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Four golden rules to halve the risk of cardiovascular events

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The 'Global Burden of Disease' study reported that in 2016 the larger number of fatalities (17.6 million) were due to cardiovascular diseases (CVD), with ischaemic cardiomyopathy and cerebrovascular diseases taking the 'lion share' (more than 85% of all CVD related deaths).[1] Around the world, between 2006 and 2016 cardiovascular deaths increased by 14.5%, while at the same time the standardized age related deaths decreased by 14.5%. Accordingly, due to the rapid global growth of CVD, it is ever more important to raise awareness of the key role of cardiovascular prevention, both at national and international level. For the first time the new European Guidelines for Cardiovascular Disease Prevention in Clinical Practice emphasize the population based approach, without discounting the individual strategies relying, for the large part, on pharmacologic treatment. At a time of limited financial resources, any low-cost strategy promoting health maintenance and primary cardiovascular prevention, should to be strongly supported. To this end, the Guidelines on Cardiovascular Diseases Prevention suggest first modification of life style, and resorting to drug therapy only when the results are not satisfactory. This is the key point: medical treatment is recommended only when life style modification measures are insufficient.

Considering only the physical activity, in 2010, 81% of the world adolescent population (age 11–17 years) entertained insufficient physical activity, that is less than 60 min of moderate intensity physical activity per day, as recommended by the World Health Organization (WHO).[2] It is not surprising that, as recently reemphasized, a regular physical activity is associated with a lower risk of mortality and cardiovascular adverse events in all countries, regardless the socio-economic status, confirming that physical activity is a simple, widely applicable, and low-cost strategy, potentially capable of reducing CVDs and deaths worldwide.[3] Body mass index (BMI) is an important risk factor for cardiovascular and renal pathologies, diabetes, some form of cancer, and musculoskeletal disorders. Concerns on the health and economic impact of a rising BMI, globally, lead to the inclusion of obesity, among the non-communicable diseases (NCD), as a target project to limit, by the year 2025, its growing prevalence, aiming at its return to the 2010 level. The rate of increasing of the BMI since 2000 has been slower than during the previous decades in the high socio-economic status countries, where obesity has become a clear concern for Public Health.[4] Nonetheless, in some regions the rate of BMI increase has been brisk, such as the overall increase BMI has not slowed down. Should the post-2000 trend continue, not only the goal of stopping the obesity will fail, but, by the year 2025, obesity will surpass, in women, underweight. Globally, around 1.3 billion people smoke, the vast majority residing in developing countries, where almost 50% of the adult male are smokers. Even though we are not able to predict the smoker who will eventually develop CVD, the best action the smokers could take for their heart is to quit. In a years' time people who quit smoking have a drastic decrease of the risk of coronary events, and patients who already experienced a coronary event reduce the risk of recurrence. In a 5 years' time the risk of stroke becomes similar to the non-smokers. Alcohol has biphasic and complex physiology, and the cardiovascular risk could be higher or lower in relation to the amount and the regularity of consumption, as well as the outcome considered. Moderate regular alcohol consumption (1–2 drinks a day) improves: the lipid profile (specifically HDL cholesterol), heart rate variability, endothelial function, sensibility to insulin, coagulation cascade, and fibrinolytic activity, with consequent reduction of the risk of CVD. On the other hand, a higher consumption (3–4 drinks a day), is associated with higher risk of hypertension, diabetes, stroke, and fatal myocardial infarction.

Firm clinical evidences proved that people adhering to a healthy life style drastically decrease their risk of cardiovascular events. Furthermore, a part from the non-modifiable hereditary genetic risk, an healthy life style decreases the risk of coronary disease by 50% as compare to unhealthy life style.[5] Encouraging healthy behaviour for the population, such as non-smoking, prevention of obesity, regular aerobic physical activity, and healthy eating, must become a global mandatory priority to positively impact CVD, and to contribute to an healthier planet.

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