

Written by Michael G. Richie, M.D.

You know her well, Aunt Esther, the sweetest of all your relatives, the first to smile and ask about your kids. Amazingly, she knows not only their names and ages, but also where they are in school and what sports teams they play on. She comes to all the home games, Christmas concerts, and piano recitals. Amazing, especially when you consider that Aunt Esther no longer drives and even stopped her local paper...all because her vision is failing.

Finally, while driving her home from Sarah's last hockey game, you ask Esther about her vision. With a sigh, she tells you that she can see, just not good enough to read or drive a car. She has macular degeneration, has had it for years, but just lost most of her vision in the last year or so. Not so bad, really, she says, but giving up driving was the worst part of the whole process. Still, she maintains that ever smiling face and up-beat attitude that has always made her your favorite relative.

Back at home that evening you cruise the internet, looking for more information on macular degeneration. First of all, you learn that age-related macular degeneration (AMD) is far more common than you realized, affecting nearly 2 million Americans over 65 years old. In addition, it is the single most common cause of new onset legal blindness in that same population and is only going to become more common as the baby boom generation ages.

AMD is a general term that refers to a gradual, age-related deterioration of the nerve cells in the back of the eye called the retina. The central portion of the retina, the macula, the area that provides us with sharp vision for reading and seeing detail, is primarily affected by AMD. The internet references classify AMD into two primary categories: wet and dry.

Dry AMD is the most common variety, accounting for 90% of all cases of AMD. It tends to be slowly progressive, occurs at a later age, and vision can range from reasonably good to quite bad. Sudden changes in vision are not the usual, but people with dry AMD can get very frustrated with visual fluctuation; some days, with good light, vision can be good but the next day it can be terrible. Bad lighting, overcast days, poor quality print with poor contrast...these are just some of the variables that come into play for people with dry AMD.

Wet AMD, on the other hand, is not as common though every bit as important. Abnormal blood vessels will develop in and under the macula and cause leaking and bleeding, thus the term "wet." The blood and fluid causes a sudden change in vision, straight lines become crooked, and letters get distorted. The problem, although AMD is usually present in both eyes, will commonly affect only one eye at a time, making detection somewhat easier. A simple home test with an Amler grid also aids in rapid detection and diagnosis.

Once developed, AMD is difficult to treat although tremendous advances have occurred in the last several years in treatment of wet AMD. Research has produced a number of drugs that, when injected directly into the eye, can cause the abnormal leaky blood vessels to regress, shrivel up, and go away. Once that happens, the excess fluid can resorb and vision can recover, sometimes with amazing results. The medicines (Avastin, Lucentis, and Macugen) usually last several months, so repeat injections are common, even as often as every two months. With time, however, the vision may stabilize and the injections can be less frequent or even not at all.

Researchers identify three main risk factors in the development of AMD: genetic, circulation, and nutritional factors. Obviously, you cannot choose your family, but a family history of AMD is significant and completely out of your control. You can, however, improve your vascular status by controlling diabetes, blood pressure, and weight...all of which will increase circulation. Regular exercise also reduces the risk of vision loss due to AMD, but smoking is the single biggest factor we control. Cigarette smokers, especially women, are ten times more likely to go blind than non-smokers.

The Age-Related Eye Disease Study (AREDS) in 2001 identified several vitamins and minerals which, in moderately high doses, can help preserve vision in people with AMD. Although the study did not specifically look at prevention, most eye doctors now recommend vitamin supplements for people with AMD and those at risk. Vitamin C, vitamin E, beta-carotene (vitamin A), zinc, copper, and lutein are the primary components found in eye vitamins like OcuVite, I-Caps, Ocular Nutrition, and other AREDS-formula vitamins found over-the-counter at drug stores and super markets. Take two each day for prevention, four each day if you already have AMD. As an aside, sunglasses can protect those who have had cataract surgery.

Now that you understand Aunt Esther's problem a little more thoroughly, you realize AMD is a very real problem that we will all come into contact with now or in the coming years. Although we have no prevention, we can lower our risk factors by controlling blood pressure and blood sugar, getting regular exercise and keeping our weight in line, taking those vitamins, wearing our sunglasses and keeping that annual eye exam appointment, Above all...put out that cigarette.