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Are Your Eyeglasses Worsening Your Vision?

Analysis by Dr. Joseph Mercola | August 07, 2024

STORY AT-A-GLANCE

- It's often said that wearing glasses won't worsen your vision, but there are cases when wearing glasses can cause problems with your eyesight
- If your eyeglass prescription is based on your vision at 20 feet, then when you're working on something up close, like your computer, your prescription is actually 20 times too strong; so, wearing those glasses while working all day will make your vision worse
- For presbyopia, commonly known as age-related farsightedness, I recommend avoiding reading glasses, as they may make vision worse
- Your eyes are highly susceptible to damage caused by linoleic acid, which should be avoided to protect vision health
- Carotenoids, including lutein, zeaxanthin and astaxanthin, are beneficial for your eyes and may protect against age-related macular degeneration, cataracts and other eye conditions

It's a common concern that if you wear eyeglasses, your eyes may become "dependent" on them. Then, when you take off your glasses, your vision might seem worse than before you started wearing them. While according to the American Academy of Ophthalmology wearing glasses won't worsen your vision,[1] there are cases when wearing glasses can cause problems with your eyesight, even making vision worse.

This is particularly true if you wear the wrong glasses while doing work up close, such as on a computer. There are, however, a number of reasons why your vision may seem to

worsen when you take your glasses off compared to before you started wearing them.

Why Might Your Eyesight Seem to Worsen After Wearing Glasses?

When you start wearing glasses, your brain adapts to the clearer and more focused vision they provide. Once you remove them, the sudden return to blurred vision can feel more pronounced because your brain has become accustomed to the clarity.

Further, glasses correct your vision by improving focus and detail. When you begin wearing them, you become more aware of what clear vision looks like. This increased awareness makes the contrast between corrected and uncorrected vision more noticeable. Glasses also help reduce eye strain by correcting your vision.

When you remove them, the strain from trying to focus without assistance can make your vision seem blurrier than before. The perception of worsening vision when you wear glasses can be more about your brain's adaptation to corrected vision rather than a real decline in eye health.

Writing in The Conversation, James Andrew Armitage, professor of optometry at Deakin University in Geelong, Australia, and Nick Hockley, director of Deakin Collaborative Eye Care Clinic, said, "Some people sense an increasing reliance on glasses and wonder if their eyes have become 'lazy' … Once we are used to seeing clearly, our tolerance for blurry vision will be lower and we will reach for the glasses to see well again."[2]

Reading Glasses for Presbyopia May Make Matters Worse

There are cases in which a reliance on glasses may worsen vision. For presbyopia, for instance, I recommend not wearing sunglasses and avoiding reading glasses. As you age, there's a tendency to want to make font bigger to see text better, but I recommend resisting that temptation, as it's only going to make matters worse.

People with presbyopia, commonly known as age-related farsightedness, have trouble focusing on objects close up. It commonly affects people beginning in their early- to mid-40s, progressively worsening until about age 65.[3]

If you have presbyopia, you may find that you need to hold books farther away in order to see them clearly. Other symptoms include blurred vision at a normal reading distance and eyestrain or headaches that occur after you've been reading or doing close-up work. The blurry close-up vision may be worse when you're tired or in a dimly lit area.[4]

The conventional solution is typically reading glasses, which many keep with them throughout the day — in the kitchen, the car, the office and the bedroom — just to go about their daily activities. However, this may encourage your eyes to stay in one place instead of moving around — which is essential for healthy eyes.

Optometrist and eye health coach Taylor DeGroot uses a holistic, **bioenergetic approach to eye health**. In our interview, she noted, "Healthy eyes like to move a lot and they don't like to just stay in one place and stare. That's another bad habit people have. They stare and keep their eyes in one place. That's also what glasses train the eyes to do.

Glasses have an optical center, so there's one part in the glasses where you see most clearly. Glasses in a way are kind of visual confinement because they lock your eyes into one place."

There's also evidence that training your brain, namely targeting perceptual learning by repeatedly practicing a demanding visual task, may improve visual performance in people with presbyopia. In one study, the brain training enabled subjects to "overcome and/or delay some of the disabilities imposed by the aging eye."[5]

A number of apps are available that offer this form of brain training for improved vision. In a study published in Scientific Reports, researchers explained that the vision benefits seemed to stem from changes in the brain — not in the eye itself:[6]

> *"This improvement was achieved without changing the optical characteristics of the eye. The results suggest that the aging brain retains enough plasticity to*

overcome the natural biological deterioration with age."

In addition to avoiding reading glasses, also avoid squinting and simply blink instead. Blink multiple times until the text becomes clear, then relax your eyes to refocus. Brighter light may also help you read without increasing the font size on your tablet or computer, or using reading glasses. You can also use nutritional approaches to help stop the progression of many eye diseases, which I'll discuss below.

Why You May Need Two Pairs of Glasses

In our interview, DeGroot highlighted little-known problems with prescription eyeglasses. If your prescription is based on your vision at 20 feet, then when you're working on something up close, like your computer, your prescription is actually 20 times too strong. So, wearing those glasses while working all day will make your vision worse. She explains:

"If you're doing your work and you're using a prescription that's set for 20/20, that glasses prescription is 20 times too strong for you. If you're working on your computer, ideally you would be using a prescription that's set for that distance.

I would say if you're spending most of the day on the computer and you can go without the glasses, obviously, do that. But if your prescription is too high and you can't see anything at near, just get another prescription that's set for that distance.

I prefer two separate pairs of glasses. The problem with bifocals and progressives is that they lock your eyes. You can only see from a very specific part of the glasses, so that locks your eyes into that one position. That's locking up your posture, and that's also locking up the nervous system because eye movements obviously correlate with emotions.

When we think and access emotions, our eyes make certain movements. That's actually how we access information. We use certain eye movements because

> *the eyes are pattern addicts and so are the brain. When those two have to work together, the eyes are always working with the brain, basically because they're part of it.*
>
> *That's why when you lock the eyes into any certain position, you're not able to access your brain, your brain isn't as fluid, your thinking isn't as fluid, your body isn't as fluid. That's the big downside to wearing things like bifocals and progressives — they do lock your eyes into a certain position to see clearly."*

Important Carotenoids for Eye Health

Carotenoids, including lutein, zeaxanthin and astaxanthin, act as antioxidants, protecting your eyes from the damaging effects of oxidative stress and harmful light wavelengths. This protection helps prevent the development of age-related macular degeneration (AMD)[7] and cataracts, which are common causes of vision impairment and blindness.

Lutein and zeaxanthin are concentrated in the macula,[8] a small area of the retina responsible for central vision. They help filter out blue light from digital screens, which can damage your eyes over time. According to a team of researchers from Harvard Medical School and The University of Hong Kong, writing in the journal Nutrients:[9]

> *"As the peak wavelength of lutein's absorption is around 460 nm which lies within the range of blue light, lutein can effectively reduce light-induced damage by absorbing 40% to 90% of incident blue light depending on its concentration.*
>
> *The outer plexiform layer of the fovea, where the majority of axons of rod and cone photoreceptor cells are located, is the retinal layer having the highest density of macular carotenoids including lutein. Hence the photoreceptors are protected against photo-oxidative damages from blue light."*

While there are about 850 known carotenoids, most are not found in the human body[10] and only lutein and zeaxanthin cross the blood-retina barrier to form macular pigment.[11] Not only are higher blood levels of lutein and other carotenoids associated with a lower risk of AMD, but one study found people with the highest lutein and zeaxanthin intake

had a 65% lower incidence of neovascular AMD compared to those who consumed the least.[12]

In another study, those who consumed to most lutein had a 50% lower likelihood of cataracts than those who consumed the least.[13] Glaucoma, another leading cause of blindness worldwide, is also linked to lutein. A systematic review revealed that lutein enhanced neuroprotection of retinal ganglion cells, helping to preserve synaptic activity.[14]

Foods rich in lutein and zeaxanthin include leafy greens such as spinach and kale, as well as eggs and yellow and orange fruits and vegetables. Even eating just 60 grams of spinach — about 1/2 cup — daily for four weeks was found to protect the eyes by increasing macular pigment density.[15,16] Following are 10 foods that are particularly rich sources of lutein.

Dark leafy greens, such as spinach and kale	Carrots
Broccoli	Egg yolks
Red and yellow peppers	Sweet corn
Avocados	Raspberries
Cherries	Paprika

Astaxanthin Is a Top Nutrient for Vision Health

Astaxanthin is another notable nutrient that has emerged as a top carotenoid for eye health and the prevention of blindness. Research shows it 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.

Astaxanthin improves many eye conditions, including retinal dysfunction caused by light, nonadvanced AMD and cataracts, while leading to improvements in visual acuity and vision-related functions.[17]

Krill oil is a great source of astaxanthin, but for higher doses a supplement works well. If you decide to give astaxanthin a try, I recommend starting with 4 milligrams (mg) per day and working your way up to about 8 mg per day — or more if you're suffering from chronic inflammation.

Avoid Linoleic Acid to Protect Your Vision

Your eyes are highly susceptible to damage caused by polyunsaturated fats (PUFAs) such as **linoleic acid** (LA).[18,19] This is one reason why 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 high in LA and hidden in virtually every processed food, including restaurant foods, and there's virtually nothing more destructive to your body in producing age-related macular degeneration[20] and other chronic health problems.

LA is found in virtually every processed food, including restaurant foods, sauces and salad dressings, so to eliminate it you'll need to eliminate most processed foods and restaurant foods from your diet. It's also hidden in "healthy" foods like chicken and pork,[21] as well as olive oil, which is often cut with cheaper seed oils.

DeGroot agrees, stating she believes it's important to recognize this health threat and to make sure children aren't overexposed, as LA builds up in tissues over time. Even at the age of 18, these lipids start building up in the eyes. "You can actually see it," she says.

> *"One of the earliest ways that we can see degeneration in the eye is using a visual field test, because we'll see parts of the visual field that are missing or little spots in the visual field that are missing before we actually see degeneration in the optic nerve.*

> *That's actually a really good early detection for glaucoma, because we'll see the visual field defect before we see changes on the optic nerve. That's one of the most sensitive tests we can do to catch things early.*
>
> *With macular degeneration specifically, you see these spots that they call drusen, which is a buildup of calcium, lipids, and things like that. They're very tiny, so you have to look very carefully in younger people. But it's interesting how early these things actually start."*

Blue Light Is Another Threat to Healthy Eyes

Blue light emitted from digital screens may accelerate AMD, as it affects retinal and results in the death of photoreceptor cells in the macula.[22] Retinal is essential in order to trigger photoreceptor cells to produce electrical signals. Kasun Ratnayake, from the University of Toledo, commented:[23]

> *"It's toxic. If you shine blue light on retinal, the retinal kills photoreceptor cells as the signaling molecule on the membrane dissolves. Photoreceptor cells do not regenerate in the eye. When they're dead, they're dead for good."*

It's important to note that blue light is likely only able to cause this damage if you have an excess of LA. If your LA levels are normal, blue light is far less likely to cause this damage. That said, it's important to avoid blue light, as it reduces melatonin in your lens, which is a contributor to cataracts.

Avoiding blue light becomes even more important if you have cataract surgery, as your natural lens has some built-in protection against blue light whereas the artificial lens does not. UV-blocking artificial lenses are available through special order, but it's not standard. So, if you've had cataract surgery, it's especially important to wear blue-blocking glasses when you're looking at screens and spending time in artificial lighting indoors.

If you're interested in optimizing your vision instead of just relying on glasses to cover up the problem, search for a neuro-optometrist or an optometrist that specializes in

vision therapy. They assess how your eyes work together and not just "Do you have 20/20 vision?" To find a vision therapist, check out the **College of Optometrists in Vision Development's website**.

Sources and References

- [1] American Academy of Ophthalmology August 31, 2015
- [2] The Conversation April 7, 2024
- [3] Mayo Clinic, Presbyopia, Overview
- [4] Mayo Clinic, Presbyopia
- [5, 6] Scientific Reports volume 2, Article number: 278 (2012), Abstract
- [7] Med Hypotheses. 2003 Oct;61(4):465-72
- [8] Nutrients. 2020 Jun; 12(6): 1721, Distribution of Lutein in the Human Body
- [9] Nutrients. 2020 Jun; 12(6): 1721, Chemical Structures and Properties of Lutein
- [10] Nutrients. 2020 Jun; 12(6): 1721, Introduction
- [11] Curr Dev Nutr. 2019 Jul; 3(7): nzz066
- [12] Nutrients. 2020 Jun; 12(6): 1721, Lutein and AMD
- [13] Nutrients. 2020 Jun; 12(6): 1721, Lutein and Myopia
- [14] Nutrients. 2021 Jun 6;13(6):1949. doi: 10.3390/nu13061949, Abstract
- [15] Invest Ophthalmol Vis Sci. 1997 Aug;38(9):1795-801
- [16] NutritionFacts.org March 16, 2023
- [17] Life (Basel). 2023 Jan; 13(1): 77
- [18] Eur J Cell Biol. 1996 Nov;71(3):286-92
- [19] Experimental Eye Research, 79(5), 689–704. doi: 10.1016/j.exer.2004.07.009
- [20] Free Radic Biol Med. 2019 Dec;145:349-356. doi: 10.1016/j.freeradbiomed.2019.10.007. Epub 2019 Oct 9
- [21] Journal of Dairy Science January 2018; 101(1): 222-232
- [22] Scientific Reports, 8:10207
- [23] Fortune, August 15, 2018