

BETA-CAROTENE: HOW SAFE AND EFFECTIVE?



Beta-carotene, a plant compound that can be converted by the body into vitamin A, has interested nutrition researchers over the last several years. It, along with vitamin C and vitamin E, are believed to be strong antioxidants and thereby protect people against certain cancers, including lung cancer, coronary heart disease, certain eye disorders and other chronic ailments. The beta-carotene findings were quickly noted by vitamin manufacturers, health food store proprietors, and alternative medicine practitioners and they seized upon the opportunity to promote antioxidant vitamins including beta-carotene.

On the basis of these and other studies, some of the leading nutritionists in the country have also suggested that taking beta-carotene supplements might be a good thing. To test it, some major research trials were started using approved scientific procedures. Two of these studies have not been reported and the news is not good. One, known as the Physician's Health study of 22,071 male physicians, used high beta-carotene supplements of 50 milligrams every other day. After 12 years there was no evidence that the supplement had provided any benefit and some people developed yellow skin and minor gastrointestinal symptoms.

In the CARET study, both vitamin A and beta-carotene were given daily for an average of four years to 18,314 current or former smokers or to those who had been asbestos workers. The trial was cut short because preliminary evaluation showed that the subjects given high levels of beta carotene and vitamin A had more lung cancer and more deaths, from lung cancer and from cardiovascular disease than those without any treatment.

Scientists have noted all along that people eating recommended or higher levels of fruits and vegetables have lower lung cancer rates. High beta-carotene blood levels without supplements means that the person is consuming numerous fruits and vegetables, especially yellow and green ones. They suspect that high beta-carotene and vitamin A supplements are toxic. There are some 600 carotenoids in plants, most of them unstudied. It is quite possible that the main protectors against lung cancer are other compounds associated in plants with beta-carotene. As one researcher has noted, we are a long way from being able to create a pill that will duplicate all the carotenoid in foods."

Thus, the first line of defense is not pills but eating at least five servings of fruits and vegetables daily. In Kansas, less than one in every four persons eat this much. The poorest fruit and vegetable intakes are reported by young adults generally and males of all ages. Some two percent eat no fruits or vegetables at all.

The best fruit sources of beta-carotene are cantaloupe, apricots, and mangoes. Among vegetables, carrots, leafy greens like kale, mustard and turnip greens, spinach, winter squash, red peppers, and sweet potatoes are highest. Other fruits and vegetables have varying amounts while they also provide hundreds of other carotenoids. Stay tuned for more news about this fascinating group of plant protectors but in the meantime, eat your veggies and shun the pills with the highest levels of vitamin A.

Sources: Beta-carotene and Other Antioxidants. Two reports in Nutrition Research Newsletter. 15(5):49-51. May 1996.
Beta Carotene Pills: Should You Take Them? University of California at Berkeley Wellness Letter. 12(7):1-2. April 1996.
Health Risk Behaviors of Kansans, 1992. Kansas Department of Health and Environment. p. 28-29.

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10/96 File: FOOD COMPONENTS/Vitamins

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