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What Should You Eat?

If you've heard it once, you've probably heard it a thousand times: eating fruits and vegetables reduces your risk of cancer. This past week, the European Prospective Investigation into Cancer and Nutrition (EPIC) published another part of this large study. I talked about vitamin D a couple of weeks ago. This time, they examined the relationship between intake of fruits and vegetables and the overall risk of cancer. The results seem to be discouraging at first glance. I'll clarify that study as well as a study published on the glycemic index and heart disease.

Fruits, Vegetables, and Cancer

In a study published this past week, researchers reported that higher levels of fruit-and-vegetable intake reduce the risk of cancer by only about 2% (1). They urged caution in generalizing the results to the entire population because of the potential for error. Error? What they're talking about is the way they collected the nutrition information: they had subjects use a country-specific Food Frequency Questionnaire (FFQ). That means you're asked how many servings of a food you usually eat in a specific time period if you live in Spain. The FFQ will be different in Sweden because the food choices are different. It's done once at the beginning of a study as was done in this case. I think you can see the problem with this approach, but when dealing with 500,000 subjects, that's the only practical way data can be collected.

The data were divided into equal groups by vegetable and fruit intake—in this case into quintiles or five groups. Then they compared the group with the lowest intake to other groups with higher intakes. That's how they determined that the highest intake of fruits and vegetables reduced the risk of cancer by 2%. They've used this same data set and statistical approach to examine bladder and lung cancer as well (2,3). The results for lung cancer showed a definite improvement, but the bladder cancer data were similar to this recent study.

But FFQ problems aside, they didn't really examine which intake level would reduce the risk of cancer. The highest vegetable intake was 307 grams or higher, while the highest fruit intake was 357 grams per day. Added together, that equals about 10 ounces or just over half a pound. So what intake would equal those amounts? If you ate a cup of broccoli flowerets, a medium baked potato, and about two-thirds cup of carrots, that would be 317 grams of vegetables. If you ate a medium apple and a cup of halved strawberries, that would 334 grams of fruit. Those amounts would be similar to what many people eat in the United States and Canada. But that many servings are not what the research shows reduces the risk of cancer. It takes eight to ten servings—double what was considered high intake in this study. At some point, they will probably tease out the intake associated with the lowest cancer rate, and we'll probably find that it's a lot higher.

Glycemic Index (GI) and Heart Disease

The press reported on a study published in the *Archives of Internal Medicine* that demonstrated a relationship between carbohydrate intake and heart disease in women (4). Researchers broke foods down into high-GI and low-GI foods. Essentially, high-glycemic carbohydrates raise blood sugar faster and higher than low-GI foods. While it didn't seem to affect men as much, the women who had the highest intake of high-GI food had 2.25 times the risk of having heart disease over an eight-year period. Sounds bad, doesn't it?

But let's take a look at the numbers. In eight years, 463 people had some form of heart disease. That's about 60 per year. That means the percentage of persons who would have a cardiac event was 0.1%. Raising that by 2.25, that's about 0.2% or 2 out of 1,000. I'm sorry, but that's not really meaningful in the real world.

The real problem with these simplistic conclusions is that high-GI foods can be modified by what is eaten with them. Bread? High GI. Add some peanut butter, and it becomes low GI. I'm not suggesting we need to eat more simple or refined carbohydrates, but whether it's the researchers presenting the conclusions of the study or the press interpreting it, let's present all the facts. We can handle the truth. It just might not make very many headlines.

The Bottom Line

I think that these studies clearly indicate that we need to eat more vegetables and fruits. The more we eat, the lower our risk of cancer, and fruits and vegetables are also better carbohydrate choices than refined carbohydrates. So shoot for a pound or more a day of vegetables and fruits. Half of that total should be dark green and dark red. That's the path to a healthier you.

What are you prepared to do today?

Dr. Chet

References:

1. J Natl Cancer Inst. 2010 Apr 6 Online First.
2. Cancer Causes Control. 2010 Mar;21(3):357-71.
3. Int J Cancer. 2009 Dec 1;125(11):2643-51.
4. Archives of Internal Medicine. April Online First.

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