

This is Dr. Daniel Weiss from Your Diabetes Endocrine Nutrition Group. My subject today is recent findings on selenium.

Do you take a selenium pill or maybe a multi-vitamin and mineral supplement containing selenium? If so, check out the labels. Perhaps you should stop these pills or, at least be sure your total intake is less than 200 micrograms. Here's why:

A study published in the Annals of Internal Medicine in August 2007 showed that persons given 200 micrograms of selenium daily had a greater than 50% risk of developing diabetes over time. This study was done in over 1200 persons. Half were randomly assigned (like the flip of a coin) to selenium and half to a matching inactive pill or, what is called placebo.

This study was actually mainly done to look at the possibility of skin cancer prevention in white persons (mostly men) who had had a previous skin cancer. Over an average follow-up period of more than 7 ½ years, those without diabetes at the start were 55% more likely to be diagnosed with diabetes if they were given selenium as compared to the group receiving placebo. And the risk was higher in those starting with a higher selenium levels in the blood.

What is selenium and what is it good for? Selenium is one of many micronutrients required by the body for normal function. Selenium is a required trace mineral that is a key part of certain proteins in the body that are important in immune function and thyroid gland activity and that protect against what is called oxidative stress.

But lack of selenium, selenium deficiency, virtually never occurs in the United States. And like other substances, so for selenium: a little may be good, but a lot may be harmful.

Why might extra selenium increase the risk of diabetes? The answer to this question is not known. But studies thus far suggest that selenium in excess may actually increase the production of reactive oxygen species—the opposite of anti-oxidants. These reactive oxygen species may cause reduced production of insulin and may reduce the ability of cells to respond to insulin.

More studies are taking place on selenium and its possible role in cancer prevention. But for now, there is no good reason to take selenium. If you don't have diabetes yet, selenium may increase your risk of getting it.

My goal in these pod casts is to bring you important new scientific findings about nutrition, diabetes and other medical issues. I want to remind you that scientific knowledge is always changing. What is known today may be seen from a different perspective or may be changed tomorrow. I will share with you my understanding of current research related to day to day decisions about your health.

Take care.

References:

Stranges, S et.al. Ann Intern Med 2007; 147: 217-223.

Bleys J et al. Ann Intern Med 2007; 147: 271-2.