

My name is Dr. Steven Pratt. I am a senior staff ophthalmologist at Scripps Memorial Hospital in La Jolla, California.

Over the last 22 years, I have diagnosed vision loss in thousands of seniors, people for whom their eyesight suddenly becomes the center of their existence. I have seen them struggle with remaining independent and I have seen them lose that independence when nothing more can be done. I have seen devastation when an older person loses the ability to drive, in a country where driving equals independence.

There are four main causes of vision loss in elderly Americans: cataracts, glaucoma, diabetic retinopathy and age-related macular degeneration or AMD. As a physician, it is my job to diagnose and treat these conditions whenever possible. And in many cases, I can do my job. I can remove cataracts. I can treat glaucoma with medications or surgery. I can reduce vision loss from retinopathy through photocoagulation therapy. I can cure and I can give hope.

But every day across this country, ophthalmologists diagnose patients with age-related macular degeneration. And then, in many cases, those doctors must send the patients home without a cure, without hope.

Because of this, I have watched my own mother and grandfather become legally blind from macular degeneration -- a truly unpleasant, helpless experience.

AMD is the leading cause of irreversible blindness in persons over the age of 65. The Beaver Dam Eye Study estimates that 25 percent one-quarter of the population over 65 has clinical evidence of the disease. The numbers worsen as age increases. In persons 75 and older, fully 33 percent have symptoms of AMD. Another 23 percent will have signs of AMD by the time they turn 80 years of age. Prevalence of AMD is highest in the fastest growing age group--85 and older. By the year 2050, there will be upwards of a million Americans 100 and over.

Combine these facts and we have a vision loss epidemic, not only in the U.S. but also in industrialized countries across the world. As we increase lifespan, we must do more to increase health span.

Yet, AMD is an invisible disease. Awareness is extremely low. And because treatment options are limited and a cure does not exist, it seems that very few health care dollars are spent on AMD.

The fact is, however, that AMD and other diseases that cause vision impairment in the elderly do cost money, primarily from increased need for nursing home care and assisted living. In addition, AMD has a disabling ripple effect in seniors. With vision loss, falls and fractures increase, exercise decreases, leaving the person at risk for diabetes, obesity and heart disease.

The position I will present today is that changes in diet and other lifestyle habits should be a priority as we combat this disease and attempt to keep our health care costs under control.

Numerous studies are under way to find a cure. Some forms of AMD can be treated with lasers but, at best, we can only halt progressive loss of vision. Promising phototherapy techniques are under development but can only be used in a small number of cases. Tissue transplants are being investigated - - an expensive solution to a disease that affects millions of people in a health care system with limited resources.

By the time a person is diagnosed with AMD in their 60s or 70s, the disease has been developing for

decades. This leads me to conclude that prevention is the only realistic hope for halting the increasing prevalence of AMD -- prevention that must start at an early age.

Prevention of AMD must involve synergy between changes in both dietary intake and lifestyle. Increased risk of AMD has been linked to cigarette smoking, excess alcohol intake and lifetime sun exposure, in addition to genetics, gender and light colored irises. But the most intriguing risk factor is low dietary intake of fruits and vegetables.

Several dietary factors may contribute to AMD prevention, including Vitamin E, polyphenols, carotenoids, and the mineral zinc. Most promising are two related nutrients lutein and zeaxanthin -- found in all fruits and vegetables but particularly in dark green leafy vegetables. Lutein can also be well absorbed from vitamin supplements, raising blood and tissue levels.

Research provides conclusive evidence that lutein functions as an antioxidant in the human macula and in other parts of the body subject to damaging radicals. Investigators at Schepens Eye Research Institute found that high levels of lutein and zeaxanthin in the macula may protect against retinal disease. Persons with high levels of lutein in their diets have a 43 percent reduced risk of developing wet AMD, the most visually disabling form of the disease.

Equally important, research indicates that lutein may help in the prevention of cataracts, and perhaps glaucoma.

But indications are that Americans do not consume enough of this beneficial nutrient. Recent U.S. Department of Agriculture studies indicate that only 1 percent of Americans eat a green, leafy vegetable each day. Lutein consumption in women actually decreased by 18 percent between 1987 and 1992, despite higher AMD risk in women.

Recently I attended the annual meeting of the Alliance for Research in Vision and Ophthalmology and met researchers from across the world who are focusing their studies on lutein and its link to AMD prevention. They shared with me their triumphs -- the growing preponderance of evidence that lutein and zeaxanthin are essential nutrients in the prevention of AMD. But they also shared with me their frustration. Their repeated efforts to obtain funding from the National Institutes of Health for further lutein research. And their repeated failure to obtain the dollars they need.

I respectfully submit that we must focus our attention on research and education that will help prevent age-related macular degeneration and other eye diseases. Clinical trials must be done to determine lutein's role in treatment and prevention. Americans must learn to eat more carotenoid- and lutein-rich foods or take lutein supplements. We owe it to ourselves and our rapidly aging population.

Thank you.