

Uses & Effectiveness?

Effective for

An inherited disorder marked by sensitivity to light (erythropoietic protoporphyria or EPP)." Taking beta-carotene by mouth can reduce sensitivity to the sun in people with erythropoietic protoporphyria.

Possibly Effective for

An eye disease that leads to vision loss in older adults (age-related macular degeneration or AMD). Taking beta-carotene by mouth along with vitamin C, vitamin E, and zinc seems to help prevent vision loss and worsening of AMD in people with more severe AMD. Taking this combination might reduce the progression of AMD to a more advanced state in people at low risk, but results are conflicting. Taking beta-carotene plus antioxidants but without zinc does not seem to improve advanced AMD. There is conflicting evidence about whether taking beta-carotene as part of the diet helps reduce the risk of developing AMD.

Breast cancer. Eating more beta-carotene in the diet is linked to a lower risk of breast cancer in high risk, pre-menopausal women. This includes women with a family history of breast cancer and those who consume a lot of alcohol. Also, in women that already have breast cancer, eating more beta-carotene in the diet is linked to an increased chance of survival.

Complications after childbirth. Taking beta-carotene by mouth before, during, and after pregnancy might decrease the risk of diarrhea and fever after childbirth. It also seems to reduce the risk of pregnancy-related death in underfed women.

Sunburn. Taking beta-carotene by mouth may decrease sunburn in people sensitive to the sun. However, taking beta-carotene is unlikely to have much effect on sunburn risk in most people. Also, beta-carotene does not appear to reduce the risk of skin cancer or other skin disorders associated with sun exposure.

Possibly Ineffective for

Ballooning of a blood vessel wall (aneurysm). Research suggests that taking beta-carotene by mouth for about 5.8 years does not prevent the development of abdominal aortic aneurysm in male smokers.

Alzheimer disease. Eating a diet high in beta-carotene does not seem to reduce the risk of Alzheimer disease.

Cataracts. Taking beta-carotene alone or in combination with vitamin C, vitamin E, and zinc, for up to 8 years is unlikely to reduce the incidence or progression of cataracts.

Cystic fibrosis. Taking beta-carotene by mouth for up to 14 months does not improve lung function in people with cystic fibrosis.

Diabetes. Some early research suggests that eating a diet containing higher amounts of beta-carotene is linked with a reduced risk of developing type 2 diabetes. However, taking beta-carotene supplements does not reduce the risk of developing diabetes or diabetes-related complications.

Non-cancerous moles (dysplastic nevi). Research shows that taking beta-carotene by mouth for 3 years does not reduce the development of new moles.

Liver cancer. Taking beta-carotene alone or with vitamin E for 5-8 years does not prevent liver cancer in men who smoke.

Liver disease. Taking beta-carotene alone or with vitamin E for 5-8 years does not prevent death due to liver disease in men who smoke.

Death from any cause. Some research suggests that taking supplements containing beta-carotene, vitamin C, vitamin E, selenium, and zinc for about 7 years might lower the risk of death in men. However, it doesn't seem to benefit women. Also, other research shows that taking larger doses of beta-carotene in for up to 12 years may increase the risk of death in both men and women.

Stroke. Taking beta-carotene by mouth for about 6 years does not reduce the risk of stroke in male smokers. Also, there is some evidence that taking beta-carotene supplements increases the risk of bleeding in the brain in people who drink alcohol.

Likely InEffective for

Cancer. Most research shows that taking beta-carotene does not prevent or decrease death from cancer of the uterus, cervix, thyroid, bladder, skin, brain, or blood (leukemia). In fact, it might increase the risk of death.

Heart disease. The American Heart Association states that the evidence does not justify using antioxidants such as beta-carotene to reduce the risk of heart disease. Research also shows that beta-carotene in combination with vitamin C and E does not decrease heart disease risk.

Colon cancer, rectal cancer. Most research shows that taking beta-carotene by mouth, alone or with vitamins C and E, selenium, and calcium carbonate, does not decrease the risk of colon tumor growth. It also doesn't seem to reduce the risk of colon tumor recurrence in people who have had colon tumors removed, although it might reduce the risk of colon tumor recurrence in people who never drink or smoke. However, in people that smoke cigarettes and drink alcohol, taking beta-carotene supplements increases the risk of new tumors. It is unclear if dietary beta-carotene reduces the risk of colon cancer.

Lung cancer. Taking beta-carotene seems to increase the risk of lung cancer in people who smoke, people who used to smoke, people exposed to asbestos, and those who use alcohol in addition to smoking. However, beta-carotene from food does not seem to have this adverse effect. Taking supplements containing beta-carotene, vitamin E, and selenium for about 5 years does not reduce the risk of death in people previously diagnosed with lung cancer.

Prostate cancer. Taking beta-carotene supplements does not prevent prostate cancer in most men. In fact, there is some concern that beta-carotene supplements might actually increase the risk of prostate cancer in some men. There is evidence that men who take a multivitamin daily along with a separate beta-carotene supplement have an increased risk of developing advanced prostate cancer. Also, men who smoke and take beta-carotene supplements have an increased risk of developing prostate cancer.

Insufficient Evidence for

Ageing skin. Early research shows that taking 30 mg of beta-carotene daily may reduce signs of skin aging. But taking 90 mg of beta-carotene daily doesn't have this same effect.

Lou Gehrig's disease (amyotrophic lateral sclerosis or ALS). Taking beta-carotene supplements doesn't seem to reduce the risk of ALS. But eating a diet high in beta-carotene seems to reduce the risk of ALS by a small amount.

Asthma. Eating a diet high in beta-carotene does not seem to reduce the risk of asthma.

Side effects from chemotherapy. Eating a diet high in beta-carotene might reduce toxic effects in children who are receiving chemotherapy for a certain type of cancer (lymphoblastic leukemia).

A lung disease that makes it harder to breathe (chronic obstructive pulmonary disease or COPD). Eating more beta-carotene in the diet seems to help prevent bronchitis and breathing issues in smokers with COPD. But beta-carotene supplements do not have this effect.

Memory and thinking skills (cognitive function). Some research suggests that taking beta-carotene for one year does not improve thinking skills and memory in older men. However, taking beta-carotene for up to 18 years might help.

Cancer of the esophagus. Taking beta-carotene supplements doesn't seem to reduce the risk of esophageal cancer.

Asthma caused by exercise. Taking beta-carotene supplements seems to prevent asthma attacks that are caused by exercise.

Stomach cancer. Some research suggests that taking beta-carotene does not decrease risk of stomach cancer. But some early research suggests that taking beta-carotene, vitamin E, and selenium might reduce the risk of stomach cancer in underfed Chinese people who are at high risk. Also, taking beta-carotene might stop cancer-like lesions in the stomach from turning into cancer.

A digestive tract infection that can lead to ulcers (*Helicobacter pylori* or *H. pylori*). Some early research shows that taking beta-carotene by mouth along with prescription drugs does not help treat *H. pylori* infection better than prescription drugs alone.

HIV/AIDS. Some early research suggests that taking beta-carotene by mouth for 4 weeks helps improve immune system function in people with HIV. However, conflicting evidence exists.

Infant development. Some research shows that higher levels of beta-carotene in the mother's breastmilk is linked to better development in the nursing infant.

Build up of fat in the liver in people who drink little or no alcohol (nonalcoholic fatty liver disease or NAFLD). Some research shows that eating more beta-carotene in the diet is linked to a lower chance of having NAFLD.

White patches inside the mouth that are usually caused by smoking (oral leukoplakia). It is unclear if taking beta-carotene by mouth decreases symptoms of oral leukoplakia. Some research suggests that it might when taken up to 12 months. However, at least in people that do not smoke, beta-carotene does not seem to help reduce symptoms or prevent mouth cancer.

Swelling (inflammation) and sores inside the mouth (oral mucositis). Taking beta-carotene by mouth doesn't seem to prevent oral mucositis during radiation therapy or chemotherapy.

Osteoarthritis. Eating more beta-carotene in the diet may prevent osteoarthritis from getting worse. But it does not seem to lower the risk of getting osteoarthritis.

Ovarian cancer. Eating a diet rich in carotenoids, including beta-carotene, may reduce the risk of ovarian cancer in women after menopause.

Pancreatic cancer. Taking beta-carotene supplements doesn't seem to reduce the risk of pancreatic cancer.

Parkinson disease. Eating more beta-carotene in the diet doesn't seem to affect the chances of developing Parkinson disease.

Physical performance. Eating more beta-carotene in the diet seems to improve physical performance and muscle strength in older people.

Skin rash caused by sun exposure (polymorphous light eruption or PMLE). Some research suggests that taking beta-carotene supplements can improve sensitivity to sun exposure in people with polymorphous light eruptions. But not all research agrees.

Hearing loss.

Alcoholism.

Chronic fatigue syndrome (CFS).

Depression.

Epilepsy.

Headaches.

Heartburn.

Hypertension.

Infertility.

Psoriasis.

Rheumatoid arthritis.

Schizophrenia.

Side Effects & Safety

When taken by mouth: Beta-carotene is **LIKELY SAFE** in adults and children when taken in appropriate amounts for certain medical conditions. However, beta-carotene supplements are not recommended for general use.

Beta-carotene supplements are **POSSIBLY UNSAFE** when taken by mouth in high doses, especially when taken long-term. High doses of beta-carotene can turn skin yellow or orange.

There is growing concern that taking high doses of antioxidant supplements such as beta-carotene might do more harm than good. Some research shows that taking high doses of beta-carotene supplements might increase the chance of death from all causes, increase the risk of certain cancers, and possibly cause other serious side effects. In addition, there is also concern that taking large amounts of a multivitamin plus a separate beta-carotene supplement increases the chance of developing advanced prostate cancer in men.

Special Precautions & Warnings:

Pregnancy and breast-feeding: Beta-carotene is **LIKELY SAFE** when taken by mouth in appropriate amounts. However, large doses of beta-carotene supplements are not recommended for general use during pregnancy and breast-feeding.

Children: Beta-carotene is **LIKELY SAFE** when used orally and appropriately.

Angioplasty, a heart procedure: There is some concern that when antioxidant vitamins, including beta-carotene, are used together they might have harmful effects after angioplasty. They can interfere with healing. Don't use beta-carotene and other antioxidant vitamins before or after angioplasty without the recommendation of your healthcare provider.

History of asbestos exposure: In people who have been exposed to asbestos, beta-carotene supplements might increase the risk of cancer. Don't take beta-carotene supplements if you have been exposed to asbestos.

Smoking. In people who smoke, beta-carotene supplements might increase the risk of colon, lung, and prostate cancer. Don't take beta-carotene supplements if you smoke.

Interactions?

Moderate Interaction

Be cautious with this combination

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Medications used for lowering cholesterol (Statins) interacts with BETA-CAROTENE

Taking beta-carotene, selenium, vitamin C, and vitamin E together might decrease the effectiveness of some medications used for lowering cholesterol. It is not known if beta-carotene alone decreases the effectiveness of some medications used for lowering cholesterol.

Some medications used for lowering cholesterol include atorvastatin (Lipitor), fluvastatin (Lescol), lovastatin (Mevacor), and pravastatin (Pravachol).

Niacin interacts with BETA-CAROTENE

Taking beta-carotene along with vitamin E, vitamin C, and selenium might decrease some of the beneficial effects of niacin. Niacin can increase the good cholesterol. Taking beta-carotene along with these other vitamins might decrease the good cholesterol.