

How to protect yourself against vision loss, a growing problem

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Ask Americans to name the ailment they fear most, and blindness ranks at the top, along with Alzheimer's and cancer, according to a recent survey by the Wilmer Eye Institute at Johns Hopkins University. And yet each year, 50,000 Americans go blind, nearly half from eye diseases that are treatable or preventable.

What's worse, the number of Americans who are either blind or visually impaired is expected to double by 2050, most of it driven by an aging population and the growing number of people with chronic conditions that can cause vision loss, such as diabetes, says James Jorkasky, executive director of the National Alliance for Eye and Vision Research.

The challenge for vision experts is to make Americans aware of the things they can do to protect their eyesight, including getting a regular eye exam. Only half of the estimated 61 million Americans at high risk of losing their eyesight had an eye exam in the past 12 months - partly due to a lack of insurance coverage for preventive eye care and glasses, noted a National Academies of Sciences, Engineering and Medicine report last fall, but also because many eye diseases don't show symptoms in the early stages, so people don't realize they have a problem.

Doctors, too, may need to step up their game. A new study in the journal JAMA Ophthalmology found that in one of four cases, trained eye professionals missed the early, more treatable signs of age-related [macular degeneration](#) (AMD) - an irreversible loss of vision that affects 14 million Americans.

But there is some good news for those already diagnosed with [eye disease](#), including new treatments and cutting edge research that could bring hope to millions in the near future. There are also simple changes everyone can do to greatly reduce their risk of eye disease. Here's what you need to know:

Cutting edge technologies

- Glaucoma is caused by a buildup of damaging pressure within the eye and requires a daily dose of medicated eye drops to hold the disease at bay. Unfortunately, getting patients to follow that regimen daily for years is difficult, says Dr. Andrew Iwach, board chairman for the Glaucoma Research Foundation. Instead, clinical trials have started testing a thin polymer ring to be worn in the eye that would slowly release medication throughout the day. "It's like drip irrigation, rather than flooding the eye," Iwach says.

- Using [stem cells](#) to regenerate healthy cells in disease-damaged eyes is the holy grail for researchers. This is especially true for incurable conditions that damage the retina, the layer of light-sensitive cells at the back of the eye.

Earlier this year, a Japanese man became the first person to receive retinal stem cells created from donated skin cells to stop his macular degeneration from getting worse.

And scientists at the Jules Stein Eye Institute at the University of California at Los Angeles report promising results from transplanting stem cells from embryonic cells into patients who had been blind for decades from AMD and another disease. A study in 2014 reported that 10 of the 18 patients who received the cells experienced significantly improved vision.

- The Argus II, a bionic retina approved by the Food and Drug Administration, is now being used by more than 100 people with retinitis pigmentosa and other related conditions. It also recently was implanted in the first person with macular degeneration.

This "bionic eye" uses a tiny camera attached to glasses that sends visual data to a microchip implanted in the eye, which then sends light signals to the brain. So far, the vision it provides is rudimentary, but patients say even some vision can greatly improve the quality of life for a blind person.

WAYS TO HELP YOUR EYES

To keep your eyes healthy, says the National Eye Institute, get a dilated [eye exam](#) to detect problems early; know your family history and whether you're at risk for eye disease; wear sunglasses to block out ultraviolet rays that can increase the risk of cataracts; and control your diabetes to prevent damage to the retina.

Here are five other surprising things that can help:

- Adjust your yoga and sleep position: Those with glaucoma should avoid head-down positions in yoga (downward facing dog, for example), which can cause a dangerous rise in internal eye pressure, a study last year found. Other studies show that habitually sleeping on one side can cause greater pressure and worsening vision loss in the eye facing downward.

- Got dry, irritated eyes? Add more fish to your diet. The omega-3 oils in fish not only can cut the risk of dry eyes, studies show, but omega-3 fish oil supplements may improve dry eye symptoms. A new study published in the journal *Cornea* found that taking a daily omega-3 supplement improved dry eye symptoms after six weeks.

- Think of it as Vitamin See. A diet high in vitamin C - oranges, red peppers, strawberries, broccoli - may help curb cataracts by 33 percent. British researchers believe vitamin C helps prevent the clouding of the lens that causes cataracts, but their findings only pertain to vitamin C from food, not supplements.

- Send your children outside. Adults aren't the only ones with dry eye woes. A new study finds the same problem among children ages 7 to 12 who spend more than three hours daily looking at a smartphone. Playing outside could help. Researchers at the University of Cambridge report that for every hour children play outside in natural light with far-away horizons, they reduce their risk of near-sightedness by 2 percent.

- Exercise (and spinach) helps glaucoma. A brisk walk for 20 minutes four times a week can lower the pressure inside the eye, which helps protect the retina, according to the Glaucoma Research Foundation. Adding more dark, leafy greens - spinach, kale - to your diet could help too. A recent study found that those who ate the most greens were 21 percent less likely to develop glaucoma.

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