



## ((( Healthy Living Alert )))

### **Glyconutritional Research and Four Manifestations of Heart Disease**

**Atherosclerosis:** As the landmark article released in the February 1999 Science Magazine states, there is a growing body of scientific evidence that shows that bacterial and viral infections may lie at the 'heart' of the problems with atherosclerosis. Most of us are routinely exposed to these invaders, but our immune systems are equipped to easily dispose of the problem. However, for those of us with weakened immune systems (such as the elderly, those overweight or obese, and those with poor or improper nutrition), these invaders may begin to cause problems, especially as they attack the fragile endothelial vessel wall cells. Numerous science and laboratory studies have shown that the addition of the essential glyconutrients to the diet helps the immune system seek and destroy bacterial and viral invaders. If white blood cells can quickly identify and eliminate invaders, then the problems associated with prolonged inflammation can be avoided.

**Cholesterol:** The protein transport HDL is the mechanism by which excess cholesterol is removed. Proper cellular communication is imperative in the process. The LDLs that deliver cholesterol to the cells must first communicate with cells to inquire if cholesterol is needed. If miscommunication occurs the delivery of cholesterol may not be made and a surplus of cholesterol can develop. When LDL proteins are communicating properly much of the surplus can be used internally in the cell and not in the blood where it can cause problems. In the journal LIPID RESEARCH, it has been shown that the addition of the glyconutrients to the diet effectively reduced cholesterol in the patients with a long history of high cholesterol.

**Triglycerides:** Triglycerides are formed when there is an overabundance of glucose in the system. Normally, insulin delivers the glucose to the cell and the excess is converted into a storable form like fat, glycogen, or triglycerides. When a breakdown in communication between the insulin delivery protein and the cells has occurred, as happens with Type 2 diabetes, the excess glucose or triglycerides are not handled properly. This can lead to accumulation in the blood. If proper communication can be restored between the insulin delivery protein and the cell, fuel can be delivered where needed and excess glucose can be dealt with properly. Studies have demonstrated that this proper cellular communication is dependent upon the presence of the necessary glyconutrients. The addition of a blend of these

biologically active glyconutrients gives the body the raw materials needed to communicate properly.

**Blood Pressure:** High blood pressure is quite often the terminal element in heart disease. When inflammation and blockage can be eliminated by putting the proper nutrients into the body, it is easy to see how vessel walls can become healthy again and blood pressure can be reduced. Scientists have shown positive results utilizing glyconutrients to lower blood pressure. A study released in the Chemical and Pharmaceutical Bulletin has shown that adding glyconutrients to the diet of subjects for one week reduced blood pressure by 45-65 points. This reduction remained stable until the researchers discontinued the supplements, whereupon the blood pressure spiked to pre-treatment levels. When the glyconutrients were reintroduced into the diet the levels declined once again.

Dennis Shollenburg

Cornerstone of Life

“Excerpts from various Glyconutrition articles”