

Healthy Lifestyle Cuts Risk of MI by 86% in Swedish Cohort Study

Michael O'Riordan | September 26, 2014

STOCKHOLM, SWEDEN — A healthy diet, moderate alcohol consumption, a smaller waist circumference, and not smoking were each independently associated with a lower risk of MI in a large cohort of healthy Swedish men^[1].

When these four lifestyle behaviors were combined with physical activity, individuals who adhered to all five healthy practices had an 86% lower risk of MI when compared with a high-risk group of individuals who didn't adhere to any to healthy behaviors. When compared with the rest of the study cohort, which included individuals who practiced some but not all of the healthy lifestyle behaviors, the risk of MI was reduced 79% compared with those who adhered to all five.

"The benefit of combined diet, lifestyle, and healthy body weight may prevent up to approximately four of five cases of MI in this healthy study population," write Dr Agneta Åkesson (Karolinska Institutet, Stockholm, Sweden) and colleagues in the September 30, 2014 issue of the *Journal of the American College of Cardiology*. "A decrease in risks with increasing adherence to the low-risk behaviors was also observed in men with hypertension and high cholesterol."

Overall, just 1% of the 20 721 men adopted all five of what the researchers referred to as "low-risk behaviors." While the number is dismal, the researchers say that these lifestyle behaviors are modifiable and that previous studies have shown that adopting components of such a healthy lifestyle can reduce the incidence of coronary heart disease.

"It is, however, also clear that extensive prevention can be achieved only through inhibiting the initiation and establishment of any high-risk behavior," write Åkesson et al. "Preferably, also to control healthcare expenditures, prevention should focus on ensuring that ideal low-risk behaviors are introduced early and continued throughout life."

Diet Neither Extreme Nor Exceptional

In the study, men aged 45 to 79 years old filled out a questionnaire that included approximately 350 items related to diet and lifestyle factors. A "low-risk" diet was defined on the basis of a recommended food score adopted by the **National Health and Nutrition Examination Survey (NHANES)**. Moderate alcohol consumption was defined as 10 to 30 g/day, while a low-risk physical-activity behavior was defined as at least 40 minutes of walking or cycling per day. Finally, a waist circumference less than 95 cm was defined as healthy.

After 11 years of follow-up, individuals who combined a low-risk diet, one that included fruits, vegetables, reduced-fat dairy, whole grains, and fish, with moderate alcohol consumption had a 35% lower risk of MI compared with a high-risk group of individuals who adhered to none of the healthy lifestyle behaviors. A healthy diet, moderate alcohol consumption, and not smoking were associated with a 64% lower risk of MI. Adding physical activity to the model reduced the risk of MI by 76%, while all five healthy behaviors, including low abdominal adiposity, reduced the risk by 86%.

In an editorial^[2], Dr Dariush Mozaffarian (Tufts University, Boston, MA) notes that simply eating the healthy diet was associated with a 20% lower risk of MI. The diet, he said, was "neither extreme nor exceptional, but reasonable and consistent with dietary guidelines." Also, the dietary evidence showed that the benefit was attributed to eating healthier foods rather than a lower intake of unhealthy food, such as red and processed meat, fried potatoes, and sweets, among other items.

Not adhering to the healthy diet and drinking alcohol more excessively accounted for nearly one in four MIs in the study population, while the combined absence of three healthy behaviors—diet, alcohol, and not smoking—explained nearly half of the MIs.

"These findings highlight the primacy of healthy lifestyle," writes Mozaffarian. "For both individual patients and populations, lifestyle goals should not be formulated solely for control of weight or blood pressure, cholesterol, and glucose levels. Although lifestyle has major benefits on these physiological factors, a healthier diet, greater activity, and nonsmoking influence numerous other pathways of risk and produce substantial additional benefits for cardiovascular and noncardiovascular health."

The authors have reported they have no conflicts of interest. Mozaffarian has received royalties from UpToDate; is on the advisory board of Unilever North America; is a consultant for Foodminds, Nutrition Impact, Amarin, AstraZeneca, and Life Sciences Research Organization; and has received honoraria from Quaker Oats, Pollock Institute, and Bunge.

References

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2. Mozaffarian D. The promise of lifestyle for cardiovascular health. *J Am Coll Cardiol* 2014; DOI:110.1016/j.jacc.2014.00.1191. Editorial

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