



Benefits of Controlling Cardiovascular Risk Factors



Control of a range of cardiovascular risk factors as a result of healthy lifestyle choices, medications and Mendelian randomisation (good genetics) can result in significant reduction of atherosclerotic cardiovascular disease (ASCVD) risk, according to a commentary published in the *Canadian Journal of Cardiology*.

The article cites a study by Bérard et al., also published in the same issue of the journal, that evaluated the impact of adherence to a wide range of risk factors and healthy behaviours on total and ASCVD mortality. The cohort was based on the 3rd French MONICA population that was enrolled between 1994 and 1997. Of the 3,402 subjects in the original cohort, 1,311 had detailed information on diet and exercise and form the basis of the paper. The researchers concluded that better adherence to a range of potentially modifiable risk factors was associated with better cardiovascular and overall outcome.

"Clearly, cigarette smoking, dietary choices and exercise are generally at the full discretion of the individual," according to the commentary authored by Todd J. Anderson, MD, from the Libin Cardiovascular Institute and Cumming School of Medicine, University of Calgary, Calgary AB.

The concept of ASCVD risk factors began with the establishment of community-based cohort studies such as the Framingham Heart Study in the 1940s. This notion was established by following healthy subjects over a period of years, and demonstrating that certain modifiable and non-modifiable factors were present more often in subjects who developed myocardial infarction, stroke or cardiovascular death. Some of these factors were related to unhealthy lifestyle choices, such as cigarette smoking, whereas others may be related to a combination of genetic and environmental factors. These would include blood pressure, lipoprotein and glucose levels.

In addition, the INTERHEART study, a standard case control study of myocardial infarction determinants in 52 countries, identified that nine potentially modifiable risk factors accounted for more than 90% of the population attributable risk. Given the striking heterogeneity of cardiovascular prevalence across the globe, it is felt that the vast majority of ASCVD could be eliminated with appropriate adherence to risk factor interventions.

Recently there have been several large epidemiology studies that have shown the benefits of adherence to healthy lifestyle choices. For example, a large Danish registry of 57,000 subjects evaluated five lifestyle factors (smoking, alcohol, inactivity, poor diet and increased waist circumference). With a very robust 14 years of follow-up and 6,700 deaths, it was determined that the control of each of these factor resulted in a 25-30% reduction in events. These results were confirmed in a meta-analysis of 15 similar intervention studies.

Dr. Anderson says these studies should serve as a reminder to physicians to redouble their efforts and communication to their clients – the patient with or at risk of ASCVD. "Taking the time to encourage lifestyle modification, cardiac rehabilitation, weight loss strategies and smoking cessation will go further than writing a prescription," he adds.

Source: [Canadian Journal of Cardiology](#)

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Published on : Tue, 1 Aug 2017