How to reduce Cardiovascular Mortality, Morbidity and to prolong averaged value of healthy life

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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. The most effective approach to improve this situation is 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. 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 most effective are programs which support regular physical cardio-training, education concerning right nutrition principles, relaxation, stress and obesity management and sleeping hygiene. Concrete examples of daily menu, adequate exercise proposals and obesity management how to reach recommended risk factors levels are discussed. Their effectivity could be expressed as follows:

Conclusion

- decrease of saFA about to 10% from daily energy intake and their substitution by polyunFA leads to decline cardiovascular risk about 20-30%
- 2% increase in energy intake from trans fatty acids increases IHD risk by 23%
- 30 g unsalted nuts daily decreases cardiovascular risk about 30%
- 7 g/day higher intake of total fibre is associated with a 9% lower risk of IHD and a 10 g/day higher fibre intake is associated with a 16% lower risk of stroke and a 6% lower risk of type 2 diabetes mellitus
- 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
- secondary prevention ambulatory cardiovascular rehabilitation programs, based on regular exercising, education, stress, sleep and obesity management, have reduced total mortality 15-28%, cardiovascular mortality 26-31%
- Non-inclusion of the patient in the secondary prevention ambulatory cardiovascular rehabilitation program has increased mortality 28%. Delayed delivery of cardiac rehabilitation means for patients lost years of life
- 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
- The diet + exercise combined interventions in inducing weight loss are more effective than diet-only inerventions at 6 months. Such interventions typically result in 8-11% weight loss. Moderate-intensity to high-intensity aerobic exercise-only, without prescribed diet, conducted at a frequency of at least 3-5 times per week, result in 2-3% weight loss. Low intensity walking (step counts) and habitual activity produce 1-1,5% weight loss of the initial weight at 3-6 months, resistance training alone does not produce weight loss.

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 include long term monitoring of patient´s risk factors 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 signifficantly the levels of risk factors and to reduce their pharmacotherapy burden. It means also to award the GPs who were able to manage their patients to change their lifestyle habits to decrease the levels of risk factors and to reduce pharmacotherapy. Proposed proceeding in the specialized sphere include implementation of ambulatory cardiovascular rehabilitation in cardiology stacionairs. 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 informations and advises for both public and experts in the field of the effectivity of preventive medicine practice, the effectivity of food suplements and the effectivity of the new diagnostic and therapeutic procedures.

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