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Lutein — An Important Nutrient for Eye and Brain Health

By Dr. Mercola | August 7th, 2017

Eating plenty of dark leafy greens, rich in carotenoids like lutein, can go a long way toward maintaining healthy vision and keeping cognitively fit into old age. Lutein, which you have to get from your diet as your body cannot manufacture it, is well-known for its vision-enhancing properties.

Along with zeaxanthin, it's found in high concentrations in your macular pigment and macula lutea, the small central part of your retina responsible for detailed central vision.

High levels of these carotenoids help stave off age-related eye diseases such as cataracts and macular degeneration, the latter of which is the No. 1 cause of blindness among the elderly. However, more recent research notes lutein also plays an important role in brain health, and may help prevent cognitive decline.

Lutein-Rich Diet Helps Keep You Cognitively Fit

According to recent research, which involved 60 adults between the ages of 25 and 45, those with higher levels of lutein in middle-age had more youthful neural responses than those with lower levels. Carotenoid status was assessed by measuring macular pigment optical density, which is known to be highly correlated with the lutein status in your brain.

Most studies have focused on the effects of diet after cognitive decline has already set in. Here, they wanted to evaluate whether lutein might have a protective effect, as the process of cognitive decline has been shown to begin far earlier than typically expected. According to these researchers, you can start seeing cognitive deterioration as early as your 30s. Indeed, the results suggest your diet, and in this case lutein-rich foods, does help keep your brain young.

"Now there's an additional reason to eat nutrient-rich foods such as green leafy vegetables, eggs and avocados. We know these foods are related to other health benefits, but these data indicate that there may be cognitive benefits as well," said Naiman Khan, professor of kinesiology and community health at the University of Illinois.

Other Health Benefits of Lutein

Lutein has also been found to promote health in other ways, beside optimizing vision and cognition. For example, studies have found:

- Diets rich in the carotenoids beta-carotene, lutein and lycopene resulted in greater resistance against oxidation of low-density lipoprotein (LDL) cholesterol. Carotenoid

supplements did not increase LDL oxidation resistance. Higher plasma concentration of carotenoids was also associated with lower DNA damage

- Lutein and zeaxanthin in combination with vitamin E appears to improve lung function
- Plasma levels of antioxidants such as lutein, zeaxanthin, vitamin E, beta-cryptoxanthin, lycopene and alpha- and beta-carotene are inversely correlated with congestive heart failure severity
- Plasma carotenoid levels are also inversely correlated with prostate cancer

Lutein-Rich Foods

Lutein is primarily found in green leafy vegetables, with kale and spinach topping the list of lutein-rich foods. You'll also find it in orange- and yellow-colored fruits and vegetables. The word lutein actually comes from the Latin word "luteus," which means "yellow." As a general rule, anywhere from 15 to 47 percent of the total carotenoid content in dark green leafy vegetables is lutein.

Following is a list of foods that are particularly rich in lutein. Ideally, you'll want to buy the whole food and consume these foods as close to raw as possible, as the lutein (and other carotenoids such as zeaxanthin) are easily damaged by heat. Accessory micronutrients in the foods that enhance their action also tend to get easily damaged.

✓ Spinach	✓ Kale	✓ Carrots	✓ Broccoli	✓ Egg yolks
✓ Red and yellow peppers	✓ Sweet corn	✓ Avocados	✓ Raspberries and cherries	✓ Spices such as cayenne pepper and paprika

While there's no recommended daily intake for lutein or zeaxanthin, studies have found health benefits for lutein at a dose of 10 milligrams (mg) per day and at 2 mg/day for zeaxanthin.

How to Optimize Lutein Absorption

Lutein and other carotenoids are fat-soluble, so to optimize absorption, be sure to add a little bit of healthy fat to your meal. For example, research shows that adding a couple of eggs — which contain both lutein and healthy fats — to your salad can increase the carotenoid absorption from the whole meal as much as ninefold.

Ideally, opt for organically-raised, free-range pastured eggs. Not only do they tend to have a better nutritional profile, by opting for pastured eggs you'll also avoid pesticide exposure and genetically modified organisms.

The vast majority of commercially available eggs come from concentrated animal feeding operations (CAFOs), where the hens are not permitted to forage on pasture. Instead, they're typically fed a diet of corn and soy, the vast majority of which are genetically engineered. CAFO eggs are also far more prone to cause foodborne illness caused by salmonella contamination

If you live in an urban area, visiting a local health food store is typically the quickest route to finding high-quality local egg sources. Your local farmers market is another source for fresh free-range eggs. Cornucopia.org also offers a helpful organic egg scorecard that rates egg manufacturers based on 22 criteria that are important for organic consumers.

You can often tell the eggs are free-range by the color of the egg yolk. Foraged hens produce eggs with bright orange yolks, indicative of higher amounts of lutein and zeaxanthin. Dull, pale yellow yolks are a sure sign you're getting eggs from caged hens that are not allowed to forage for their natural diet. Another way to boost absorption of lutein from your vegetables is to add some raw organic butter or healthy oil such as olive or coconut oil to your salad.