

Lifestyle and Dietary Modification for Patients with Age-Related Macular Degeneration

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Various studies have demonstrated that modifying one's lifestyle and/or diet May be beneficial in preventing loss of vision and preventing progression of age-related macular degeneration. Since there is no cure for age-related macular degeneration, the hope is that by performing some or all of these modifications that you may prevent for vision from becoming worse. This handout will summarize the recommendations from a number of studies to this end.

A number of studies have demonstrated that smoking can make macular degeneration worse. In particular, smoking does appear to be linked more closely with the development of the wet form of macular degeneration. Therefore, it is recommended that anyone with macular degeneration should completely stop smoking. This obviously is quite difficult for those individuals who have smoked for a number of years. In such cases, their medical doctor or internist may make recommendations for the use of medications that can help in the cessation of smoking. For those patients who absolutely cannot stop smoking completely, then reducing smoking may be beneficial also, although this has not been studied.

Other studies have demonstrated that prolonged exposure to sunlight, especially in the 20's and 30's, may contribute to the development of age-related macular degeneration later in life. In particular, the ultraviolet and blue wavelengths of light may be harmful to the retina. Therefore, the general recommendation is that all patients with macular degeneration were sunglasses that at least block out ultraviolet light. Blocking out some blue light may also be beneficial, but this is

uncertain. Blocking out all blue light would prevent the individual from seeing blue light. Anything that is blue would then be black. This color misperception may be difficult for some patients to adjust to. Therefore, it is recommended that all patients with macular degeneration wear sunglasses that block out ultraviolet light and do so whenever they are outdoors, except at night.

Another study has demonstrated that a certain type of body habitus may be associated with the progression of age-related macular degeneration. In particular, the study has recommended that patients with macular degeneration exercise three times a week, an hour at a time, in order to reduce the chance that the macular degeneration may advance. This exercise can be as simple as walking.

Lutein is a supplement that may be beneficial for patients with macular degeneration. Lutein can be taken separately or can be taken as part of a multivitamin such as *Centrum Silver* or *Vit-Eyes* with lutein. The exact dosage of lutein, however, is unclear. Further studies are under way to determine the efficacy and the dosage of lutein.

Several studies have demonstrated that dark, leafy, green vegetables may be beneficial for patients with macular degeneration. These vegetables include spinach, kale, mustard greens, collard greens, and turnip greens. The study has recommended that patients with macular degeneration eat ½ cup servings of these dark, leafy, green vegetables four or five times a week if possible. Because spinach is more common in this region, most patients simply eat spinach. Spinach can be eaten either cooked or fresh, as in a spinach salad. Spinach can be purchased fresh, frozen or canned. The nutrients in spinach which appear to be beneficial are lutein and zeaxanthine. Finally, another study has demonstrated that eating fish which are high in omega-3 fatty acids reduce the risk of developing the wet form of macular degeneration. The fish that are high in omega-3 fatty acids

include salmon, tuna, mackerel, anchovy and sardines. The study which showed eating such fish as being beneficial recommended that patients with macular degeneration eat such fish one or two times a week. For those patients who cannot eat fish, taking fish oil capsules or omega-3 fatty acid capsules may substitute for the fish itself.

Finally, a landmark study called the Age-Related Eye Disease Study (AREDS) has demonstrated that higher than normal dosages of certain vitamins can reduce the risk of loss of vision and progression of macular degeneration in up to 25-30% of patients with mild to moderate age-related macular degeneration. The vitamins include Vitamin E 400 IU daily, Vitamin C 500 mg daily, beta-carotene 15 mg daily, zinc as zinc oxide 80 mg daily, and copper as cupric oxide 2 mg daily. Rather than taking these vitamins separately, there are a number of pharmaceutical companies that manufacture such vitamins in a combination. *Bausch and Lomb's OcuVite PreserVision* is one such vitamin. It requires the patient to take two pills twice a day to achieve these dosage levels of vitamins. Another pharmaceutical manufacturer produces *Vit-Eyes*, which has the same combination as indicated in the study. This particular vitamin is to be taken one tablet twice a day. For patients who smoke or who recently quit smoking less than ten years ago, they should avoid high dosages of beta-carotene because several studies have demonstrated that beta-carotene may increase a smoker's risk of lung cancer. Therefore, patients who are smokers or who recently quit should take only Vitamin C, Vitamin E and zinc. These may be taken individually or as a combination with *Vit-Eyes—Smoker's Formula*.

A recent study which evaluated the dietary history of patients to determine what foods may contribute to progression of macular degeneration found that processed foods may be harmful to the eyes of patients with macular degeneration. By processed foods, the study means cookies, cakes, pies, muffins, French fries and potato chips. Typically, processed

foods are foods in which the manufacturer adds vegetable or animal oils or fats to the natural food source. Therefore, it is recommended that patients with macular degeneration avoid such processed foods. Instead, patients should eat more natural foods in which nothing is added to the food. This would include fruits, vegetables and nuts. Eating fruits three times a day was much more beneficial than eating fruits just once a day. Any type of nut may be beneficial in this regard. It is also felt that nuts may be protective to the eyes of patients with macular degeneration. Although peanut butter has nuts, the regular peanut butter that most people purchase and eat is a processed food because hydrogenated vegetable oils are added to this. Therefore, for patients who prefer to eat peanut butter, but without the oils, they should purchase natural or organic peanut butter in which no oils are added. *Smucker's* and *Heinen's* do manufacture such peanut butter without the oils added.

It is impossible to predict whether following any of the above recommendations will prevent loss of vision in your particular case. However, at this point, we have nothing else that we can offer patients with macular degeneration to prevent visual loss. Therefore, anything that you can do as recommended above may be helpful in preserving your vision.