Caloric Restriction Reduces Atherosclerosis Risk

Caloric restriction in humans is associated with a reduced risk for atherosclerosis, according to a study recently published in the *Proceedings of the National Academy of Sciences USA.*

Caloric restriction has been shown to prolong life and reduce the incidence of certain diseases in animals, though little is known about its long-term effects on cardiovascular risk factors in humans.

Investigators from the Washington University School of Medicine in St. Louis, MO, examined 18 adults (average age of 50) who had practiced caloric restriction for an average of six years, along with 18 age-matched healthy adults following a typical American diet.

The caloric restriction group consumed a balance of foods designed to exceed the recommended daily intake of all essential nutrients while minimizing energy intake. They consumed 1,100-2,000 calories per day, with approximately 26% of calories derived from protein, 28% from fat, and 46% from complex carbohydrates. The caloric restriction group avoided eating processed foods and trans fats. By contrast, the control group consumed nearly twice as many calories (2,000-3,500 calories a day), with approximately 18% of calories derived from protein, 32% from fat, and 50% from carbohydrates.

Compared to the control group, the caloric restriction group had a lower average body mass index (19.6 vs. 25.9), lower percentage of body fat (8.7% vs. 24%), higher levels of beneficial high-density lipoprotein (HDL), and lower levels of total cholesterol, low-density lipoprotein (LDL), triglycerides, fasting glucose, fasting insulin, C-reactive protein, and systolic and diastolic blood pressure. Furthermore, carotid artery intima-media thickness was 40% less in the caloric restriction group than in the control group.

Based on a range of risk factors and measurement of carotid artery intima-media thickness, the practice of caloric restriction in adults appears to offer powerful protection against atherosclerosis, the major cause of death in Americans.

—Elizabeth Wagner, ND

Reference

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