

BETA-CAROTENE

Beta-carotene is a member of the carotenoid family and has over 500 relatives. Carotenoids are yellow-to-red pigments found in all green plant tissues and in some species of algae. So far 21 different carotenoids have been found in human blood. The most abundant ones are alpha-carotene, beta-carotene, lutein, lycopene, cryptoxanthin and zeaxanthin. A molecule of alpha-carotene, beta-carotene, or cryptoxanthin can be split into two molecules of vitamin A in the body but the conversion of beta-carotene is by far the most effective. The six carotenoids are all antioxidants. They are very effective in neutralizing a highly reactive form of oxygen called singlet oxygen but also, to some extent, act to break up the chain reactions involved in lipid peroxidation.

Numerous studies have shown that people who consume a diet rich in dark yellow orange vegetables (carrots) and dark green vegetables (broccoli) are much less likely to develop cancer and heart disease. It has also been established that people with low levels of beta-carotene in their blood have a higher incidence of heart disease and cancer, particularly lung cancer. The National Cancer Institute endorsed a study which found that women who consume lots of beta-carotene rich fruits and vegetables have a lower chance of getting cancer, including breast cancer. The Institution says that regularly eating lots of fruits and vegetables plays a key role in cancer prevention, but whether the preventative action comes from beta-carotene or other nutrients in the produce has yet to be determined. For people who don't like eating their fruits and vegetables, a beta-carotene supplement pill was introduced into the market. Millions of vegetable hating Americans hoped that by taking a pill instead of eating vegetables, they could get the same rewards as their counterparts who enjoy the taste of fruits and vegetables. But officials at the National Cancer Institute released the results of two large studies designed to put the benefits of beta-carotene supplements to the test. One followed 22,071 doctors who for 12 years smokers had to be stopped prematurely because it seemed to me making the rate of death from cancer and heart disease worse. Taking a simple chemical supplement is not the same as eating a vegetable. Scientists suspect there are other natural ingredients that work with vitamins to promote health.

It is also possible that a beta-carotene supplement derived from natural sources and formulated so as to preserve the normal carotene ratio in the blood may be of benefit for people at high risk for cancer and cardiovascular disease. This, however, needs to be proven. So, until the remaining riddles in the carotene puzzle are solved, the prudent course of action is to avoid smoking and exposure to second-hand smoke and to increase the intake of vegetables and fruits.

In 1981 it was suggested that beta-carotene is the active component in the protective vegetables and that supplementing with beta-carotene might prevent certain cancers. The idea was based on the fact that those who took 50 mg of beta-carotene every other day. Another involved 18,314 smokers, ex-smokers, and asbestos workers. Not only did beta carotene produce no measurable health benefits, but the study of beta-carotene is an antioxidant and the most abundant carotenoid in vegetables. There was also considerable evidence to the effect that vitamin A prevents or retards certain cancers, so that beta-carotene is readily converted to vitamin A in the liver and intestine was seen as an added bonus. More recent research suggests that beta-carotene's prevention effect is due to its antioxidant property rather than to its ability to form vitamin A.

People need to learn to take a little bit of time to eat good, healthy foods instead of relying on pills. I feel that more people need to be educated about what beta carotene can do for you. If more people ate enough beta-carotene, maybe doctors would have less patients to treat. Beta-Carotene really can help prevent a lot of diseases. It's almost like a natural life-saver. Now I understand why my parents are always telling me to "eat my vegetables, they are good for you."

SOURCES

1. "Beta-Carotene: A Nugget of Nutritional Gold.", Marilyn Carnell, Ph.D., R.D
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3. Peto , R, et al. Can dietary beta-carotene materially reduce human cancer rates?
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