



Thomas P. Finley, OD

Dr. Finley received his Bachelor of Science degree from St. Francis College in Pennsylvania, and his Doctorate of Optometry from the Pennsylvania College of Optometry. Following graduation, he served as an optometrist in the U.S. Air Force and was awarded the Meritorious Service Medal and the Commendation Medal.

Dr. Finley has served as an adjunct clinical professor for three optometry schools and has been a clinical investigator for two major contact lens companies. He has published several articles in professional and trade journals and local newspapers, as well as lectured at many conferences throughout the area.

Dr. Finley is a Fellow of the American Academy of Optometry, a Fellow of the Virginia Academy of Optometry, and a member of the American Optometric Association, Virginia Optometric Association, Northern Virginia Optometric Society, and Armed Forces Optometric Society. He is an Advisory Board member for TLC Laser Eye Centers, and area Administrator for Vision Source, a national network of independent optometrists.

Locally, Dr. Finley serves as an active member of the Herndon Rotary Club (past president), Chamber of Commerce (past board member), Optimist Club (youth sports coach), Knights of Columbus (past board member), and current board member for the Jeannie Schmidt Free Clinic. He was awarded Herndon's "Distinguished Service Award," the Chamber of Commerce's "Small Business of the Year Award," and *The Times* Newspaper's "Best Eye Doctor Award." He has owned his practice in Herndon since 1989.

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Genetic Testing For Age Related Macular Degeneration

By Thomas P. Finley, OD

Age related macular degeneration (AMD) is one of the leading causes of severe vision loss among people over age 50. It negatively affects a person's ability to see clearly making it extremely difficult or impossible to do many of the tasks and activities they normally like to do. As our population continues living longer, more are affected with this debilitating disease.

AMD results from changes to the central sensitive portion of the retina in the back of the eye. This "bull's eye" area is called the macula and is made up of millions of light-sensing cells. The macular area is responsible for clear sharp central vision and is much more sensitive than the rest of the retina. It is the portion of the eye that allows us to see sharp details and bright colors.

Some people are more prone to develop macular degeneration than others. Age seems to be the greatest risk factor. AMD increases significantly as we become older. Heredity plays a role so if one of our blood relatives has or had AMD, we will be more prone to also develop it. Women tend

to be at greater risk than men. Whites are more likely to suffer vision loss from AMD than blacks. Smokers are more prone to develop AMD because smoking causes a decrease of oxygen reaching the macular area of the eyes.

Today, thanks to ongoing technological advances, we have a new test available that can predict an individual's risk for developing advanced AMD. Macula Risk®, which is manufactured by ArcticDx, Inc., can be administered in the office to patients who exhibit early signs of AMD. Macula Risk helps eye doctors predict a patient's risk of developing advanced and debilitating AMD with an 83% predictive value.

The test is administered by taking a cotton swab sample of a person's inner cheek, and then sending it to a lab. Test results usually take a few weeks. The DNA test analyzes at least four genes implicated in AMD. It is quick and painless, and because a person's genetic make-up does not change over time, the test is administered only once in a lifetime. Most insurance companies will cover the cost of the test when a person has early signs of

macular degeneration.

Results of the test separate patients into one of five macular risk categories. Categories 1 and 2 are the low and average risk scores, have a 0-15% chance of progressing to advanced AMD, and comprise about 80% of the population. Categories 3, 4, and 5 represent a significantly increased risk of developing advanced AMD (16-96.5%), and include 20% of the population.

Knowing a person's risk score will help determine the appropriate frequency of eye examinations needed to monitor a person's macular health. It will also help doctors counsel patients on risk modification before the clinical disease is present.

Vitamin therapy, which has been shown to help may be initiated sooner. Behavior modification (eat healthier, exercise, quit smoking) becomes more relevant. The goal is to maintain healthy eyes, preserve vision, and/or refer for advanced care before any significant vision loss occurs.

Our vision is our most precious sense. New Macula Risk DNA testing is one added tool available to help us preserve our vision as we all become older.



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