CoEnzyme Q10: The Key to Preventing Heart Disease?

By Greg Arnold, DC, CSCS, January 31, 2005, abstracted from “Cardiovascular risk factors emerge after artificial selection for low aerobic capacity” in the January 21, 2005 issue of Science

Link – http://www.nowfoods.com/HealthLibrary/HealthArticles/HealthNotes/M043713.htm

Despite tremendous advances in understanding heart disease, it still remains the number one killer among Americans, claiming over 700,000 lives in 2002. Recent research advances have found that chronic inflammation and the lack of omega-3 fatty acids in our diet play a key role in the onset of heart disease.

Now new research has found that the steps leading toward heart disease may start at the cellular level, particularly in a component of the cell called the mitochondrion. Known as the “powerhouse of the cell,” the mitochondrion is responsible for generating all the energy used by each cell.

In the study, researchers bred 11 generations of rats and artificially selected for exercise capacity. The better the exercise capacity, hypothesized the researchers, the better the mitochondrial function of each cell. This artificial selection put the rats in two different groups: low-capacity runners (LCRs) and high-capacity runners (HCRs) based on how long they could run on a treadmill until exhaustion.

After the eleventh generation of breeding, the researcher found LCR rats averaged 14 minutes until exhaustion while HCR rats ran for over 41 minutes, an astounding 347% difference. The HCR rats also had a 48% greater maximal absolute carotid artery relaxation, interpreted as better endothelial function, than the LCRs. Finally, they found that LCR rats had 13% higher blood pressure readings than HCRs and were insulin-resistant compared with HCR rats.

Although they did not prove a direct cause-effect relationship, the researchers were able to conclude that “impaired regulation of oxidative pathways in mitochondria may be a common factor linking reduced total-body aerobic capacity to CV and metabolic disease.”

When looking at this study, it may be reasonable to suggest that Coenzyme Q10 may help prevent heart disease. Recent research found CoQ10 to be effective in helping maintain mitochondrial function while another study found CoQ10 to be effective in helping treat conditions marked by mitochondrial dysfunction including Parkinson’s Disease.

Greg Arnold is a Chiropractic Physician practicing in Danville, CA. You can contact Dr. Arnold directly by emailing him at PitchingDoc@msn.com or visiting his website www.PitchingDoc.com.

Reference:

©Copyright 2010 Complete Chiropractic Healthcare, Inc. All Rights Reserved. This content may be copied in full, with copyright, contact, creation and information intact, without specific permission, when used only in a not-for-profit format. If any other use is desired, permission in writing from Dr. Arnold is required.