



Zentraleuropäische Diabetesgesellschaft
Central European Diabetes Association

Föderation der Internationalen Donau-Symposia über Diabetes mellitus
Federation of International Danube-Symposia on Diabetes mellitus

The Role of Nutrition in the Prevention of Cardiovascular Diseases

C. Dimosthenopoulos, E. Hatziagelaki

The World Health Organization (WHO) estimates that around 30 % of deaths worldwide are due to or associated with cardiometabolic risk factors, whereas cardiovascular events in the European Union account for about half of all deaths. Cardiovascular diseases are the leading cause of death among men and women both in Europe and globally, despite significant interventions at primary and secondary prevention levels.

These diseases are a medical and social problem for modern societies with adverse consequences for their populations and economies. WHO reports that 80 % of premature deaths associated with cardiovascular disease and stroke can be avoided through changes in lifestyle, adopting a healthier diet, having a more systematic physical activity, and smoking cessation.

Increase in cardiovascular disease in Greece

Over the last decades, lifestyle changes or the rise of metabolism-related diseases and the prevalence of Western diet have led Greece to a top position in the list of countries most affected by the increase in cardiovascular disease. Studies such as the Pan-Hellenic Nutrition and Health Study (PA.ME.DY) have shown that 1 in 5 Greeks in our country is completely sedentary, while overweight and obesity reaches 60 % in men and 40 % in women.

According to the same study on cardiovascular risk, it was found that while mortality of cardiovascular di-

sease declined in the last 20 to 30 years in Greece, morbidity and related cardiovascular risk factors are dramatically increasing. According to the Pan-Hellenic Nutrition and Health Study 5 % of men and 2 % of women have had a cardiovascular event, and the onset of the disease occurs in young people, even under 35 years of age. Finally, elevated lipid levels are seen in 1 in 4 Greeks, with rates reaching 50 % and more in those over 60 years of age. Greece has more fatal cardiovascular events than low-risk countries in southern Europe such as Italy and France, mainly due to the economic crisis, lifestyle changes and deterioration of risk factors such as obesity, sedentary lifestyle, hypertension, hypercholesterolemia and diabetes.

Especially for diabetes, recent data showed that the number of people suffering from the disease has quadrupled over the last 30 years in Greece, according to data from the National Morbidity Study (EMENO), and about 1 in 10 Greeks has diabetes and an increased risk of myocardial infarction. More specifically, it is estimated that 8 to 9 % of the population suffer from diabetes, and there is also a percentage of 3 to 4 % who do not know they suffer from the disease.

„Better to prevent than to cure“

Primary prevention is important because it aims to limit exposure of the individual to risk factors or to strengthen resistance to them and should therefore start from childhood through the develop-

ment of an appropriate hygienic pattern of life and nutritional behavior. Besides, it is „better to prevent than to cure“ according to Hippocrates' well-known advocacy supported by the modern scientific approach to the prevention and protection of public health. Studies indicate, for example, that the qualitative characteristics of diet in childhood affect the cardiovascular risk in adulthood. At the same time, official epidemiological evidence suggests that 50 % of obese children will become obese adults, and studies in children and adolescents have shown that endothelium and peripheral arteries are often already affected from a very young age.

Emphasis on modifiable risk factors

Appropriate diet patterns play an important role not only in treating but also in preventing cardiovascular disease, even before the first cardiological problems occur. In the context of primary prevention, overall dietary management should take into account all the patient's risk factors and aim for the gradual change of the everyday diet and the adoption of more healthy choices. Emphasis is therefore placed on all those risk factors that can be modified. These mainly concern lifestyle and maintaining blood lipid levels and blood pressure at normal levels through physical activity, weight control, moderate alcohol consumption, salt restriction, fresh fruit and vegetable consumption as well as low-fat dairy products. Proper diet,

combined with physical activity, is a key predisposing factor that affects positively or negatively the cardiometabolic risk and all relevant factors (blood lipid and lipoprotein levels, arterial hypertension, blood glucose, inflammation markers, thrombosis and endothelial function).

Mediterranean diet with protective effects

In recent years, there is increasing scientific evidence about the protective effects that a diet with reduced intake of simple and refined carbohydrates, increased consumption of fruits, vegetables and cereals, moderate fish consumption, reduced salt intake and high consumption of olive oil may have in our health, and nuts, containing a high amount of monounsaturated and polyunsaturated fatty acids. Also, a number of epidemiological studies have shown a great correlation between micro- and macronutrients of the diet and overall eating habits, by reducing cardiovascular disease risk.

The Mediterranean diet is one of the predominant food patterns that has been shown to have beneficial effects on human health. The Mediterranean diet is a dietary model that is particularly popular in Mediterranean countries and the rest of the world. We find it in various

variations according to the culture and geographic position of each Mediterranean country. Such an overall diet, which follows to a large extent the nutritional model of the Mediterranean diet, has been associated with a reduction in morbidity, overall mortality, and in particular reduced mortality due to cardiovascular disease (World Health Organization data) and is proposed as the dominant model which we all have to adopt.

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*Prof. Dr. Erifile Hatziagelaki
2nd Dept. of Internal Medicine,
Research Institute & Diabetes Center
University Hospital "Attikon"
Medical School, National and Kapodistrian University of Athens, Greece
E-mail: erihat@med.uoa.gr*