

Review of international medical news

The prognostic significance of rare genetic variants in patients with atrial fibrillation (AF) was evaluated using data from 44,182 individuals enrolled in the UK Biobank and the All of Us Research Program.

The analysis revealed that pathogenic or likely pathogenic variants in cardiomyopathy-associated genes (CMP-PLP) were twice as prevalent among patients with AF compared to the general population, and five times more common in those with early-onset AF (before 45 years of age).

The authors concluded that genetic testing in patients with AF—particularly those with early onset—could help identify individuals at high risk of developing cardiomyopathy and heart failure.

According to the Journal of the American Medical Association

A South Korean research team found that vaccination against herpes zoster significantly reduces the risk of cardiovascular diseases (CVD). Use of the live attenuated vaccine was associated with a 23 % reduction in CVD incidence.

The authors noted that herpes zoster virus may contribute to vascular damage, inflammation, and thrombus formation, ultimately increasing CVD risk, which can be mitigated through vaccination.

According to the European Heart Journal

The impact of anabolic steroid use on male cardiovascular health was assessed. The analysis showed that the risk of acute myocardial infarction increased threefold, while the incidence of percutaneous coronary intervention or coronary artery bypass grafting rose by approximately 2.95 times.

Additionally, the risks of venous thromboembolism and arrhythmia increased by 2.42 and 2.26 times, respectively.

The authors concluded that anabolic steroid use is associated with a significantly elevated risk of severe cardiovascular disease, with adverse effects potentially persisting for years after discontinuation.

According to the Journal of the American Medical Association and Circulation

A U.S. research team investigated the impact of diabetic hypoglycemia on the risk of acute ischemic stroke (AIS). The analysis revealed that the risk of AIS peaked on the day following a hypoglycemic episode (Relative Risk (RR) = 3.7), then gradually declined, remaining statistically significant at RR = 2.3 after 30 days.

The authors suggested that hypoglycemia may act as a trigger for AIS, temporarily increasing suscepti-

bility to stroke and can be potentially used for its prediction and prevention.

According to the Stroke journal

Researchers proposed that preventing iron deficiency in women of reproductive age may reduce the incidence of cardiovascular abnormalities.

The study found that anemia (hemoglobin <110 g/L during the first 100 days of pregnancy) was present in 4.4 % of women whose children were born with congenital heart defects, compared to 2.8 % in the control group.

After adjusting for demographic and clinical factors, anemia was associated with a 47 % increased risk of congenital heart defects.

The authors concluded that the prophylactic use of iron supplementation may become a simple and cost-effective strategy of reducing congenital heart disease.

According to the BJOG

The first cardiac procedure using optical coherence tomography in Russia was performed in Yekaterinburg, using the only device of its kind currently operating in the country.

Optical coherence tomography provides real-time, high-resolution imaging of coronary arteries by transmitting light signals through a catheter. The resulting 3D images of the vessel wall and built-in AI algorithms help physicians assess the severity of lesions, presence of calcifications, and risk of plaque rupture during interventions.

According to the press service of the Ministry of Health of the Sverdlovsk Region

Researchers from Canada have evaluated the long-term risk of serious adverse renal outcomes in children and adolescents diagnosed with arterial hypertension (AH).

Data from 26,324 participants aged 3 to 18 years were analyzed.

The findings revealed a significantly higher incidence of severe kidney-related outcomes — including death, chronic kidney disease, or kidney failure — among hypertensive children and adolescents: 5.52 events per 1,000 person-years compared to 1.66 in normotensive peers.

The authors concluded that early detection and effective management of blood pressure in children may reduce the risk of chronic kidney disease and prevent long-term kidney function loss.

According to The Lancet Child & Adolescent Health journal