

## Lifestyle Factors that Lead to a Longer Life

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Research conducted over the past 30 years has produced a lot of insight into the lifestyle factors that impact overall health and longevity. Much of this research has focused specifically on diet. The first dietary guidelines were issued in 1980 and have been updated every five years since. Nevertheless, there is quite a bit of angst among the public as to how best to achieve optimal health, despite the fact that the dietary guidelines have been quite consistent over the past 35 years or so. And, the scientific community has been pretty consistent in identifying other lifestyle factors that greatly impact health. Still, it seems the most heated nutrition discussions are about the minutia rather than on the big-ticket items.

Recent work by Li and colleagues<sup>1</sup> from Harvard University nicely illustrates just how impactful lifestyle can be and identifies those lifestyle factors that matter most. Using data from the Nurses' Health Study (1980–2014) and the Health Professionals Follow-up Study (1986–2014), they defined 5 low-risk lifestyle factors as never smoking, body mass index of 18.5 to 24.9 kg/m<sup>2</sup>, ≥30 min/d of moderate to vigorous physical activity, moderate alcohol intake, and a high diet quality score (upper 40%), and then estimated hazard ratios for the association of total lifestyle score (0–5 scale) with mortality.

Data from the [NHANES \(2013–2014\)](#) were used to estimate the distribution of the lifestyle score and the [U.S. Centers for Disease Control and Prevention WONDER database](#) to derive the age-specific death rates of Americans. The life table method was then applied to estimate life expectancy by levels of the lifestyle score. The results were striking to say the least.

During up to 34 years of follow-up, there were documented >40,000 deaths. The multivariable-adjusted hazard ratios for mortality in adults with 5, compared with zero, low-risk factors were 0.26 (95% confidence interval [CI], 0.22–0.31) for all-cause mortality, 0.35 (95% CI, 0.27–0.45) for cancer mortality, and 0.18 (95% CI, 0.12–0.26) for cardiovascular disease mortality. Even though the lifestyle scores were based on criteria that were not especially demanding, a score of 5 was still associated with a 74% reduction in mortality! Life expectancy for men at age 50 was 29.0 years for men who adopted zero lifestyle factors vs 37.6 years for men with a score of 5. For women, these figures were 29.0 years and 43.1 years, respectively.

With respect specifically to diet, risk of mortality was reduced by 37% when comparing a score of 5 with a score of 1. Diet quality was determined using the Alternate Healthy Eating Index score. Points were assigned for intake of each component on a scale from 0 to 10, with 10 indicating adherence to the recommended levels of servings per day. Ten components were included in the index: high intakes of vegetables, fruit, nuts, whole grains, polyunsaturated fatty acids, long-chain

omega-3 fatty acids and low intakes of red and processed meats, sugar sweetened beverages, *trans* fat and sodium.

Obviously, this study didn't focus on soyfoods. But soy does make accomplishing the goal of eating a healthy diet easier. By eating soyfoods in place of sources of protein more commonly consumed, protein quality won't be sacrificed, but saturated fat intake will be reduced and polyunsaturated fat increased. Soyfoods are also a good source of a host of nutrients and phytochemicals, factors that likely contribute to the health-promoting properties of fruits and vegetables.

Finally, continuing to explore the potential health benefits of soyfoods is worthwhile. These include the protective effects of consuming soy early in life against breast cancer. But even without definitive proof that soy exerts specific health benefits, it is good to know that soyfoods can be part of a lifestyle that can so markedly reduce risk of mortality.

## References

1. Li, Y., Pan, A., Wang, D.D., Liu, X., Dhana, K., Franco, O.H., Kaptoge, S., Di Angelantonio, E., Stampfer, M., Willett, W.C., et al. Impact of healthy lifestyle factors on life expectancies in the US population. *Circulation*. 2018.