How to Prevent a Top Cause of Blindness

Through the years, I’ve written numerous times about age-related macular degeneration (AMD). This is a horrible disease, but since it most commonly occurs after the age of 50, it’s not one most people think about. Unlike heart disease or diabetes, AMD does not get a lot of press coverage. Doctors don’t routinely discuss it with their patients or suggest steps to help prevent it. In large part, I believe this is because (1) there’s no drug or surgical cure for the disease, and (2) prevention requires the regular use of specific nutritional supplements and the avoidance of some of the most popular prescription and over-the-counter drugs.

Ignoring the problem won’t make it go away. AMD remains the leading cause of blindness in people over age 65. It’s a huge problem, and we’ve created a “perfect storm” that’s about to make it even bigger.

The elderly population in this country is increasing rapidly. In just 12 years (by 2030), almost 70 million people in the US will be over 65 years of age. Out of these people, one in three will develop some form of visual impairment. This is most commonly caused by AMD, cataracts, glaucoma, or diabetic retinopathy.

Cataracts can be corrected with surgery. And most cases of glaucoma and diabetic retinopathy can be prevented, or at least kept under control with medication and/or a change in diet and lifestyle. AMD is different.

There are some treatments that occasionally work, but more often than not, it progresses to severe vision loss and blindness. In most medical circles, AMD is considered incurable.

There are two forms of macular degeneration—wet and dry.

Dry (non-vascular) AMD is more common, accounting for 85–90 percent of cases. It develops more slowly, resulting in less vision loss. In past issues, I’ve reported how there has been success treating the dry form by using a transcutaneous electrical nerve stimulator (TENS) device.

This isn’t the case, however, with the wet form of AMD, which is much more severe and progressive than the dry form.

Wet (vascular) AMD occurs when tiny new blood vessels grow under the light-sensing area on the back of the eyeball (the retina) and then begin to leak, causing the formation of scar tissue. The resulting scar tissue clouds central vision.

Lately, doctors have been having some limited success by injecting anti-angiogenic compounds (substances that block the formation of blood vessels in the body) directly into the eyeball. This hasn’t been proven to cure AMD, but in some patients it slows the rate of vision decline.

For the longest time, the only risk factor for macular degeneration that everyone could agree on was age. Later, smoking was also recognized as a risk factor. Other factors like obesity, inactivity, heredity, high blood pressure, lighter eye color, and taking certain drugs (aspirin and anti-malarial and anti-psychotic medications) have also been added to that list.

Decades ago, I warned Alternatives readers that the routine use of aspirin could increase the risk of AMD and blindness. In 2000, I wrote that it would become America’s next epidemic. It’s a prediction that unfortunately is coming true.

Even more unfortunately, much like diabetes, arthritis, and other “age-related” diseases, macular degeneration is now starting to
occur in the younger population. One of the more recent studies found approximately 6.5 percent of Americans age 40 and older have some degree of macular degeneration. In 2010, there were 9.1 million cases of early AMD in the US, and this number is expected to increase to 17.8 million by 2050. (Arch Ophthalmol 2009 Apr;127(4):533–40)

Over the years, some research indicated that the incidence of AMD was actually decreasing, but that doesn’t appear to be the case. In fact, one of the latest studies found that approximately 25 percent of the eyes examined by primary care physicians—and deemed normal—actually had the beginnings of macular degeneration that would have been treatable with nutritional supplements had it been diagnosed at that early stage. (JAMA Ophthalmol 2017 Jun;135(6):570–5)

Not only are eye doctors not catching this disease early enough, they are still not warning their patients about the dangers of regular aspirin use.

One study found that those taking aspirin at least once a week had double the risk of macular degeneration. Even still, most doctors still advise their patients that the benefits of regularly taking aspirin outweigh the risks of internal bleeding and macular degeneration. Personally, I feel there are better ways than aspirin to address heart issues, such as exercise and certain heart-supportive supplements. Especially as I get older, knowing that daily aspirin use can lead to blindness is all the warning I need to avoid it.

When it comes to the impending AMD epidemic, aspirin isn’t the only problem...it’s more like the tip of the iceberg. Numerous other factors are also contributing to this perfect storm. Unfortunately, no one seems to be connecting the dots. The quicker you recognize and address these factors, the better chance you have of preventing AMD and blindness.

Blood Vessel Integrity

In many ways, the small vessels that supply oxygen and nutrients to the back of the eye require the same nutrients as other blood vessels throughout the rest of the body. Just like every tissue in the body, they are constantly undergoing changes that require the proper raw materials for their health and to facilitate repairs.

Key among these are clean, pure, unadulterated fats—substances that have gradually been eliminated or drastically reduced from people’s diets, thanks to the standard American diet.

Beneficial fats are typically those found in nature, not those chemically concocted or modified to increase the shelf life of processed foods. By now, everyone knows that foods like fish and olive oil contain essential fatty acids. And after years of misleading propaganda, some of the public is finally beginning to realize that eggs should also be part of a healthy diet.

Animal fat (lard) and coconut oil are other examples that have gotten a bad rap, but are necessary for blood vessel integrity. The switch from these good fats to vegetable oils may be one of the hardest things to correct and will be a primary contributor to the ongoing macular degeneration problem.

Research has shown that individuals who consume higher amounts of vegetable oils (corn, soybean, sunflower, etc.) and vegetable oil products (margarine, shortening, etc.) have twice the risk of macular degeneration compared to individuals who don’t. If that’s not scary enough, their rate of macular degeneration was 3.8 times higher than in those consuming little or no vegetable oil/products. The message is clear. If you want to reduce your risk or slow the progression of AMD, stop using vegetable oils.

Blood vessel integrity also requires vitamin C complex. Over the years, we’ve come to equate
vitamin C with ascorbic acid. In fact, if you look at most vitamin C supplements or multivitamins, they will only list ascorbic acid as the main ingredient. However, in nature, vitamin C exists as a complex, and ascorbic acid is just one part of that complex. Bioflavonoids are also part of it.

Bioflavonoids are polyphenols that give plants their colors and flavors. In earlier days, nutrition pioneers referred to bioflavonoids as vitamin P, for the vascular fragility factors. Even though our bodies can’t produce bioflavonoids (you can only get them from plant foods), they’ve never been classified as true vitamins. The scientific community still isn’t convinced they are essential to human health. I guess that’s where I have a somewhat different opinion. I define health as being free from disease, and bioflavonoids are essential in this regard.

Research has repeatedly demonstrated that bioflavonoids are essential for increasing and maintaining capillary strength, which, in turn, decreases the risk of bleeding from broken blood vessels. Bioflavonoids can help reduce bruising, bleeding gums, and leakage from the blood vessels in the eye associated with macular degeneration.

A study was just released that looked at the diets of 2,000 Australian adults aged 50 and older for a 15-year period. Since one in seven Australians over 50 already have some signs of macular degeneration, researchers wanted to determine if consuming bioflavonoid-rich foods could have a positive effect. They focused on common foods that contain bioflavonoids, such as tea, apples, red wine, and oranges.

They discovered that none of these foods made a difference, with the exception of oranges. The individuals who ate at least one serving of oranges every day had more than a 60 percent reduced risk of developing macular degeneration during that timeframe. Even just one orange a week seemed to offer significant benefits. *(Am J Clinical Nutr 2018 Aug;108(2):381–7)*

Here’s an abbreviated list of some of the other known health benefits associated with the entire vitamin C complex:

- Allergy relief
- Anti-inflammatory action
- Prevention of cancer and cardiovascular disease
- Prevention of cognitive decline and neurodegenerative diseases, and improved blood flow to the brain
- Improved liver function and blood circulation
- Protection against infections
- Slowing of the aging process

At least once a year, there is another well-publicized study released letting us know that taking vitamins is a waste of time and money. Nothing could be further from the truth, and if you are reading this, I am sure you know that.

Along with the vitamin C complex, here are some of the other vitamins and compounds that have been shown to help delay, slow the progression of, and, most importantly, prevent macular degeneration. Unless you eat a perfect diet each and every day, I don’t see how you can ensure you’re supplying your body with these nutrients without regularly taking a daily multivitamin:

- Beta-carotene
- Vitamin B complex
- Vitamin E
- Bilberries or blueberry extract (for anthocyanins)
- Quercetin
- Rutin
- Zinc
- Selenium
- Taurine
- Lutein
- N-acetylcysteine
- L-glutathione
- EPA/DHA

I suggest checking the ingredient list of the multi you’re taking. See if it contains citrus bioflavonoids and the other nutrients listed above.

There are also specifically formulated products for vision and eye health that contain strong antioxidants and herbal compounds for eye health. The ones I particularly like include zeaxanthin, astaxanthin, the Ayurvedic herbal concoction Triphala, and the Japanese Kampo medicine blend Hachimijiogan. Both have been successfully used for thousands of years in these different cultures. The Age Related Eye Disease Study 2 (AREDS2), sponsored by the National Institutes of Health, showed that supplementation with certain micronutrients reduced the progression of dry AMD to the more advanced stages by 25 percent.

**The Curse of Blue Light**

Twenty years ago, no one could have predicted the impact blue
light would have on our vision. After all, the first iPhone was released in mid-2007, only about 11 years ago.

Since that time, our exposure to blue light from mobile phones/devices and computer screens has skyrocketed—and this blue light harms vision and accelerates the progression of blindness. It’s a danger to us all, but exposure is greatest among teenagers. It is yet another factor in this perfect storm.

When is the last time you saw a teenager read a book? It’s rare these days. A recent study found that fewer than 20 percent of teenagers reported reading a book, magazine, or newspaper daily for pleasure. One out of every three teenagers hasn’t read a book for pleasure in a year.

However, 80 percent say they utilize social media every single day. Additionally, streaming video has led to a recent decline in going to a theatre to see a movie. This generation even watches television less than previous generations.

Digital media is rapidly replacing traditional media.

Blue light exposure will continue to increase as we make the transition from incandescent and fluorescent to LED lighting in our homes and workplaces to save energy. Incandescent lights do produce some blue light, but less than fluorescent, which produces less than white LEDs.

All of us are routinely exposed to blue wavelengths of light. It’s part of the light spectrum during daylight that helps set our circadian rhythm. This is natural. However, we are not equipped to handle the increased exposure from digital devices and LED lighting. Our eyes have no way to block or reflect these blue light waves.

The latest research out of Canada has shown how this overexposure to blue light damages the retina and potentially leads to blindness by increasing oxidative damage and killing the photoreceptor cells. These are the cells responsible for detecting light and triggering events that ultimately result in signals being sent along the optic nerve to the brain, allowing us to see. Once photoreceptor cells are dead, they’re dead for good. They do not regenerate.

When they discovered this process, the scientists were confused as to why our vision doesn’t naturally deteriorate more rapidly. They learned that when adequate amounts of vitamin E (alpha-tocopherol) are present, it prevents the photoreceptor cells from dying. This is thanks to vitamin E’s antioxidant activity.

Food intake studies indicate that the diets for the majority of Americans provide less than the RDA of vitamin E. It’s no coincidence that low concentrations of vitamin E in the blood have been linked to physical decline in older individuals. *(JAMA 2008 Jan;299(3):308–15)*

A lack of vitamin E reduces the body’s antioxidant capability, which increases free radical production associated with muscle and DNA.

(continued on page 8)
Bacteria and Rheumatoid Arthritis

AMSTERDAM—I’ve been talking for years about the connection between pathogenic bacteria in the mouth and gum disease and heart/cardiovascular problems. Now new research presented at the Annual European Congress of Rheumatology this summer has definitively linked periodontal bacteria to rheumatoid arthritis (RA).

A specific bacterium (Porphyromonas gingivalis) is the only known human pathogen that can express an enzyme that generates citrullinated proteins. The immune system creates antibodies to destroy these “foreign” proteins, resulting in inflammation. Although these antibodies originate in the mouth, researchers found they were also present in the joint cavities of at-risk RA patients well before there was evidence of any joint disease.

Dental examination confirmed these at-risk individuals also had gum disease and associated issues like pockets between the teeth and gums, bleeding on probing, etc.

It’s hard to overstress the importance of maintaining healthy gums. The pathogenic strains of bacteria that can originate and flourish in the oral cavity can easily enter the bloodstream in the presence of periodontal disease. And they can trigger inflammation and wreak havoc practically anywhere in the body. If you have cardiovascular disease or any inflammatory condition (arthritis, bowel problems, etc.), don’t overlook periodontal disease. Without stopping the source of the inflammation, you are simply treating symptoms.

Chronic periodontal disease isn’t just a condition that can make your life miserable; it can kill you. Excellent dental hygiene, flossing, professional cleanings, and a quality oral probiotic should be a regular part of everyone’s routine.

Not Salt’s Fault!

HAMILTON, ONTARIO—Researchers at McMaster University have found that for at least 95 percent of individuals, salt consumption doesn’t increase risk of cardiovascular disease, heart attack, or stroke. (Lancet 2018 Aug;392(10146):496–506)

Most doctors, particularly in this country, continue to spread the word that salt is dangerous and its usage should be severely restricted, if not totally eliminated. This misinformation is undoubtedly helping the sales of salt substitutes skyrocket.

Restricting salt intake can also lead to insulin resistance, a precursor to type 2 diabetes where the body no longer responds properly to insulin. In fact, salt improves insulin function. To quote the findings of one study, “an abundant sodium intake may improve glucose tolerance and insulin resistance, especially in diabetic, salt-sensitive, and/or medicated essential hypertensive subjects.” Essential hypertension is elevated blood pressure with no known cause.
Salt (sodium) is balanced in the body by potassium. So it’s no surprise there was a decrease in all major cardiovascular events as well as death in communities that had higher consumption of potassium-rich foods like vegetables, fruits, dairy, potatoes, nuts, and beans.

This study didn’t focus specifically on the connection between salt and blood pressure. But past research has shown that restricting sodium does very little to reduce blood pressure. One of these studies found that after 13 to 60 months of sodium restriction, the average drop in systolic pressure (the top number in a blood pressure reading) was 1.1 mmHg and the average drop in diastolic pressure (the bottom number) was an underwhelming 0.6 mmHg. ([J Eval Clin Pract 2003 Feb;9(1):1–22](https://doi.org/10.1198/107895403321769686))

I think one of the reasons we don’t see a direct connection between salt consumption and cardiovascular problems in this country is because the vast majority of our population suffers from undiagnosed hypoadrenia (weakened adrenal glands). A common symptom of hypoadrenia is cravings for salt.

One area that often gets overlooked in the treatment of hypoadrenia is the balancing of sodium and potassium levels. Your adrenal glands produce hormones called mineralocorticoids, which help regulate sodium and potassium. The mineralocorticoid aldosterone helps the kidneys retain sodium, which in turn aids in the reabsorption of water. In hypoadrenia, not enough aldosterone is produced and excess sodium is lost in the urine.

Without enough sodium, your body has difficulty retaining adequate amounts of water. As a result, you may experience problems like frequent urination and/or a tendency to perspire excessively with little or no activity. The result is dehydration.

For nerve impulses to be transmitted properly, there must be an adequate amount of sodium outside a cell and an ample supply of potassium inside a cell. Sodium and potassium work as opposites. With hypoadrenia, too much sodium is lost and too much potassium is retained. Nerve transmission is abnormal and sporadic. This can cause muscle spasms and twitches (especially during the night or upon first awakening) and heart palpitations.

There’s a simple test you can use to evaluate the relationship between hypoadrenia and poor nerve conduction. The test should be performed using a small penlight in a dark room. While standing or sitting directly in front of the person being tested, hold the light approximately six inches or so from the side of your forehead and shine the light into the center of one of their eyes. Normally, the light will cause the pupil (the black portion of the eye) to constrict (shrink) and stay constricted. But with hypoadrenia, generally one of three things occur:

1) The pupil will open up immediately.
2) The pupil will fluctuate constantly, opened to closed.
3) The pupil will first close and then within 30 seconds of continued light exposure, reopen.

All of these are abnormal pupillary reflexes to light indicative of hypoadrenia and make one extra sensitive to light.

Hypoadrenia patients complain about bright sunlight. They often feel the need to wear sunglasses, even indoors. They have difficulty driving at night. When they encounter bright headlights, it will take an abnormally long time for their eyes to readjust.

There’s another often overlooked and misunderstood symptom of sodium/potassium imbalance.

Sodium and potassium have opposite electrical charges. Your body uses this difference in electrical potential to move water in and out of the cells. When your adrenal glands are depleted, though, sodium levels drop below normal. Excess sodium gets excreted with urine, taking precious water with it. This accounts for the dehydration,
excessive perspiration, and urge to urinate 15 or 20 times a day.

Although it may sound crazy, at the same time hypoadrenia is causing dehydration and a loss of fluids from the body, it can also cause bloating or swelling.

With hypoadrenia, as sodium decreases, the potassium inside the cells creates what is called an osmotic imbalance. Without adequate amounts of sodium, potassium becomes too concentrated. To correct this situation, your body allows fluids to enter the cell in order to dilute the potassium. This causes fluid retention inside the cell (called non-pitting edema).

This bloating, especially in the ankles or wrists, can occur quite rapidly after drinking something alcoholic like beer or wine or even non-alcoholic diuretic drinks such as tea. Diuretic drinks cause the loss of more water and sodium from the body.

The next time you are out on your feet, load up on water and a salty snack. Or, if you have access to a juicer, drink the juice from a half-dozen stalks of organic celery. Celery is loaded with natural salts and the juice can be a quick-acting tonic to alleviate dehydration-related swelling, dizzy spells, headache, and muscle cramping. You’ll be surprised by just how quickly the situation can be corrected.

There are many doctors out there who are unfamiliar with the consequences of hypoadrenia. At the first sign of edema, they will prescribe a water pill (diuretic). This will only make the problem worse by further dehydrating the patient. If the extra sodium loss leads to heart palpitations and arrhythmias, a well-meaning doctor could be inadvertently responsible for triggering a patient’s heart attack.

(There’s obviously more to overcoming hypoadrenia than just consuming salt. It involves restricting refined carbohydrates, managing stress, and specific nutritional support.)

The Takeaway

The take-home from this study should be that salt is just fine for almost everyone, and probably necessary for most people. This runs contradictory to what most people hear, but that’s nothing new, as you know. It can take decades for the public to learn the truth when it comes to health matters. The pharmaceutical companies, food industry, government agencies, and various health associations have enormous financial interests that take precedence over the health of the public.

For example, the World Health Organization currently recommends less than 2 grams of salt (one teaspoon) a day. The American Heart Association (AHA) recommends only 1.5 grams of salt daily. Of course, they still recommend the use of corn, soybean, and other vegetable oils, while warning people to stay away from healthy fats like coconut oil and butter because they contain saturated fats. You’d have to be living under a rock for the last decade to be ignorant of the positive research on saturated fats, which has debunked the idea they are the cause of cardiovascular disease. The AHA obviously has chosen to overlook the research that doesn’t support the best interests of their corporate sponsors.

Another point from this study to keep in mind is that, since the body counterbalances sodium with potassium, a diet with an abundance of vegetables, fruits, nuts, and beans offset any negative health effects of salt. Everyone could benefit from more of these potassium-rich foods in their diet.

Aside from eating these foods, another easy method of increasing your potassium is to combine one of the potassium chloride salt substitutes with your regular salt. A couple that come to mind are Morton’s Salt Substitute and Nu-Salt. A 50/50 blend works well.

Finally, for the salt itself, I recommend using sea salt. There’s nothing seriously wrong with normal table salt, but sea salt doesn’t contain any anticaking additives and it supplies trace minerals as well. ■
damage and the development of numerous pathological and/or chronic conditions. A short list includes an impaired immune response, cognitive decline, heart disease, atherosclerosis, cancer, and eye disorders like macular degeneration/blindness.

I suspect if/when the public becomes more aware of this blue light issue, television and digital device makers, as well as LED bulb manufacturers, will all begin to add filters that will help block excessive blue light. At least I would hope so.

The newer Apple iPhones and iPads that run iOS 9.3 or later have a setting that allows you to reduce the blue light. I suggest doing this if you have one of these products by going to Settings>Display & Brightness>Night Shift. On an Apple Mac computer with an updated operating system (Sierra 10.12.4), go to Apple Menu>System Preferences>Displays>Night Shift.

You can set the change to start and end automatically depending on the time of day. Also, you can control the intensity of the blue light by sliding a control toward “more warm” for less blue light or to “less warm” for more blue light.

If you use a PC with Microsoft Windows 10, Creator Update allows for screen adjustments as well. Go to Start Menu>Settings (or Gear Icon)>System>Display>Night Light.

The same advice I have been giving for years still applies even after you adjust the blue light on your digital devices. Avoid exposure to blue light as much as possible, especially before bedtime, and regardless of your age, make sure your daily vitamin regimen includes vitamin E.

It’s important to keep in mind as well that since vitamin E is fat-soluble, for many people it becomes harder to digest as they get older, particularly if they’ve had their gallbladder removed. In these cases, I highly recommend taking bile acids for life with each major meal. Even with a functioning gallbladder, some individuals need additional digestive enzymes to improve their fat digestion capabilities. As we get older, our bodies naturally produce fewer of the acids and enzymes needed for proper digestion. That’s why I believe the most effective multivitamin/mineral supplements include digestive enzymes.

Teenagers are obviously one segment of the population that should be made aware of the danger of blue light exposure. They were born with almost immediate exposure to electronics, and these devices are here to stay. It would be a real shame if millions of these young people needlessly suffered from vision loss or other eye problems when there’s a simple way to prevent it. Unfortunately, their propensity for reading is declining. Unless they just happen to watch a YouTube video explaining these dangers, they’re apt to be the least informed on the topic.

Please pass this information along to as many people as you can...young and old. Prevention is the only answer. There is no cure for blindness.

Until next month,