

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

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Studies have demonstrated that modifying certain factors in one's lifestyle and/or diet may be beneficial in preventing loss of vision and preventing progression of age-related macular degeneration (AMD). Since there is no cure for AMD, the hope is that, by modifying some or all of these factors, you may prevent your vision from becoming worse.

Smoking

A number of studies have demonstrated that smoking can make macular degeneration worse. In particular, smoking appears to be linked more closely with the development of the wet form of AMD. Therefore, it is recommended that anyone with AMD should completely stop smoking. This obviously is

quite difficult for 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. For nonsmokers, exposure to smoking (second-hand smoke) increases the risk for macular degeneration. Reducing exposure to second-hand smoke may reduce the risk for macular degeneration.

Sunlight

Other studies have demonstrated that prolonged exposure to sunlight, especially when people are in their 20s and 30s, may contribute to the development of AMD 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 AMD wear sunglasses that block out at least 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 appear to be black. This color misperception may be difficult for some people to accept. Therefore, it is recommended that all patients with AMD wear sunglasses that block out ultraviolet light and do so whenever they are outdoors, except at night.

Exercise

Several studies have demonstrated that exercise may prevent the development of AMD, the progression of AMD, or the development of wet AMD. A study in runners found that the relative risk of developing AMD decreased based on the daily running distance. Compared with people who averaged less than 2 kilometers (1.24 miles) of running per day, people who averaged 2-4 kilometers (1.24 – 2.48 miles) of running per day had a 19% lower risk of developing AMD; those who averaged 4-8 kilometers (2.48 – 4.97 miles) per day, a 42% lower risk; and those who averaged 8 kilometers (4.97 miles) or more per day, a 54% lower risk. Another study found that walking several city blocks each day reduced the risk of developing wet AMD by

30% and that performing 3 or more sessions per week of sweat-inducing exercise reduced the risk by 70%. A third study demonstrated a 2-fold increased risk of progression of AMD with larger waist circumference or waist-hip ratio. It also found that vigorous physical activity 3 times a week was associated with a 25% reduced progression of AMD.

Nutrition

Several studies have shown that dark, leafy, green vegetables may be beneficial for patients with AMD. These vegetables include spinach, kale, mustard greens, collard greens, and turnip greens. It is recommended that people with AMD 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 that appear to be beneficial are lutein and zeaxanthin.

Other studies have found that eating fish that are high in omega-3 fatty acids may reduce the risk of

developing the wet form of AMD. Fish that are high in omega-3 fatty acids include salmon, tuna, mackerel, anchovy, and sardines. The studies recommended that people with AMD eat such fish 2 or more 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.

Another study found that omega-6 fatty acids appear to be a problem. It is recommended that AMD patients should reduce their red meat consumption to just one or two meals a week.

A study that evaluated the dietary history of patients to determine what foods may contribute to progression of AMD found that processed foods may be harmful to the eyes of patients with AMD. By processed foods, the study meant cookies, cakes, pies, muffins, French fries, and potato chips. Typically, processed foods are foods to which the manufacturer adds vegetable or animal oils or fats, especially trans-fats, to the natural food source. Therefore, it is recommended that people with AMD avoid such processed foods. Instead, they should eat

more natural foods to which nothing is added, such as fruits, vegetables, and nuts. The study found that eating fruit three times a day was much more beneficial than eating fruit 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 AMD. Although peanut butter is made from nuts, the regular peanut butter that most people purchase and eat is a processed food because hydrogenated vegetable oils are added to it. Therefore, patients who prefer to eat peanut butter, but without the hydrogenated oils, should purchase natural or organic peanut butter in which no oils are added. Smucker's manufactures such peanut butter without the oils added. Natural foods stores and some supermarkets also sell freshly ground nut butters made only from nuts.

Nutritional supplements

The original landmark Age-Related Eye Disease Study (AREDS), which began in 1992, demonstrated that daily intake of certain vitamins and minerals could reduce the risk of advanced AMD by about 25% over a 5-year period. The 10-year AREDS results

found a 27% reduced risk of advanced AMD, with a significant reduction of both moderate vision loss and wet AMD. The results of a subsequent study, AREDS 2, were released in 2013. Based on the results of this study, the recommendation for the new AREDS2 nutritional supplement formula is vitamin C (500 mg), vitamin E (400 IU), zinc oxide (80 mg), cupric oxide (2 mg), lutein (10 mg), and zeaxanthin (2 mg) taken daily. More recently, there have been some exciting advances in genetic testing for patients with AMD. We now have the ability to determine, based on the presence or absence of certain genes, which supplements would be most likely to be beneficial for a person with AMD. Therefore, patients should discuss with their doctors which supplements would be best to take.

Family members of patients with AMD

For family members of patients with macular degeneration, it is recommended that they follow the dietary recommendations, exercise, avoid smoking, and wear sunglasses. However, it is not recommended that they take the AREDS vitamins.

Conclusion

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

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