



Can Omega-3 Fish Oil and Vitamin C Cure Type II Diabetes?

Medical doctors often call to ask, "If Linus Pauling was correct that a chronic vitamin C deficiency causes cardiovascular disease, why then do patients respond so well after we put them on Omega-3 fish oils?" There was no definitive answer to this question until I read and understood the writing of Mr. Thomas Smith (HealingMatters.com). Mr. Smith was a Type II diabetic who cured himself in three months.

All Nutrients Enter Cells Through Cell Membranes

Smith began reviewing the scientific literature after conventional medicine failed him. His investigations led him to the conclusion that man-made, highly processed trans-fatty acids (e.g. hydrogenated oils) are the root cause of the most common form of diabetes. Smith cites research showing that these toxins in the diet disturb cellular membranes. Cells begin to have trouble absorbing nutrients, particularly the sugar glucose, which remains in the blood. The most noticeable symptoms of this condition are elevated blood and urine sugar levels. Patients are diagnosed Non-Insulin Dependent (Type II) diabetes (sometimes called Syndrome X).

Smith asserts that the damage to cell membranes caused by a poor diet can be repaired and the diabetic syndrome cured. He recommends eliminating all processed fats and oils and supplementing with high-dose Omega-3 fatty acids. As blood sugar levels begin to decline, healthful natural fats and oils are slowly added to the diet.

Smith writes that, after he adopted this protocol, his blood sugar dropped from 385 mg/dl to 85 mg/dl in 103 days. He claims that such reversals are possible in Type II diabetics because the body is continuously repairing cell membranes by using the fats and oils available in the diet. Smith says, however, that the speed of recovery is related to the length of the illness (i.e., the number of damaged cell membranes). Some Type II diabetics may require up to one year for dramatic reductions in blood sugar.

Vitamin C Competes with Glucose for Insulin Pumps

Diabetics are probably not absorbing other nutrients from the blood as well. Vitamin C is structurally similar to glucose and the vitamin has a short half-life in the blood stream. Vitamin C and glucose molecules share the same insulin-mediated tunneling mechanism into cells through the membrane.

The Report Provided by:
Ray Ellis
www.SaveYourHeart.com
rayellis@saveyourheart.com
1-800-280-5302



In the 1970s, Emeritus Professor John T. A. Ely, University of Washington, proposed his Glucose-Ascorbate Antagonism (GAA) theory that predicts high glucose levels hinder vitamin C entry into cells. Animals which make their own vitamin C use dietary glucose as the raw material, so the ascorbate and glucose molecules look very similar to the cells. The similarity extends past molecular structure to the way they are attracted to and enter cells. Both molecules require help from the pancreatic hormone insulin before they can penetrate cell membranes using special "pumps." The name for the process that propels glucose and Vitamin C through cell membranes is called Insulin-mediated uptake.

Ely studied the insulin-mediated uptake of glucose and vitamin C using white blood cells. White blood cells have more insulin pumps and they may contain 20 times the amount of vitamin C as ordinary cells. Dr. Ely explains that both glucose and vitamin C molecules compete, but all things are not equal. The pump favors glucose entry into cells at the expense of vitamin C. Because of this antagonism between sugar and Vitamin C, Ely recommends a low carbohydrate, low processed-sugar diet.

Recently, Ely and associates conducted a study on the common cold to test the GAA theory. Sugar and refined carbohydrates were restricted in the subjects. According to Dr. Ely, the remarkable (soon to be published) results showed an overwhelming preventive and curative property of vitamin C against the common cold in subjects with reduced sugar intake. (Presumably these subjects did not suffer the cellular membrane malfunction commonly diagnosed as Diabetes Type II).

The Diabetic Double Whammy

Combining these ideas, we postulate that cells that can't absorb glucose are not absorbing vitamin C either. As blood glucose levels rise, the GAA theory predicts that vitamin C uptake is greatly diminished throughout the body, even in cells with undamaged insulin pumps. Our conjecture is that the serious health consequences of prolonged Type II diabetes, e.g. blindness, wounds that won't heal, limb amputation, etc., are the result of the lack of vitamin C inside cells.

We may now more intelligently answer the question as to why heart patients do well on high-dose Omega-3 oil supplementation. Healthful omega-3 fatty acids, such as those found in fish oils, promote healthy cell membranes allowing more nutrients to pass into cells. As cell membranes become permeable, sugar molecules leave the blood stream lowering blood sugar, making vitamin C more bioavailable. Finally, we postulate that the

The Report Provided by:
Ray Ellis
www.SaveYourHeart.com
rayellis@saveyourheart.com
1-800-280-5302



cellular membrane problem hindering the uptake of glucose in diabetics also hinders their cells from obtaining vitamin C.

Heart patients, whose condition improves on Omega-3 oils, will improve even more as they eliminate processed foods, and follow Linus Pauling's recommendation to increase their vitamin C dosage to individual bowel tolerance.

Copyright 2005 by Owen Richard Fonorow PhD, MS, MBA

The Report Provided by:
Ray Ellis
www.SaveYourHeart.com
rayellis@saveyourheart.com
1-800-280-5302

© Copyright – Save Your Heart – All Rights Reserved