

New Roots Herbal's **BetaCarotene** is a 100% natural mixed carotenoid complex extracted from crude red palm oil (*Elaeis guineensis*), which is the largest natural source of carotenes (retinol equivalents). It contains approximately 15 to 300 times more retinol equivalents than carrots or tomatoes.

The mixed carotenoid complex of crude palm oil contains approximately 33% α -carotene and 65% β -carotene, in addition to other carotenoids (gamma-carotene, lycopene, etc.).

Both α -carotene and β -carotene act synergistically, offering greater health benefits than β -carotene alone.

Our formulation has one of the highest concentrations of beta-carotene as a precursor of vitamin A in combination with additional carotenes.

HEALTH CLAIMS (EU Regulation 432/2012): Vitamin A has a role in the proper maintenance of mucous membranes, skin and vision. It contributes to regulate iron metabolism and it's involved in the proper functioning of the immune system.

Ingredients: 100% natural mixed carotenoids from crude red palm fruit oil (unrefined) (*Elaeis guineensis*), flax seed oil (*Linum usitatissimum*), annatto extract (*Bixa orellana*), softgel (glazing agent: gelatin; humectants: purified water and glycerol).

Nutritional information:

1 softgel (240 mg)

Mixed carotenoids:	155 mg
<i>beta</i> -carotene (pro-vitamin A)	3 750 μ g RE(1) (25 000 IU) (469%*)
<i>alpha</i> -carotene**	7 440 μ g
<i>gamma</i> -carotene**	116 μ g
Lycopene**	34 μ g

*NRV: Nutrient Reference Value in %

** Typical average values.

(1) RE: Retinol Equivalents.

Size and format:

90 softgels.

Recommended daily dose:

1 softgel daily.

Do not exceed the stated recommended daily dose.

Indications and uses:

- It boosts the body's immune function. This can be used preventively or therapeutically to improve the state of the immune system.
- It helps to maintain the structure of tissues in good condition, especially epithelial tissue.
- It protects against pollution and is important in the formation of bones and teeth, it reduces cancer risks and improves vision by protecting the eyes from free radicals attack.

Cautions:

In case of pregnancy or breastfeeding, consult your health care professional before using this product.

BetaCarotene is a 100% natural mixed multi-carotenoid complex containing balanced forms of beta-carotene, a non-toxic vitamin A precursor.

In the human body, carotenoids are part of the antioxidant defence system and interact synergistically with other antioxidants. The best known of these antioxidants is beta-carotene, although recent studies indicate that other carotenes may provide additional benefits to the body.

Beta-carotene, a vital antioxidant, makes up about 90% of the total carotenes, while the other 10% consist of alpha-carotene and xanthophylls such as lutein, zeaxanthin and cryptoxanthin (the same carotenoids found in fruits and vegetables).

Vitamin A has a role in the proper maintenance of mucous membranes, skin and vision. It contributes to regulate iron metabolism and it's involved in the proper functioning of the immune system.

New Roots Herbal's natural **BetaCarotene** contains the highest quality blend of the six natural carotenoids commonly found in various fruits and vegetables. The ingredients are suspended in linseed oil and contained in a soft gelatin and glycerin-based capsule.

INGREDIENTS:

BETA-CAROTENE: It is a precursor of vitamin A, as well as a potent antioxidant that provides other protective functions in the body ⁽¹⁾. Vitamin A is essential for many functions in the human body, including vision, growth, bone development, tooth development, maintenance of healthy epithelial tissues, cancer protection and reproduction, as well as coenzyme and hormone functions. Vitamin A has toxic effects at high doses, whereas beta-carotene (and other carotenoids) have no known toxicity. Although beta-carotene may be the best known of the carotenes, approximately 500 of carotenes have been identified, and their health benefits are only beginning to be recognised. Beta-carotene and other carotenoids act as antioxidants in the body and protect the body from the harmful effects of free radicals ⁽¹⁻⁴⁾.

Beta-carotene can occur in two stereoisomers: trans or cis. Synthetic beta-carotene does not provide the antioxidant benefits that natural beta-carotene does, as it contains only the trans isomer, which is converted to vitamin A by the body, and has little antioxidant benefit. However, natural beta-carotene is a mixture of the trans and cis stereoisomers. The one with the highest antioxidant power is 9-cis-beta-carotene ^(5,6).

Natural beta-carotene is a 100% natural source of beta-carotene and contains half trans isomers and half cis isomers ^(7,8).

The American National Cancer Institute (NCI) recommends consuming 5-6 servings of fruits and vegetables in a day to obtain the required 4-5 mg of beta-carotene per day ⁽⁹⁾. However, with our current lifestyles, it may not be possible to eat well every day and most people do not meet this recommended amount. The best solution is therefore to add New Roots Herbal's into your diet.

Both α -carotene and β -carotene act synergistically, offering major health benefits.

A 12-year study in Japan found that high serum levels of total carotenoids (α -carotene, β -carotene and lycopene) were associated with a lower risk of cardiovascular disease mortality ⁽¹⁰⁾.

Two other studies conducted in the USA revealed that a high intake of carotenoids (α -carotene and lycopene) led to a significant reduction in lung cancer risk ⁽¹¹⁾.

A high intake of α -carotene together with β -carotene decreases the prevalence of atherosclerosis in the carotid and femoral arteries ⁽¹²⁾.

Health benefits of the natural carotene blend synergism:

Telomere length increase ⁽¹³⁾:

In a study involving 3,660 participants, plasma carotenoid concentration was measured. DNA was extracted from blood samples and the telomere length of leukocytes was determined.

Telomere length increased by 5-8% in patients with higher carotenoid concentrations. Plasma levels of alpha-carotene, beta-carotene and beta-cryptoxanthin were associated with 1.76%, 2.22% and 2.02% increases in telomere length, respectively.

Minimising the risk of age-related macular degeneration ⁽¹⁴⁾:

A prospective cohort study of over 100,000 patients published in the Journal of the American Medical Association (JAMA) found that a high intake of mixed carotenoids, especially alpha-carotene, beta-carotene, lutein and zeaxanthin, were inversely associated with age-related macular degeneration.

Decreased risk of type 2 diabetes ⁽¹⁵⁾:

A study carried out in the Netherlands with 37,846 participants assessed dietary intake of carotenoids over 10 years. A high intake of alpha-carotene and beta-carotene were found to decrease the risk of type 2 diabetes. In contrast, dietary intake of individual carotenoids is not associated with a decreased risk of diabetes, which highlights the synergistic effect of alpha-carotene and beta-carotene.

Bone mineral density (BMD) increase ⁽¹⁶⁾:

Another study of women and men aged 50-75 years followed up for 3 years again showed that the synergistic effect of high levels of alpha-carotene, lycopene and beta-cryptoxanthin is associated with a BMD increase.

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