



The Cardiac Dynamic Trio

Your state of health is contingent on the very integrity of the cellular membranes of every cell in your body. A healthy cell membrane allows nutrients in to support its metabolism and toxins out to expel the waste products of those chemical reactions in the body. It is necessary to support the biochemical processes in living cells with targeted nutraceuticals for maximum energy production and preservation of mitochondrial function. One place that this is particularly important is in individual heart cells.

For instance, without the necessary elements of L-Carnitine and Coenzyme Q10 to protect and support inner mitochondrial membranes, there can be serious deficits in energy production in the individual heart cells. When energy production fails, cells can suffer and die prematurely. The heart generates 60-70% of all its energy demands from the metabolism of fatty acids. In combination with Coenzyme Q10, L-Carnitine transports fatty acids into heart cells and shuttles the toxic metabolites out thus facilitating cell efficiency.

Interestingly, some of the best pharmaceuticals available thus far actually BLOCK some of these metabolic/enzymatic reactions, instead of preserving them. Beta blockers, ACE inhibitors and statins – mainstays of traditional cardiology – directly impede these key metabolic pathways. If a person is taking any of these medications, it is good and necessary to supplement with L-Carnitine and Coenzyme Q10.

In addition to L-Carnitine and to coq, there is a new vital nutrient emerging into the foreground of heart health, i.e., D-ribose. It is a simple five-sided sugar that supports the production of ATP (adenosine triphosphate) levels in cardiac and skeletal muscle. ATP aids heart muscle contraction. Scientific research demonstrates that when ATP levels fall, so too does diastolic function which is the resting phase of the cardiac cycle when the healthy heart relaxes and accommodates incoming blood volume. D-ribose is vitally important in the overall recovery of myocardial ATP and therefore instrumental in treating arrhythmia, heart failure, peripheral disease, statin induced myalgia, and congestive heart failure. D-ribose also enhances endurance. The heart is all about ATP. One of the basic principles in the treatment of any form of cardiovascular disease might be the restoration of the heart's supply of ATP.

This dynamic trio of nutraceuticals could prove to be a legitimate intervention for preventing and treating heart disease on a metabolic level.

T. Boland, ARNP, LMFT, Ph.D., ABD, FAARM
Total Health Solutions, Inc.™
totalhealthsolutions@protonmail.com