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Our March 2025 Newsletter for Healthy Living

A Healthy Diet for Healthy Eyes

Ageing 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.

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.

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: *"Lutein and zeaxanthin are found commonly in dark green leafy veg and veggies like 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."

Some studies suggest these nutrients may also slow down or prevent age-related macular degeneration (ARMD), which is the leading cause of vision loss and blindness for Americans aged 65 and older. While there's no recommended daily intake for lutein and zeaxanthin, studies have found health

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 nine-fold. Eggs from free-range, pastured hens have bright orange yolks, which is an indication of their elevated lutein and

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benefits for lutein at a dose of 10 milligrams (mg) per day⁷ and at 2 mg per day for zeaxanthin. Meanwhile, studies suggest American adults get, on average, only 1 mg to 2 mg of lutein from their diet each day.

Lutein and zeaxanthin are primarily found in green leafy vegetables. 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. 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

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.

Following is a list of foods that are particularly rich in lutein: Most of these also contain zeaxanthin, albeit in lesser quantities than lutein: egg yolks, avocados, broccoli, and 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 activity 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.

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

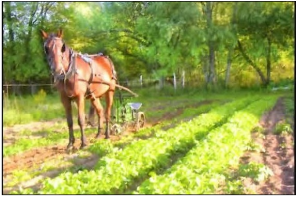
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2025 Organic Produce Club

Michigan Organic Family Farms



Farming Practices

Healthy food starts with promoting life in the soil. Our growers are certified organic. Every year these farms are inspected by a third party and certified in compliance with National Organic Program Standards. This is to assure you that no harmful chemicals, pesticides or genetically-modified organism (GMO) seeds are used in the production of your food. In the rare circumstance that an item in your box is not certified organic, we will include details and an explanation.

About Our Club

By joining our club, you become a patron of organically-grown produce. Our CSA/club has supported small Michigan family farms for over 10 years. In doing so, we have seen that the unpredictability of the seasons can significantly impact the variety, quality and value of the boxes. Simultaneously, weather variations and the availability of farm help (or not) can create problems for a single farm(er). To provide more value and variety in your weekly box, we will be working with several Michigan family farms in the 2025 season. These will include the growers from previous years, Green Valley Organics, Pleasant Lane Farm, and Homer Organic Family Farms. We will also welcome new growers Daniel Detweiler, Yost Stutzman and their neighbors in Blanchard. You will find a weekly update in your box with info about the harvest.

What are the benefits?

By subscribing to our club you are supporting Michigan Organic family farms. Not only are members getting the freshest food, but they are also using their dollars to assist and ensure that these farms remain “certified organic”. In appreciation of your patronage, you also receive: a **10% discount on any “in-store” produce purchases, any day**, for the duration of the season (June 18 - October 4); your choice of three different pickup days, and a pickup location that is super-convenient. Grab and run or choose to shop a well-stocked grocery while you’re here.

What might I see in my weekly box?

Early Season: June - mid-July

Asparagus,
Leaf Lettuce,
Swiss Chard,
Kale varieties,
Collards,
Zucchini,
Peas: Snap and Shell,
Salad Greens,
Rhubarb
Strawberries

Summer Season: July/August

Lettuce, Broccoli, Cabbage,
Cauliflower, Radishes, Beans,
Zucchini, Cucumbers,
Hot Peppers, Garlic,
Carrots, Peas, Tomatoes,
Sweet Potatoes, Basil, Garlic,
Kale, Potatoes, Green Onions,
Sweet Corn, Onions, Beets,
Summer Squash, Watermelon,
Blueberries

Late Season: September

Any remaining
summer crops,
Red Peppers,
Hard Squash,
Spinach, Pie Pumpkin,
Late Greens, Turnips,
Eggplant, Parsnips,
Cabbage, Brussels
Sprouts, Watermelon,
Cantaloupe

Enroll now through May 31st

Be a Patron of Organic Produce

Americans end up getting cataracts by the time they're 80. 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. It found those who ate more vitamin C-rich foods lowered their risk of cataracts

pholipids. This is primarily why the bio-availability of krill oil is so much higher than fish oil, because in fish oil, the DHA and EPA are bound to triglycerides.

Astaxanthin is produced by the microalgae *Haematococcus pluvialis*

“Astaxanthin has been shown to ameliorate light-induced damage, and damage to the neurons of the retinal layers.”

by one-third.

Another study 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 research 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. In a survey of optometrists in Australia and New Zealand, 79% said they recommended their patients consume omega-3 fats to improve eye health. 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), small fatty, cold-water fish such as herring, sardines and anchovies and 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 phos-

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. 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 retinopathy, retinal arterial occlusion and venous occlusion, glaucoma, and 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, 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.

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. 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 revers-

ing 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. According to the authors, "The results suggest that ... long-term supplementation with bilberry extract is effec-

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tive in prevention of macular degeneration and cataract."

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.

Additionally, 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.

Reference: Annual Review of Nutrition, 2003; 23:171-201. BBC News, Trust Me, I'm a Doctor, Can I improve My Eyesight? Medical Hypotheses, 2003 Oct; 61(4):465-72. U.S. CDC, Learn About Age-Related Macular Degeneration. Verywell Health December 9, 2022. The Journal of Nutrition March 1, 2022;132(3):518S-542S. British Journal of Ophthalmology Aug 1998; 82(8):907-910. Science Daily, March 9, 2015. Nutrients, April 2013; 5(4):1169-85. Ophthalmology December 2010; 117(12):2395-2401. JAMA Ophthalmology, 2016; 134(10):1142-49. Nutrients, 2020 April 22; 12(4):1179. Oxidative Medicine and Cell Longevity 2019; 2019:3849692. Journal of Ophthalmology, 2022; 2022:8071406. Marine Drugs, 2020 May; 18(5):229. Antioxidants 2020 August; 9(8):729. Molecules, 2019 September; 24(18):3311. Advances in Gerontology 2005; 16:76-9. Science Daily, August 31, 2015. JAMA Ophthalmology 2015; 133(10):1171-79.



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**Duration: 16 weeks/
June 18 - October 4**

Cost: \$500

Share Size: 1/2 Bushel box
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will vary w/ seasonal contents)

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Name(s) _____

Phone # _____

Address _____

Phone # _____

City/Zip _____

E-mail _____

Choose your Pickup Time: (circle one)

Wednesdays @ 7:30AM or **Thursdays @ 2:30PM** or **Saturdays @ 7:30AM**

Boxes are clearly marked with surname of subscriber and are placed on the dedicated pickup rack adjacent to the main entrance, outside the store under our canopy. **You will be able to park, pick up your box, and be on your way in as little as 60 seconds!** Boxes not picked up within 36 hours will be donated to Food Gatherers. If you will be unable to make your pickup, please e-mail info@arborfarms.com the week prior to change your day. You may also gift your box to a neighbor or friend willing to pick it up. E-mail info@arborfarms.com with questions.

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