Greg Arnold, DC, CSCS
(925) 321-4668
PitchingDoc@msn.com
www.PitchingDoc.com

Mouse Study Shows Hope for Vitamin A and Type 1 Diabetes

By Greg Arnold, DC, CSCS, April 2, 2008, abstracted from "Diets Rich in Polyphenols and Vitamin A Inhibit the Development of Type I Autoimmune Diabetes in Non-obese Diabetic Mice" in the May 2007 issue of the Journal of Nutrition

Link – http://www.nowfoods.com/HealthLibrary/HealthArticles/HealthNotes/M101670.htm

While 90% of all of the diagnosed cases and a significant portion of Diabetes' $132 billion cost to society each year is from Type 2 Diabetes[1], many people forget that type 1 diabetes is just as critical an illness. Type 1 diabetes (T1D) results when the body inexplicably destroys the cells in the pancreas that make insulin (called an autoimmune reaction). It increases your risk for many serious healthy complications, including heart disease, blindness, and nerve and kidney damage[2].

While B vitamins help blood vessel health in patients with T1D[3], very few options are available outside of cod liver oil[4] as possible ways to help maintain pancreas cell health and reduce T1D risk. Now a new study[5] in mice has found that vitamin A may benefit pancreas cell health and help patients with T1D.

In the study, non-obese diabetic mice were given either 250 IU of vitamin A per gram of food per day, a diet with 1% freeze-dried grape powder or a control diet for seven months. The researchers found that by seven months, 71% of mice in the control group had a blood sugar level greater than 13.9 millimoles per liter (classified by the researchers as having full-blown type 1 diabetes) while only 25% of the mice in the vitamin A group and 33% of those in the grape powder group reached that blood sugar level. They also noted "significantly lower" levels of the inflammatory protein called TNF-alpha, prominent in patients with T1D[6], in the vitamin A and grape powder groups versus the control group.

For the researchers, "These data suggest that diets rich in polyphenols or vitamin A have protective effects against autoimmune inflammatory attack of the islet beta cells and have the potential to reduce the onset and pathogenesis of [Type 1 Diabetes]."

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

Reference:

[1] Hogan P. Economic Costs of Diabetes in the U.S. in 2002. *Diabetes Care* 2003; 26: 917-932

[2] American Diabetes Association www.diabetes.org

[3] MacKenzie KE. Folate and Vitamin B_6 Rapidly Normalize Endothelial Dysfunction In Children With Type 1 Diabetes Mellitus. *Pediatrics 2006*; 118: 242-253

[4] Stene LC. Use of cod liver oil during the first year of life is associated with lower risk of childhood-onset type 1 diabetes: a large, population-based, case-control study. *American Journal of Clinical Nutrition* 2003; 78: 1128-1134

[5] Zunino SJ. Diets Rich in Polyphenols and Vitamin A Inhibit the Development of Type I Autoimmune Diabetes in Nonobese Diabetic Mice. *J. Nutr*. 2007 137: 1216-1221

6 Zorena K. Interleukin-12 and tumour necrosis factor-alpha equilibrium is a prerequisite for clinical course free from late complications in children with type 1 diabetes mellitus. *Scand J Immunol*. 2008 Feb;67(2):204-8