

Top Foods to Improve Your Vision

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STORY AT-A-GLANCE

- › Nourishing your eyes with appropriate nutrients throughout the years can go a long way toward maintaining good eyesight well into your senior years
- › Some of the most important nutrients for eye health include lutein, zeaxanthin, meso-zeaxanthin, astaxanthin, anthocyanins, animal-based omega-3 fats and vitamin C
- › Foods rich in beneficial lutein include egg yolks, spinach, avocado and broccoli; black currants and bilberries also contain important antioxidants for vision health
- › Avoiding blue light, especially from cool white LED lights, may help prevent vision deterioration

Aging is inevitable, but are age-related problems such as poor vision absolute givens? Contrary to popular belief, your vision is largely dependent on your lifestyle. Nourishing your eyes with appropriate nutrients throughout the years can go a long way toward maintaining good eyesight well into your senior years.

Even if your eyesight has started to deteriorate, evidence suggests you can stop the deterioration. You may even be able to turn back the clock, as it were, and improve your vision.

Foods Can Protect and Improve Your Eyesight

Medical journalist Michael Mosley discussed his vision problems and experiences with nutritional intervention in an episode of the BBC program "Trust Me, I'm a Doctor."¹ The shape and length of your eyeballs, and the thickness of your eye lens, affect your ability to see things close-up and at a distance. Your retina, located at the back of your eye, also contains light-sensitive cells that are critical for good vision.

Your macula – the part of your retina responsible for central vision – is protected by a yellow pigment made up of lutein, zeaxanthin and meso-zeaxanthin. These compounds absorb light and protect your macula from blue light and ultraviolet (UV) light from the sun and other light sources.²

Lutein, zeaxanthin and meso-zeaxanthin are plant compounds with potent antioxidant capacities. Your body cannot make them, so you must get them from your diet. As noted by the BBC:³

"Lutein and zeaxanthin are found commonly in dark green leafy veg such as kale and spinach, and also bell peppers ... and saffron. Meso-zeaxanthin is generally not found in plants – it is thought to be made in our bodies from lutein (although it is also present in some fish ...) These pigments, once we eat them, appear to be important in our vision and in helping keep the macula healthy."

Lutein and Zeaxanthin Supplements Can Make a Big Difference

Mosley describes undergoing a number of extensive vision tests designed to evaluate the health of his retina, his ability to see colors, night vision and the level of protection his macula had against UV and blue light. He explained:⁴

"The results of my tests were both fascinating and depressing. My detection of yellow and blue colors was extremely poor – something that [Professor John] Barbur said was likely the result of my brush with diabetes many years ago.

My night vision and perception of details were also poor compared with younger people – but consistent with my age. The Trust Me team then handed

me a 90-day supply of supplement pills that were supposed to help."

The supplements in question contained lutein and zeaxanthin. Three months later, follow-up tests revealed remarkable improvement. Not only did his night vision and protective macular pigments improve, but his blue and yellow color perception moved within the normal range.

Some studies suggest these nutrients may also slow down or prevent age-related macular degeneration (ARMD),⁵ which is the leading cause of vision loss and blindness for Americans aged 65 and older.⁶

How Much Lutein and Zeaxanthin Do You Need?

While there's no recommended daily intake for lutein and zeaxanthin, studies have found health benefits for lutein at a dose of 10 milligrams (mg) per day⁷ and at 2 mg per day for zeaxanthin.⁸ Meanwhile, studies suggest American adults get, on average, only 1 mg to 2 mg of lutein from their diet each day.⁹

Research evaluating the effect of lutein, zeaxanthin and meso-zeaxanthin in combination, using a dose of 10 mg of lutein, 10 mg of meso-zeaxanthin and 2 mg of zeaxanthin per day for one year, found it helped improve vision in those who had normal vision at the outset.^{10,11}

"Should we all, then, be taking supplements to protect and even improve our eyesight? Well, the research certainly shows that supplements work," Mosley wrote.¹²

"Even for someone like me, who has a relatively healthy diet with plenty of fruit and vegetables, and whose blood levels of the compounds that weren't particularly low, the supplements helped. However, some researchers believe that diet can simply be enough, if we eat the right things."

What Should You Eat to Protect or Improve Your Vision?

Lutein and zeaxanthin are primarily found in green leafy vegetables, with kale and spinach topping the list of lutein-rich foods. You'll also find these nutrients in orange- and yellow-colored fruits and vegetables.

According to a study published in the British Journal of Ophthalmology, orange pepper had the highest amount of zeaxanthin of the 33 fruits and vegetables tested.¹³

According to the authors:

"Most of the dark green leafy vegetables, previously recommended for a higher intake of lutein and zeaxanthin, have 15 [to] 47 percent of lutein, but a very low content (0 to 3 percent) of zeaxanthin. Our study shows that fruits and vegetables of various colors can be consumed to increase dietary intake of lutein and zeaxanthin."

Egg yolk is another good source of both lutein and zeaxanthin, along with healthy fat and protein, and while the total amount of carotenoids is lower than in many vegetables, they're in a highly absorbable, nearly ideal form. For instance, one study found that adding a couple of eggs to your salad can also increase the carotenoid absorption from the whole meal as much as ninefold.¹⁴

Eggs from free-range, pastured hens have bright orange yolks, which is an indication of their elevated lutein and zeaxanthin content. Dull, pale yellow yolks are a sure sign you're getting eggs from caged hens fed an unnatural grain diet, and hence will have low amounts of these valuable nutrients.

For a beverage, one of your best choices is chrysanthemum tea, as it contains vitamin A, a nutrient that plays a critical role in promoting healthy vision. This vitamin is an essential component of rhodopsin, a protein that absorbs light in the retinal receptors.

It also helps promote normal function of the conjunctival membranes and cornea, and helps reduce the risk for eye disorders like age-related macular degeneration.¹⁵

What Are the Best Food Sources of Lutein?

Following is a list of foods that are particularly rich in lutein.^{16,17,18} Most of these also contain zeaxanthin, albeit in lesser quantities than lutein.

- Egg yolks
- Kale and spinach
- Avocado
- **Broccoli**
- Green, red and yellow peppers

Ideally, you'll want to buy the whole food and consume it 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. Lutein and other carotenoids are fat-soluble, so to optimize absorption, be sure to add a little bit of healthy fat to your meal.

Vitamin C Combats Cataracts

Other nutrients are also beneficial for vision health. For instance, vitamin C is associated with a lower risk of cataracts. According to the National Eye Institute, more than half of all Americans end up getting cataracts by the time they're 80.¹⁹

One study compared vitamin C intake and the progression of cataracts in more than 320 pairs of female twins over the course of a decade.²⁰ It found those who ate more vitamin C-rich foods lowered their risk of cataracts by one-third. Interestingly, vitamin C supplements were not associated with a reduction in risk.

Citrus fruits such as kiwis, oranges, lemons, limes and grapefruits are well-known for being high in vitamin C, but the fruit with the highest concentration of all is actually acerola cherries (also known as Barbados cherries). Each cherry has only 1 calorie, but 80 mg of vitamin C and the associated micronutrients. I have two of these trees in my front yard and for months I am able to gather 50 to 70 cherries a day. It is by far my favorite and healthiest fruit.

Animal-Based Omega-3 Lowers Risk of Blindness in Diabetics

Another study²¹ found that diabetics who routinely ate 500 mg of omega-3-rich fish (two servings per week) reduced their risk of diabetic retinopathy by an impressive 48%. Diabetic retinopathy is a serious complication of Type 2 diabetes that occurs when blood flow to your retina is reduced. It's the most common cause of blindness in diabetics.

This significant risk reduction was primarily attributed to lower inflammation levels. Animal-based omega-3 fats also provide structural support to cell membranes that boost eye health and protect retinal function. Earlier research¹⁴ has shown that those with the highest intake of animal-based omega-3 fats have a significantly lower risk of advanced macular degeneration compared to those who consume the least.²²

In a survey of optometrists in Australia and New Zealand, 79% said they recommended their patients consume omega-3 fats to improve eye health.²³ Specifically, 68% recommended omega-3-rich foods for ARMD while 62% recommended omega-3 supplements for this purpose.

Seventy-eight percent also recommended omega-3-rich foods or supplements for dry eye disease. Marine sources that are high in omega-3 and low in environmental pollutants include:

- Wild Alaskan salmon (which also contains astaxanthin – one of the most potent promoters of eye health; see below)
- Small fatty, cold-water fish such as herring, sardines and anchovies
- Fish roe
- **Krill oil**

While fish oil is a well-known source of omega-3 fats, it has several drawbacks, the lack of phospholipids being one of them. The omega-3 fats DHA and EPA are water insoluble and therefore cannot be transported in their free form in your blood. They must be packaged into lipoprotein vehicles such as phospholipids. This is primarily why the

bioavailability of krill oil is so much higher than fish oil, because in fish oil, the DHA and EPA are bound to triglycerides.

Astaxanthin – The Most Powerful Promoter of Eye Health

Astaxanthin is produced by the microalgae *Haematococcus pluvialis* when its water supply dries up, forcing it to protect itself from UV radiation. Besides the microalgae that produce it, the only other source are the sea creatures that consume the algae, such as wild salmon, shellfish and krill.

Astaxanthin is far more powerful an antioxidant than both lutein and zeaxanthin, and many researchers believe it to be the most powerful antioxidant ever discovered for eye health.^{24,25} It's been found to have protective benefits against a number of eye-related problems, including ARMD and cataracts, as well as:

- Cystoid macular edema
- Diabetic retinopathy²⁶
- Retinal arterial occlusion and venous occlusion
- Glaucoma²⁷
- Inflammatory eye diseases (retinitis, iritis, keratitis and scleritis)

Astaxanthin easily crosses into the tissues of your eye and exerts its effects safely and with more potency than any of the other carotenoids, without adverse reactions. Specifically, astaxanthin has been shown to ameliorate or prevent light-induced damage, photoreceptor cell damage,²⁸ ganglion cell damage and damage to the neurons of the inner retinal layers.

Astaxanthin also helps maintain appropriate eye pressure levels that are already within the normal range, and supports your eyes' energy levels and visual acuity. Depending on your individual situation, you may want to take an astaxanthin supplement.

I recommend starting with 4 mg per day and working your way up to about 8 mg per day – or more if you're suffering from chronic inflammation. Taking your astaxanthin supplement with a small amount of healthy fat, such as grass fed butter, coconut oil, MCT oil or eggs, will optimize its absorption.

Krill oil also contains high quality animal-based omega-3 fat in combination with naturally occurring astaxanthin, albeit at lower levels than what you'll get from an astaxanthin supplement.

How Anthocyanins in Berries Benefit Your Eyes

Dark blue or purplish, almost black-colored, berries like black currants and bilberries contain high amounts of antioxidant anthocyanins that are beneficial for vision and eye health.²⁹ Black currants contain some of the highest levels. They're also rich in essential fatty acids, lending added support to their anti-inflammatory properties.

For medicinal purposes, many opt for using black currant seed oil, but eating the whole food is always an option, especially when they're in season. Bilberry, a close relative of the blueberry, also contain high amounts of anthocyanins, just like black currant. Research suggests bilberry may be particularly useful for inhibiting or reversing macular degeneration.

A 2005 study found that rats with early senile cataract and macular degeneration that received 20 mg of bilberry extract per kilogram of body weight suffered no impairment of their lens and retina, while more than 70% of the control group suffered degeneration over the three-month-long study.³⁰ According to the authors, "The results suggest that ... long-term supplementation with bilberry extract is effective in prevention of macular degeneration and cataract."

Even More Important: Avoid Artificial Blue Light

The full extent of the health benefits associated with blue light avoidance are only beginning to be understood. Glasses that block blue light have the benefit of making

objects appear sharper, but mounting research suggests blocking blue light also serves an important biological purpose by regulating your internal body clock, which controls your sleep patterns and other body functions.

Indeed, exposure to artificial light is among the most often-overlooked health risks of living in the 21st century.

One of the simplest and least expensive ways to protect your body's internal rhythm, and thereby support healthy sleep and a lowered risk of many chronic diseases, is to wear amber-colored glasses that block blue light – not just at night but anytime you are exposed to fluorescent or LED lights.

This is because LEDs and fluorescents, although far more energy efficient, are not analog thermal light sources but digital ones. They have unbalanced wavelengths that are very different from the sun. They have a predominance of blue frequencies that contributes to free radical production, and lack the red, infrared and near infrared healing frequencies that stimulate repair and regeneration that are present in thermal light sources like clear incandescent bulbs.

LEDs found in many screens have virtually no beneficial infrared light and an excess of blue light that generates reactive oxygen species (ROS), harming your vision and possibly leading to age-related macular degeneration.³¹ LED lights may also exacerbate mitochondrial dysfunction leading to chronic conditions ranging from metabolic disorders to cancer.

If you view screens at night, it's therefore essential to block your exposure to blue light while doing so. In the case of your computer, you can install a program to automatically lower the color temperature of your screen. In addition, when watching TV or other screens, be sure to wear blue-blocking glasses after sundown. Better yet, eliminate the use of screens entirely after sunset.

Additionally, one of the best strategies to establish your circadian rhythm is to spend some time outdoors shortly after sunrise. The red and infrared frequencies will help prepare your retina for the blue light emitted a bit after sunrise, which will produce a

reactive oxygen signal to produce melatonin later that night – assuming you sleep in complete darkness.

Establishing a healthy circadian rhythm is essential for good health, so please consider the healthy habit of getting outside every day shortly after sunrise without glasses to expose your retina to the full spectrum of sunlight.

It is likely that chronic exposure to unopposed digital blue light from LED and fluorescents will likely contribute to an epidemic of blindness in the next two decades, as it will increase the incidence of ARMD. The benefits of blue-blocking glasses and avoidance of blue light include but are not limited to:

- Preventing damage to the DHA in your retinal pigmented epithelium (RPE), which is responsible for converting the photons from sunlight into electrons via the photoelectric effect that Einstein received a Nobel prize for in 1921. These electrons provide a vital DC electric current that your body needs for optimal functioning
- Increasing mitochondrial health and efficiency, as blue light has the side effect of increasing the distance of the proteins in the respiratory electron transport chain in your mitochondria, making them far less efficient in producing ATP. Blocking blue light prevents this decline in efficiency from occurring
- Significantly improving symptoms of bipolar disorder. Those who wore blue-blocking orange-tinted glasses from 6 p.m. to 8 a.m. for seven days had significant improvements in symptoms of mania compared to those who wore clear glasses.³² What's more, the improvements began after just three nights of use

The dramatic results make sense in light of the relatively recent discovery of intrinsically photo-responsive retinal ganglion cells, which are receptors in your eyes that detect only blue light.

These receptors communicate with areas of your brain linked to control of your biological clock (hypothalamus) as well as mood and emotions (the limbic system).³³

Earlier research also found dramatic improvements in insomnia and mood in about half of bipolar patients who wore blue-blocking glasses.³⁴

Optimize Your Eyesight by Eating Right and Living Healthy

Besides eating plenty of carotenoid-rich vegetables, organic pastured egg yolks and omega-3 and astaxanthin-rich wild Alaskan salmon, another important dietary aspect is to normalize your blood sugar. Excessive sugar in your blood can pull fluid from the lens of your eye, affecting your ability to focus. It can also damage the blood vessels in your retina, thereby obstructing blood flow.

It's important to ignore the mainstream advice to eat vegetable oils, which are more accurately defined as seed oils. Seed oils, such as soybean, cottonseed, sunflower, rapeseed (canola), corn and safflower, are hidden in virtually every processed food, including restaurant foods, and there's virtually nothing more destructive to your body in producing age-related macular degeneration³⁵ and other chronic health problems.

These seed oils contain the omega-6 fat linoleic acid, which is toxic at the high doses many Americans consume daily. In your own cooking, examples of healthy fats to use instead of seed oils are beef tallow, butter or coconut oil. As mentioned, it's also important to avoid ultraprocessed foods.

Besides addressing your diet, you'll also want to exercise regularly, and be sure to [optimize your vitamin D level](#). Vitamin D is particularly important for those with genetic risk factors for ARMD. In one study, middle-aged women who have a high-risk genotype and are vitamin D deficient were found to be 6.7 times more likely to develop ARMD than those without this genetic risk factor who also have sufficient vitamin D.^{36,37}

Sources and References

- ^{1, 4, 12} [BBC News September 6, 2016](#)
- ² [Annual Review of Nutrition 2003;23:171-201](#)
- ³ [BBC, Trust Me, I'm a Doctor, Can I Improve My Eyesight?](#)
- ⁵ [Med Hypotheses. 2003 Oct;61\(4\):465-72](#)

- ⁶ U.S. CDC, Learn About Age-Related Macular Degeneration
- ⁷ Investigative Ophthalmology & Visual Science December 2006, Vol.47, 5227-5233
- ⁸ Verywell Health December 9, 2022
- ⁹ The Journal of Nutrition March 1, 2002; 132(3): 518S-542S
- ¹⁰ Investigative Ophthalmology and Visual Sciences June 1, 2016;57(7):3429-39
- ¹¹ Nutraingredients-USA.com July 14, 2016
- ¹³ British Journal of Ophthalmology Aug 1998; 82(8): 907–910
- ¹⁴ Science Daily March 9, 2015
- ¹⁵ NIH Office of Dietary Supplements, Vitamin A
- ¹⁶ Self Nutrition Data Lutein + Zeaxanthin
- ¹⁷ Nutrients 2013 Apr; 5(4): 1169–1185
- ¹⁸ USDA, Healthy Colors of Your Diet
- ¹⁹ National Eye Institute, Cataracts
- ²⁰ Ophthalmology June 2016; 123(6): 1237-1244
- ²¹ JAMA Ophthalmol. 2016;134(10):1142-1149
- ²² Ophthalmology 117 (12): 2395-2401, December 2010
- ²³ Nutrients. 2020 Apr 22;12(4):1179. doi: 10.3390/nu12041179
- ²⁴ Journal of the Science of Food and Agriculture May 1, 2001: 81(6); 559-568
- ²⁵ Oxid Med Cell Longev. 2019; 2019: 3849692
- ²⁶ J Ophthalmol. 2022; 2022: 8071406
- ²⁷ Mar Drugs. 2020 May; 18(5): 239
- ²⁸ Antioxidants (Basel). 2020 Aug; 9(8): 729
- ²⁹ Molecules. 2019 Sep; 24(18): 3311
- ³⁰ Advances in Gerontology 2005;16:76-9
- ³¹ Cleveland Clinic August 9, 2019
- ³² Bipolar Disorders May 26, 2016
- ³³ Newsweek July 26, 2016
- ³⁴ Chronobiol Int. December 2009;26(8):1602-12
- ³⁵ Free Radic Biol Med. 2019 Dec;145:349-356. doi: 10.1016/j.freeradbiomed.2019.10.007. Epub 2019 Oct 9
- ³⁶ Science Daily August 31, 2015
- ³⁷ JAMA Ophthalmol. 2015;133(10):1171-1179