

# How to Reduce Cardiovascular Mortality, Morbidity and to Prolong Averaged Value of Healthy Life

Stefan Farsky

**Key words:** cardiovascular risk factors, nutrition, cardiotraining, health policy, health insurance companies

## Abstract:

Ischemic 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. 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:

## In conclusion:

1. decrease of saFA about to 10% from daily energy intake and their substitution by polyunFA leads to decline cardiovascular risk about 20-30%
2. 2% increase in energy intake from trans fatty acids increases IHD risk by 23%
3. 30 g unsalted nuts daily decrease cardiovascular risk about 30%
4. 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
5. 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
6. 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%
7. Non-inclusion of the patient in the secondary prevention ambulatory cardiovascular rehabilitation program has increased mortality 28%
8. The increase of BMI about 5kg/m<sup>2</sup> 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 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 significantly 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 stations. 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 supplements and the effectivity of the new diagnostic and therapeutic procedures.

## References:

1. Piepoli MF, Hoes AW, Agewall S, et al. 2016 European Guidelines on cardiovascular disease prevention in clinical practice. *Eur Heart J* 2016;37:2315-2381. doi:10.1093/eurheartj/ehw106.
2. Yusuf S, Hawken S, Ounpuu S, et al. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*. 2004;364:937-952.
3. Laatikainen TI, Critchley J, Vartiainen E, Salomaa V, Ketonen M, Capewell S. Explaining the decline in coronary heart disease mortality in Finland between 1982 and 1997. *Am J Epidemiol*. 2005 Oct 15;162(8):764-73. Epub 2005 Sep 8
4. Sacks FM, Lichtenstein AH, Wu JHY, et al. Dietary Fats and Cardiovascular Disease. Presidential Advisory from American Heart Association. *Circulation* 2017; 136(3):e1-e23.
5. 2019 ESC/EAS Guidelines for the management of dyslipidemias: lipid modification to reduce cardiovascular risk. *Eur Heart J* 2019;doi:10.1093/eurheartj/ehz455
6. Lindsen A, Oldridge N, Thompson DR, et al: Exercise-Based Cardiac Rehabilitation for Coronary Heart Disease, Cochran systematic Review and Meta-Analysis. *J Am Coll Cardiol* 2016; 67 : 1-12
7. Hambrecht R, Walther C, Mobius-Winkler S, et al: Percutaneous Coronary Angioplasty Compared With Exercise Training in Patient with Stable Coronary Artery Disease. *Circulation*. 2004;109:1371-1378
8. Hinde S, Harrison A, Bojke L et al. Quantifying the impact of delayed delivery of cardiac rehabilitation on patients' health. *Eur J Prev Cardiol*. 2020 Mar 25:2047487320912625 /doi.org/10.1177/2047487320912625

Name: Stefan Farsky

Affiliation: Slovak League against Hypertension, Dom srdca Martin, Slovakia, Email: farsky@za.psg.sk