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Eat Your Carrots

The National Health and Nutrition Examination Survey (NHANES) is the largest nutritional study in the U.S. I've written about other reports from it, but today I'm going to pick on a nutrient many of you may not be familiar with: alpha-carotene. You've heard of beta-carotene, but there are more types of these phytonutrients called carotenoids. If you don't eat carrots or winter squash now, I'll bet you will when I'm done.

Carotenoids

Carotenoids are a group of phytonutrients made by plants with yellow, orange, and red pigments. The most common carotenoids in the typical American diet are alpha-carotene, beta-carotene, beta-cryptoxanthin, lutein, zeaxanthin, and lycopene. Besides having funny names, what do these phytonutrients do?

Some are provitamin-A carotenoids; that means they can be converted to vitamin A if the body needs it. Alpha-carotene, beta-carotene, and beta-cryptoxanthin are these types of carotenoids. Other carotenoids such as lutein, zeaxanthin, and lycopene are not converted to vitamin A.

While we know that carotenoids are good for us, we really don't know how they do what they do. Are they acting as antioxidants, or do they have some other function? We don't know yet, but researchers are finding out how they do what they do every day. We do have a good indication that, no matter how they work, they're good for us.

The Study

Researchers assessed the relationship between alpha-carotene levels and mortality in 15,318 adults in the third NHANES Follow-up Study. Subjects were adults 20 years and older. At the beginning of the study, blood was drawn and analyzed for a variety of nutrients including alpha-carotene. Over the next 18 years, deaths from all causes were recorded. Researchers analyzed the data by quintiles of blood alpha-carotene levels.

As the levels of alpha-carotene increased, the mortality rate decreased from all causes. That includes deaths from all types of cardiovascular disease, cancer, and diabetes. If that isn't a reason to eat more carrots and tomatoes, I don't know what is—but there's even more.

A Closer Look

Drilling down in the results, one variable was interesting. In current smokers, the results were the same: the higher the alpha-carotene levels, the lower the risk of death from all causes. Remember those studies linking beta-carotene supplementation with increased risk of lung cancer in smokers? Maybe a supplement with all carotenoids might have been a better choice than the synthetic beta-carotene-only supplements given to the subjects in that trial.

There were also a couple of other interesting observations. As alpha-carotene increased, so did HDL-cholesterol. Leisure-time activity increased and BMI decreased with higher alpha-carotene levels. That makes sense because people who eat more vegetables are likely to have other healthy habits as well.

The Bottom Line

This is another study that shows the benefit of eating vegetables and fruit. In this case, yellow-orange (carrots, sweet potatoes or pumpkin, and winter squash) and dark-green (broccoli, green beans, green peas, spinach, turnip greens, collards, and leaf lettuce) vegetables all have a high alpha-carotene content. We should eat servings of them every day. In addition, using a supplement with whole-plant concentrates of these vegetables would also provide additional carotenoids that can benefit our health. But in order to get the benefits, we have to do our part and eat them. Every day.

What are you prepared to do today?

Dr. Chet

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