

**Rusnak I.T.**

## **CARDIOVASCULAR RISK FACTORS. PHYSICAL ACTIVITY**

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There is a decrease in physical activity worldwide. Every third adult is not physically active. However, the increase in physical activity in terms of a healthy environment benefits the health of people of all age groups. The WHO provides recommendations for optimal activity levels, but even minor physical activity is better than its lack. People who suffer from lack of exercise should start with a low level of physical activity and gradually increase the duration, frequency and intensity of training. Among the factors that form the basis promoting many diseases, including cardiovascular ones, there is lack of physical activity. Approximately 3.2 million annual deaths are related to physical inactivity. Physical activity is any body movement involving skeletal muscles with energy release. Physical inactivity (lack of physical activity) is an independent risk factor for occurring chronic diseases. Healthy people are recommended to maintain appropriate levels of physical activity throughout their life. At least 30 minutes of moderate-intensity physical activity 5 times a week reduces the risk of a number of non-communicable diseases among adults. Stronger physical activity brings more health benefits and may be required to control the body weight. Physical activity helps prevent heart attacks and cardiovascular diseases. The results of all available researches demonstrate that regular exercises in moderate amount are perhaps the most effective preventive measure of heart diseases and their complications. In case of coronary artery diseases, regular exercises help the body to form more auxiliary arteries, through which the blood can flow around the body and bypass occluded blood vessels. Aerobic exercises contribute to the decrease of blood pressure, the level of triglycerides and low-density cholesterol, at the same time increasing the level of high-density cholesterol and preventing blood clotting.

The results of a large-scale investigation during 8 years of more than 84 thousand nurses are significant. Those who regularly did a complex of physical exercises presented the risk of heart attack or stroke 54% less compared to those women who had sedentary lifestyle. Modification of lifestyle is a priority in the treatment of hypertensive patients according to the recommendations of the European Society of Hypertension (ESH) and the European Society of Cardiology (ESC). Clinical studies show that to reduce blood pressure changes in lifestyle can be equivalent to the efficacy of the drug alone and able to safely and effectively prevent the development of hypertension or delay the use of drug therapy; to prevent, if necessary, the use of it by patients with stage 1 hypertension. In addition to effecting blood pressure reduction, lifestyle changes contribute to the control of other factors of cardiovascular risk and clinical conditions. In the recommended approach to lifestyle changes regular exercise is recommended, for example, at least 30 minutes of moderate physical activity within 5 - 7 days a week. Moderate aerobic exercises are walking, jogging, cycling, and swimming.

**Sem aniv M.M.**

## **HORMONAL AND METABOLIC RISK FACTORS OF ESSENTIAL ARTERIAL HYPERTENSION DEPENDING ON POLYMORPHIC VARIANTS OF THE AGTR1 (RS5186) AND VDR (RS2228570) GENES**

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The aim of this study was to establish the role of hormonal and metabolic risk factors of essential arterial hypertension (EAH) depending on 1166A>C polymorphism of *AGTR1* gene (rs5186) and A/G polymorphism of *VDR* gene (rs2228570).

100 subjects with EAH and target-organ damaging (2<sup>nd</sup> stage), moderate, high, very high cardiovascular risk were involved in the case-control study. Among them, 70,84% females, 29,16% males of average age  $57,86 \pm 7,81$ . The control group consisted of 60 healthy individuals of relevant gender and age. All patients were observed by general physicians, cardiologists. Patients were tested for serum level of fasting glucose (enzymatic method, "CORMAY", Poland), ionized