

The Fountain of Youth?

By Gregory S. Cohn, MD

Many of us dream of living a longer life. The 20th century saw great advances in longevity due to improved nutrition, the discovery of antibiotics along with an improved understanding of the role of infectious agents in causing disease, as well as improved diagnostic, medical, and surgical techniques. In fact, longevity has become a burgeoning area of research, as scientists seek to discover the secrets behind “programmed” cell death, and whether this programming can be altered in order to extend life. With this in mind, here are some interesting tidbits that rehash some recurring themes of my previous columns.

The following information was recently published in the Journal of the American Medical Association. Large population studies suggest that **lifestyle factors** (lack of exercise, diet, and adiposity) are responsible for up to **70% of all chronic disease**. Other research has shown that calorie restriction can slow the aging process and extend the maximum life span of rats and mice. Calorie restriction increases longevity in these animals in part by *preventing or delaying the occurrence of chronic diseases, including diabetes, atherosclerosis, and cancer*. In humans, a group called the Calorie Restriction Society (CRS) practices self-imposed calorie restriction in the belief that it will extend their lives. Members of this society have an average BMI of 19.6 (normal range 18.5 to 25), consume about 30% fewer calories (1800 cal/d) than average people, and eat a variety of fruits, veggies, nuts, dairy products, egg whites, meat, wheat and soy proteins, and avoid processed foods. Examination of members of this society show that compared to most Americans, they have a lower percentage of body fat, lower systolic and diastolic blood pressure, markedly improved lipid profiles, increased insulin sensitivity, low levels of inflammation, and decreased arterial stiffness. *Many of these alterations are exactly the same as those seen in the long-lived rodents!*

The offspring of people who live to be 100 years or older (centenarians) have an **8-17 times greater chance of living past the age of 100** compared to offspring from parents with a typical life span. The offspring of long-lived parents also have an approximately **50% lower prevalence of hypertension, diabetes, heart attacks, and strokes**. Another recently published study looked at the lipid profiles of a group of centenarians compared against controls. While the standard cholesterol measures were quite similar between the two groups, the centenarians had significantly larger LDL and HDL particle sizes, and significantly less small LDL and HDL particles. Larger LDL particles are less atherogenic, while smaller LDL particles are associated with much higher risk, and the presence of insulin resistance/diabetes; larger HDL particles are associated with the greatest degree of protection against atherosclerosis, and are thus the most desirable to have.

The take home message here is that while our genes are important, the lifestyle that we choose goes a long way in determining how long we will live. Eating a balanced diet, reducing caloric intake, and exercising regularly can improve cholesterol levels and increase LDL and HDL particle sizes. Talk to your doctor about getting an advanced lipid profile to check this out for yourself.

Dec 2007

Gregory Cohn, M.D. has a concierge Internal Medicine practice in Boca Raton specializing in Cardiovascular Disease prevention and Hypertension. Dr. Cohn is a board-certified internist and clinical lipidologist and has been practicing medicine in Florida since 1991. Dr. Cohn can be reached at (561)367-7447 or www.gregcohnmd.com.