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Opinion

How to Reduce Cardiovascular Disease Burden in Population

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Abstract

Ischaemic heart disease (IHD) and stroke are the world's biggest killers. The good news is that 80% of cardiovascular diseases can be prevented with healthy lifestyle habits [1,2]. The most effective approach to improve this situation is the wide application of the therapeutic lifestyle changes and the reduction of risk factors levels. Small positive shifts of risk factors, across a whole population consistently leads to greater reductions in disease burden than the huge investment to the new drugs and devices including invasive procedures. Convincing evidence has come from Finland, at the end of previous century, where the significant decrease of cardiovascular mortality was attributed in more than 50% to risk factors reduction and 23% to the treatment investments invasive procedures including [3]. Motivation is a key element of cardiovascular prevention. It means in practice non-smoking, support for nutrition and behavior changes, regular and effective physical activities and obesity management mainly. The key element is implementation of the programs which support regular cardio training, education concerning right nutrition principles, relaxation, stress and obesity management and sleeping hygiene.

Conclusion

a) Decrease of saFA about to 10% from daily energy intake and their substitution by polyunFA leads to decline cardiovascular risk about 20-30%.

b) 2% increase in energy intake from trans fatty acids increases IHD risk by 23%.

c) 30 g unsalted nuts daily decrease cardiovascular risk about 30%.

d) 7 g/day higher intake of total fiber is associated with a 9% lower risk of IHD and a 10 g/day higher fiber intake is associated with a 16% lower risk of stroke and a 6% lower risk of type 2 diabetes mellitus.

e) Effective physical activities 150 to 300 min. Of moderate-intensity exercise or 75 to 150 minutes of vigorous-intensity exercise each week lead to a 31% reduction in all-cause mortality.

f) Secondary prevention ambulatory cardiovascular prevention (ACVR) programs, based on regular exercising, have reduced total mortality 15-28%, cardiovascular mortality 26-31%.

g) Non-inclusion of the patient in the secondary prevention program ACVR has increased mortality 28%.

h) The increase of BMI about 5kg/m2 leads to increase of mortality risk about 30% and about 40% risk of IHD, stroke and other vascular diseases.

Together: 80% of cardiovascular diseases can be prevented with healthy lifestyle habits. To implement this approach to health care system by education programs is not enough effective. For the health care system are needed concrete proposals with the aim to reduce cardiovascular morbidity and mortality and prolong averaged value of healthy life.

Proposed proceeding includes long term monitoring of patient´s risk factors, globally expressed as a HEART SCORE value [4] and basal obesity management in primary care, nurse led preventive cardiology clinics establishment and introducing of positive economic stimulation to decrease levels of risk factors in population by health insurance companies. It means to award the patients who were able to reduce significantly the levels of Heart Score value and to reduce their pharmacotherapy burden. It means also to monitor the Heart Score averaged value of all the patients included in care of GP and to award the GPs who were able to manage their patients to change their lifestyle habits to decrease the levels Heart Score averaged value and so to reduce pharmacotherapy and hospitalization expenses. Proposed secondary prevention

tools in the specialized cardiology care include implementation of ambulatory cardiovascular rehabilitation in cardiology stacionairs [5-11].

Programs of ambulatory cardiovascular rehabilitation are key elements of secondary prevention needed for implementation of therapeutic lifestyle changes during second posthospitalization phase after acute coronary syndrome and/or revascularization procedures. They include regular supervised cardio exercise training not only but the complex education and stress management and psych relaxation training too. There are more long-term benefits from physical activity, including improved brain health, reduced risk of eight types of cancer, reduced risk for fall-related injuries in older adults, and reduced risk of excessive weight gain. Physical activity helps manage more chronic health conditions. It can decrease pain for those with osteoarthritis, reduce disease progression for hypertension and type 2 diabetes, reduce symptoms of anxiety and depression, and improve cognition for those with dementia, multiple sclerosis and Parkinson's disease. In the public health area include changes in food groups taxing according to their health effects and implementation of the clinical excellence centrum to publish official information and advises for both public and experts in the field of the effectivity of preventive medicine practice, the effectivity of food supplements and the effectivity of the new diagnostic and therapeutic procedures.

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