If you think that carrots are good for your eyes, you are right. Carrots contain carotenoids, a group of pigments found in yellow, orange, and green fruits and vegetables.

Carotenoid-containing fruits and vegetables such as carrots, cantaloupe, apricots, broccoli, sweet potatoes, and spinach, as well as dairy products, liver, and egg yolks provide a good source of the fat-soluble vitamin A that is essential to our health.

Forms of vitamin A
Retinol, also known as preformed vitamin A, is one of the most usable forms of vitamin A and is found in both plant and animal sources. Provitamin A carotenoids are darkly coloured pigments found in plant foods that can be converted to vitamin A. Common carotenoids found in foods are beta-carotene, alpha-carotene, lutein, zeaxanthin, lycopene, and cryptoxanthin. The one that is most efficiently converted to retinol in the body is beta-carotene.

Seeing in the dark
Fortunately, vitamin A deficiency is rare in North America; however, it is common in developing countries. According to the US National Institute of Medicine, 250,000 to 500,000 malnourished children in the developing world go blind each year from a vitamin A deficiency.

Vitamin A helps you see normally in the dark. In fact, one of the first signs
of a deficiency is night blindness, a condition in which the eyes have difficulty adjusting to the dark or to bright lights. If it takes you more than a minute to adjust your eyes in a darkened area, you may have this condition.

**Other reasons to eat your carrots**

Vitamin A is also involved in the formation and maintenance of healthy skin, hair, and mucous membranes, which provide a barrier to bacteria and viruses. It may also help lymphocytes, a type of white blood cell, fight infections more effectively. In countries where vitamin A deficiency is common, millions of children die each year from complications of infectious diseases. Vitamin A is necessary for proper bone growth, tooth development, reproduction, and cell division.

Some carotenoid compounds, in addition to providing vitamin A, have also been shown to function as antioxidants, which are important for protecting cells from free radicals that are thought to contribute to degenerative diseases such as cancer and heart disease.

**How much vitamin A do you need?**

Eating a variety of foods that contain vitamin A (and carotenoids) is the best way to get an adequate amount. Healthy individuals who eat a balanced diet, including plenty of yellow and orange fruits, dark green leafy vegetables, and lean meat and eggs, rarely need to supplement with vitamin A.

A recent survey by the US Department of Agriculture confirmed the average intake of vitamin A in the population met the RDA (see sidebar). However, vegetarians who do not consume eggs and dairy foods may need to supplement with provitamin A carotenoids. Vegetarians (and the rest of us!) should get a minimum of five daily servings of carotenoid-rich fruits and vegetables.

Since vitamin A can be lost from foods during preparation, cooking, or storage, serve fruits and vegetables raw whenever possible. Keep vegetables and fruits covered and refrigerated during storage. Steam vegetables, and braise, bake, or broil meats instead of frying.

**Too much of a good thing**

Too much vitamin A can be toxic. Vitamin A is a fat-soluble vitamin and is easily stored in the body. Taking large doses can cause severe problems. These include vomiting, bone and joint pain (which may result in osteoporosis), dry scaly skin, and liver damage.

**Vitamin A for health**

Vitamin A is an essential nutrient found in our diets. A carrot a day just may keep the eye doctor away! 👀

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