition is an increase in the consumption of plant



products that can bind and remove cholesterol from the body. In this regard, it is recommended to use:

- dietary fiber (at least 30 g per day); they are found in large quantities in fruits (pears, apples, oranges, peaches), berries (raspberries, strawberries, blueberries), vegetables (cauliflower, broccoli, green beans) and legumes (peas, lentils, beans);
- pectins (at least 15 g per day), which are found in fresh fruits (apples, plums, apricots, peaches), berries (black currants) and vegetables (carrots, red beets);
- vegetable stanols (at least 3 g per day); they are found in soybean and rapeseed oils, extracts of coniferous oils; Recently, sterols/stanols, being plant lipids, have been shown to reduce LDL cholesterol levels in the blood by competitive inhibition of cholesterol absorption in the small intestine.

**Overweight** - body increases the risk of coronary artery disease and other diseases associated with atherosclerosis. To estimate your weight, use a simple formula for determining the body mass index (weight (kg) / height (m)<sup>2</sup> = body mass index). If the body mass index is less than 25, this is the desired body weight; if more than 28 in women and 30 in men, we can talk about obesity. Moreover, the so-called central obesity (male type) is more dangerous, when fat is deposited on the abdomen. The presence of central obesity can be judged by waist circumference and the ratio of waist circumference to hip circumference. The risk of CVD increases in men with a waist circumference of more than 94 cm and, especially, with a circumference of more than 102 cm, in women - more than 80 cm and 88 cm, respectively. The ratio of waist circumference to hip circumference in men is more than 1.0 and in women more than 0,85 is a more accurate indicator of the central type of obesity. The most common causes of overweight are family factors (these may be partly genetic, but more often reflect general eating habits), overeating, a diet high in fat and carbohydrates, and insufficient physical activity. Overweight is most common among lower cultural and educational backgrounds, especially among women due to a lack of a balanced diet.

**Smoking** - is one of the main risk factors. Why is smoking dangerous? Because even one cigarette increases blood pressure for 15 minutes, and with constant smoking, vascular tone increases, and the effectiveness of drugs decreases. If a person smokes 5 cigarettes a day - this is an increase in the risk of death by 40%, if one pack a day - by 400%, then there are 10 times more chances of dying!

According to WHO, 23% of deaths from coronary artery disease are due to smoking, reducing the life expectancy of smokers aged 35-69 by an average of 20 years. Sudden death among persons who smoke a pack of cigarettes or more during the day is observed 5 times more often than among non-smokers. Smokers not only put their lives at risk, but also the lives of those around them (passive smoking increases the risk of coronary artery disease by 25-30%). Already after 6 weeks of following a healthy lifestyle, dramatic changes in health occur, and among those who quit smoking, the risk of coronary artery disease is significantly reduced and after 5 years becomes the same as for those who have never smoked.

**Low physical activity** - contributes to the development of CVD 1.5-2 times more often than in people leading a physically active lifestyle. Walking at a brisk pace for half an hour a day can reduce the risk of cardiovascular disease by approximately 18% and stroke by 11%. For the prevention of CVD and health promotion, physical exercises that involve regular



rhythmic contractions of large muscle groups are most suitable: brisk walking, jogging, cycling, swimming, skiing, etc. The frequency of physical exercises should be at least 4-5 times a week, the duration of classes is 30-40 minutes, including a warm-up and cool-down period. Recommendations for individuals with coronary artery disease should be based on clinical examination and exercise test results. systolic blood pressure below 140 mm Hg;

- no tobacco use;
- the level of total cholesterol is below 5 mmol / l;
- low density lipoprotein cholesterol below 3 mmol/l;
- walking 3 km a day or 30 minutes of any other moderate physical activity;
- daily use of at least 5 pieces of fruits and vegetables;
- avoid obesity and diabetes.

Thus, for effective prevention of most cardiovascular diseases and their complications, it is necessary to follow only 7 rules:

1. Control your blood pressure.
2. Control your cholesterol levels.
3. Eat right.
4. Get some exercise: even a little is better than nothing.
5. Don't start smoking, and if you do, try to quit, no matter how difficult it may seem.
6. Do not abuse the use of alcoholic beverages.

Try to avoid prolonged stress.

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