

PROSOPON

NR 2/ 2013

[119-126]

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The importance of health counseling centers in process of protection, development and support of public health in Slovakia

Key words: *health protection, monitoring, health counseling, risk factors*

Declaration

In the belief that investing into the health of heart can prevent cardiovascular diseases, reduce suffering and disability of countless millions of people, avoid the waste of resources and increase productivity, thereby contribute to economic growth and prosperity, calls Advisory Board of the Second International Conference on Heart Health - Experts in the field of health, the media, - Education and social sciences as well as their organizations - Representatives of science - Gov-

ernment agencies dealing with health, education, trade, industry and agriculture - Private sector - International organizations and agencies focused on health and economic development - Groups of preventive health care at the community level - Voluntary health organizations, - Employers and their organizations to join forces to mobilize the public and society as a whole to more efficient use of its resources to eliminate the global epidemic of cardiovascular diseases. Advisory Board of Second International Conference on heart health Barcelona, Catalonia (Spain) 1 June 1995

Introduction

Every year about 10 million people in the world die of cardiovascular diseases, and it is expected that this number will increase to 20 million in 2005, 13 million of which will be in developing countries and Eastern Europe. In the mortality due to cardiovascular diseases are significant differences between countries, which cause differences between the life expectancy in Eastern Europe compared with Western Europe. Some developed countries in recent decades experienced significant success in reducing the effects of the largest non-infectious epidemic of cardiovascular disease of 20th century. The measures taken in the U.S. in connection with improved awareness, treatment and checking of blood pressure in the years 1972 - 1994 was reflected in decrease of mortality in coronary heart disease related to age by 53% and by decrease in mortality in stroke even by 60%. After 1960, when the death rate from cardiovascular disease culminated in Canada and Australia, were adopted the principles whose implementation significantly reduced the mortality, confirming preventability of these deaths. In European countries, 50% reduction in mortality was achieved in Finland thanks to the North Karelia Project. Chronic non-communicable diseases represent in Slovakia the majority of causes of death, illness, disability, hospitalization and long-term working absence. The largest percentage of all causes of death are circulatory diseases and cancer. The heart and vascular diseases, which are preventable, cause each year around 28 500 deaths. These diseases begin to develop in childhood, although they are not apparent until decades later. Today they already threaten persons aged 20-30 years. In a society where half of the people prematurely die from cardiovascular diseases, everyone should think about their risk! Cardiovascular dis-

eases and chronic non-infectious diseases were until recently seen as inevitable consequences of aging. In sixties begun on the basis of epidemiological studies defined the so-called risk factors, especially smoking, high blood pressure and high levels of total cholesterol which were supposed to be involved in the increased risk of those diseases [Krač, 2008]. Today we can say that thanks to the large number of epidemiological studies, animal research, laboratory studies and large clinical studies were identified other important risk factors that contribute to increased risk of cardiovascular diseases. In principle, they can be divided into two groups. The first group consists of the so-called risk factors that cannot be influenced, where we include age, gender and family history.

1. AGE / GENDER With age increase the likelihood of diseases of the cardiovascular system. Men are at higher risk than women. In the highest risk of cardiovascular diseases are men over 50. However, the risk increases also in women at menopause.

2. FAMILY HISTORY Cardiovascular diseases often affect blood relatives. If the client's parents, grandparents, or siblings had suffered from cardio-vascular disease, the risk is higher. Their risk is significantly higher if relatives who had heart attack or stroke were younger than 60 years. If client comes from the so-called "Risky family", it is extremely important for him to control each of the other risk factors [Egnerová, et. al, 1994].

3. PERSONAL HISTORY If the client already has a disease of the arteries supplying the heart, brain or legs, he is in the increased risk of vascular events. Adjusting of each of the other risk factors is for them highly important. Into the second group of risk factors belong risk factors which are suggestible by humans, where we include smoking, high blood pressure or high total cholesterol levels. Modifiable risk factors for chronic non-infectious diseases directly related to life-style play in terms of population health an important role (6).

1. SMOKING In addition to 90% of the causation of lung cancer, smoking is harmful to the heart and blood vessels. Cigarette smokers have 70% higher rate of heart attack than non-smokers. Smokers have five times higher probability of sudden death to extensive myocardial infarction than nonsmokers. If they quit than they can repair the damage caused by cigarettes to heart and blood vessels. After one year of abstinence, the risk can be reduced by half.

2. **HIGH BLOOD PRESSURE** Normal value of blood pressure in a healthy person is 120/80 mmHg at any age. High blood pressure damages the heart, blood vessels, brain, kidneys and other organs. High blood pressure increases the risk of stroke, heart failure and myocardial infarction. High blood pressure is especially dangerous because it often does not show any problems for a long time and thus remains untreated. When the systolic pressure is 160 mmHg or more and/or diastolic blood pressure is 90 mmHg or more, it is necessary to attend the doctor.

3. **HIGH CHOLESTEROL** Normal cholesterol levels in healthy adult is less than 5 mmol/l. High blood cholesterol levels can cause blockage of blood vessels. High blood cholesterol levels can have several reasons. A diet rich in animal fat and cholesterol can increase blood cholesterol and thus the risk of heart disease. Inappropriate foods include: fatty meats, offal, butter, full-fat cheese, whole milk, cream, ice cream, margarine, palm and coconut oil, chocolate, sausage ... cholesterol levels can be modified by eating of five pieces of fresh fruit and 500 to 800 grams of fresh vegetables a day /(*Krak, 2008*)/, as well as by regular exercise (such as fast walking) daily for 1 hour, and maintaining the appropriate weight.

4. **DIABETES MELLITUS (DIABETES)** Diabetes causes narrowing of the blood vessels supplying the heart and other organs. In people with diabetes, the risk of cardiovascular disease is significantly increased. To the development of diabetes in adult age very often leads overweight. If a client is overweight, change of the composition of food and increasing of physical activity can help to reduce risk of getting diabetes.

5. **BODY WEIGHT** overweight people die of cardiovascular disease in a higher percentage than those with a reasonable weight. Overweight is often associated with other risk factors such as high blood pressure, diabetes or high cholesterol. Body weight is assessed by body mass index (BMI). Normal BMI is 24 for women and 25 for men. BMI 30 is overweight and a BMI over 30 is obesity. Combination of balanced diet and regular physical activity will help clients to lose weight and to maintain reasonable weight (6). In addition to the aforementioned risk factors we meet with additional risk factors such as general deterioration of living conditions and penetrating psychosocial stress due to rapid social and economic changes. Understanding the risk factors that increase the risk of cardiovascular diseases and understanding their mechanism of action allows us to receive and

implement effective measures at many levels, which ultimately should lead to improved health status of the population [Krač, J. 2008]. In 1993, Slovakia was by the WHO accepted into network of countries fulfilling program CINDI (Countrywide Integrated Non-communicable Disease Prevention) - CINDI program is in Slovakia, as in other countries, based on Goal 4 of WHO Programme Health for All - reduction of chronic non-infectious diseases by the year 2000 (Egnerová, et al, 1994). Integrated prevention of chronic non-infectious diseases came from the unfavorable situation in the mortality and morbidity of the Slovak population to chronic non-communicable diseases, especially cardiovascular and cancer. Its long-term goal is to reduce total mortality in Slovakia, particularly mortality from coronary heart - vascular and tumor diseases, especially those causing premature death which means to 65 years of age (Rovný, et al. 1998). Slovak government in 2010 approved the National Program of Prevention of Heart Disease and Blood Vessels. In this program are participating Slovak public health authorities as the part of the National Health Promotion Programme /Egnerová, et. al, 1994/. The role of Public Health of the Slovak Republic should be the role of national and regional public health authorities at the regional level to create a positive social atmosphere for an intense, effective and long-term health and education of the population in all levels possible in order to increase the willingness of Slovak citizens take care of their health and at a time when even health departments work synergistically linked with the activities of the health advisory public health offices and health care facilities in the primary prevention of cardiovascular disease and other (7). The main objective of counseling centers of health protection and promotion is the reduction of health risks through general and specialized counseling for positive change in lifestyle using proven knowledge and methods from the fields of medicine and public health (4). The aim of counseling centers is to increase interest in own health of the population, learning about the health risks and of their own prevent chronic non-communicable diseases, particularly cardiovascular (high blood pressure, heart or stroke) and metabolic diseases (obesity, diabetes, lipid metabolism disorders) and cancer. Because counseling centers are focused to prevention, clients should be particularly younger people and middle aged people. Into Health counseling centers come people motivated with interest in their own health [Rovný, et al. 1998]. Advising is based on the exami-

nation of the main risk factors associated with lifestyle and subsequent assessment of personal risk score. Evaluation of risk factors and of personal risk score allows recommending appropriate action to the person in the way of life in both basic and specialized counseling. Due to the fact that risk factors affect health together, among many of them are significant linkages and their effects multiply each other, it is fundamentally essential to assess them complexly and to develop a comprehensive plan to influence them in Basic Counseling Centre (6).

BASIC COUNSELING CENTRE The meaning and activities of Basic Counseling Centre are focused on reducing of the influence and major risk factors particularly cardiovascular disease (high blood pressure, heart attack or stroke), metabolic diseases (obesity, diabetes, lipid metabolism disorders) and tumor diseases through basic and specialized counseling by the basic range of somatic and biochemical examinations performed by specialists (6). In 2011, in the counseling centers of health protection and promotion were screened 18,781 clients - 6,550 men and 12,231 women. First basic examination passed 11 647 clients - 4,415 men and 7,232 women. Control examination passed 7,134 clients - 2,135 men and 4,999 women (5). Health counseling centers are designed for healthy people who are interested in the quantification of selected health status indicators related to cardiovascular disease, based on which is assessed the risk of cardiovascular disease. The basic part of counseling is, in addition to anamnestic data, focused on the incidence of cardiovascular disease in the family, and on detecting of premature deaths from these diseases, on focus to finding of diet, physical activity and to the information on smoking. Furthermore are measured anthropometric parameters as height, weight and circumference of waist and hips on what basis is determined body mass index - BMI and index of central obesity - WHR. Furthermore is with the use of OMRON device measured the percentage of body fat. Using of dry method with Reflotron device are from capillary blood measured values of total cholesterol, HDL cholesterol, triglycerides and glucose. From obtained values is determined the value of LDL cholesterol and value of atherogenic index (the ratio of total cholesterol and HDL cholesterol). The results are than evaluated in "Test a healthy heart" software [Kraak, 2008]. Computer determine the personal risk score. After the examination is client taken over by doctor who, after examination and evaluation of personal risk score, recommend optimal and appropriate

changes in lifestyle through comprehensive individual counseling with subsequent visits of elementary counseling after a comprehensive individual counseling visits to specialist. Where appropriate, to client are recommended further examinations and visits of practitioner. During all examinations and advisory and consultancy activities are followed mandatory standard methods and procedures, as well as current recommendations of international and Slovak professional medical societies for primary prevention of chronic non-infectious diseases.

Conclusion

Health is not only one of the most important rights of all citizens, but also an obligation to take care of it. Chronic diseases can be prevented by adopting of principles of good nutrition, sufficient physical activity and avoidance of smoking, alcohol and stress. Level of control of major risk factors, especially of hypertension, should be increased. Also the motivation for patients to eliminate their risk factors through the instruments of state policy - adequate education and the availability of better quality health care should be improved.

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Summary

Authors focus on the importance of counseling centers in health protection and in promotion and development of public health in the Slovak Republic. Health is not only one of the most important rights of every citizen, but it also an obligation to take care of it. Chronic diseases can be prevented by adopting the principles of good nutrition, sufficient physical activity and avoiding of smoking, alcohol and stress. Level of control of major risk factors, especially of hypertension, should be increased. Also the motivation for patients to eliminate their risk factors through the instruments of state policy - adequate education and the availability of better quality health care should be improved. Health counseling centers are designed for healthy people who are interested in the quantification of selected health status indicators related to cardiovascular disease, based on which is assessed the risk of cardiovascular diseases.