Macular Disease

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What is the macula? The macula is that portion of the retina which contains the highest concentration of cone photoreceptor nerve elements, the retinal nerve fiber elements most responsible for color vision and for fine, detailed, discriminating eye sight. It is this portion of the eye that is "fixed" or "focused" onto something which one wants to see in great detail. Obviously, damage or disease to the macula could be reasonably expected to have profound consequences on the quality of eyesight. Indeed, it does.

Macular disease is a major cause of vision loss in all societies. The reasons for the macula degenerating, becoming no longer normal, is varied and complex and incompletely understood. The most common degenerative macular disease, age-related macular degeneration, essentially occurs, as the name implies, in patients over the age of fifty to sixty years old, and, regrettably, it tends to get worse at the patient ages. Some of the factors that appear to be related to development and progression of this disorder include genetics (family history), ultra violet light (e.g., sunlight) exposure, diet (deficient in certain vitamins and antioxidants), and smoking tobacco. Obviously, any of those features and factors that can be modified should be modified: patients who smoke should stop; patients who are not eating a balanced diet with at least five servings of fruits and vegetables, particularly those rich in deep green and orange/yellow colors should modify their diets; and patients should always have good quality ultra violet protection against sunlight affecting the retina when they are outdoors. No drug therapy has yet been discovered that is definitively proven to be effective at slowing down the progression of macular degeneration, though many research trials are currently in progress, including here at the Massachusetts Eye Research and Surgery Institution . We are extremely encouraged by the results that we are seeing with the new monoclonal antibody treatments directed against abnormal blood vessel growth in our care of patients with the "wet" form of macular degeneration, and are hopeful about prevention of progression of macular degeneration through the use of specially formulated preparations of vitamin and mineral supplements which are believed to slow the progression of the disease.

One of the more important things that a patient with age-related macular degeneration can do is to be evaluated with some regularity by a person who is an expert in this disorder, typically, a retina specialist with particular interest in the disease. That doctor can then educate the patient fully as to what he or she can do, what he or she might expect in the future, and can monitor the patient to guard against one of the more catastrophic consequences of the disease, the development of fragile, new blood vessel growth under the retina, which, if not treated with laser therapy, can rupture and produce hemorrhage under the retina, with dramatic loss of vision abruptly.