



Hands of Health Newsletter

September/October 2004

Hello, again:

Having lived in Arizona for as long as I have I don't believe summer is over until late October. Here we are at the beginning of September and it's still 107°. It's still in the 80's in the early morning when I go out to run. And consistency is the rule: Keep consistency with your exercise routine and keep consistency with your massage program. Some of my clients have not missed a massage all summer and some have missed a lot. So if you haven't been in for a therapy for over a month call me and let's get you started on the road to better health. The 2 articles in this issue of my newsletter continue to follow the themes of most of my newsletters: diet and exercise. Hope you learn something.

VITAMINS ENHANCE BENEFITS OF EXERCISE FOR THE HEART

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Taking vitamin supplements appears to have a synergistic effect on the benefits of exercise and heart health, according to new research on mice. The combination of the nutrients and exercise significantly reduces the risk of atherosclerosis by boosting the body's production of nitric oxide, which protects against a variety of cardiovascular disorders, report researchers led by medicine nobel laureate Louis Ignarro from UCLA.

Ignarro's team found that moderate exercise reduced the development of atherosclerosis, or hardening of the arteries, in mice that are genetically prone to heart disease. Exercise alone has been shown to increase nitric oxide in the body.

But adding the amino acid L-arginine and the antioxidants vitamins C and E to the mix significantly magnified the effect, said Ignarro, who shared the 1998 Nobel Prize for his discoveries in the role that nitric oxide plays in the cardiovascular system. "This is the first study that shows that if you exercise in addition to taking dietary supplements you have a markedly enhanced production of nitric oxide - in science, we like to call it a synergistic effect," said Ignarro.

The researcher, along with others from the University of Naples in Italy and the Mayo Clinic Foundation, studied six groups of eight-week-old LDL receptor-deficient male mice with high cholesterol over 18 weeks. The mice were randomly divided into three dietary groups: one fed a high-cholesterol diet alone, another fed a high-cholesterol diet along with the antioxidant vitamins C and E, and a third fed a high-cholesterol diet and given antioxidants and L-arginine. Some of the mice also were put on a swimming regimen, while others did not exercise.

The mice from all three dietary groups lost weight and had lower cholesterol when they exercised. The atherosclerotic lesions were significantly reduced in the mice whose diets included the antioxidants and amino acid, the researchers will report in this week's online edition of the *Proceedings of the National Academy of Sciences*.

They explain that exercise increases the amount of endothelial NO synthase, an enzyme that converts L-arginine to nitric oxide, which in turn lowers abnormally elevated blood pressure, prevents unwanted blood clotting and early inflammation associated with coronary artery disease, and protects against stroke and myocardial infarction.

The antioxidant vitamins C and E work together to remove destructive oxidants from the blood stream, thereby stabilizing the nitric oxide, which can thus rise to higher levels in the blood stream and produce a more beneficial effect. Ignarro also noted that the supplements work well even in the absence of exercise.

Sedentary mice fed with the supplements showed a 40 percent reduction in atherosclerosis lesions compared with the mice that were on a regular, high-cholesterol diet but neither given the supplements nor put on an exercise regimen. The mice that exercised, but were not fed the supplements, showed a 35 percent reduction of the lesions.

The researcher concluded that simple lifestyle changes - doing moderate exercise, eating a low-fat diet and taking dietary supplements - can make a difference to vascular health. "It works in mice, it'll work in humans."

CORN SYRUP: YOUR ONE-WAY TICKET TO TYPE 2 DIABETES

By Greg Arnold, May 26, 2004, Abstracted from "Increased consumption of refined carbohydrates and the epidemic of type 2 diabetes in the United States: an ecologic assessment" in the May 2004 issue of the American Journal of Clinical Nutrition.

Despite the advancements made in electronics and medicine, technology has exacted more harm than good for us nutritionally, continuing to divert us away from eating the foods nature intended. Perhaps nowhere is this more prevalent than in the food Americans have come to love in epidemic proportions: sugar.

Rather than having natural sugar cane constituting the foods we eat, technology has decided to make sugar from corn and make it ubiquitous in almost everything we eat. That sugar is called High Fructose Corn Syrup (HFCS).

Developed in the 1970's, the manufacturing of HFCS has steadily grown into a \$2.6 billion per year industry. HFCS is produced by processing corn starch to yield glucose, and then processing the glucose to produce a high percentage of fructose. Two enzymes used to make HFCS, alpha-amylase and glucose-isomerase, are genetically modified to make them more stable. The ubiquitous nature of HFCS (used in almost everything, from jams to condiments to soft drinks to so-called "health foods" also makes those trying to avoid genetically engineered foods even more difficult. Today Americans consume more HFCS than sugar.¹

According to a new study published in the *American Journal of Clinical Nutrition*, corn syrup's ubiquity in our food has now been linked to Type 2 Diabetes.

Seeking to examine the correlation between consumption of refined carbohydrates and the prevalence of type 2 diabetes in the United States, researchers conducted an ecologic correlation study. They examined the per capita nutrient consumption in the United States between 1909 and 1997 obtained from the US Department of Agriculture and compared that with the prevalence of type 2 diabetes obtained from the Centers for Disease Control and Prevention.

After conducting a multivariate nutrient-density analysis, in which total energy intake was accounted for, corn syrup was positively associated with the prevalence of type 2 diabetes. Fiber was negatively associated with the prevalence of type 2 diabetes. In contrast, protein and fat were not associated with the prevalence of type 2 diabetes when total energy was controlled for.

These results led the researchers to conclude, "intakes of refined carbohydrate (corn syrup) concomitant with decreasing intakes of fiber paralleled the upward trend in the prevalence of type 2 diabetes observed in the United States during the 20th century."

REFERENCES:

¹Swanson JE. Metabolic effects of dietary fructose in healthy subjects. *American Journal of Clinical Nutrition* 1992; 55 (4): 851-6

²Forristal AJ. "The Murky World of Corn Syrup" on the Weston A. Price Foundation Website.

There you have it. If you are reading my newsletter from my website and would like a printed copy because you can't print it out yourself let me know. Again, if you haven't been in for your massage recently it's time. And you can also give a gift certificate for massage to your loved ones because they need one, a business associate to say thank you, for someone's anniversary, a birthday or just because.

Until next time,

Stay healthy, stay well,

*What your kids are exposed to in childhood
will affect them the rest of their lives.*

Unknown



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