

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

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

Nutrition

Lutein is a supplement that may be beneficial for patients with AMD. Lutein can be taken separately or can be taken as part of a multivitamin such as Centrum Silver with lutein. The exact dosage of lutein that should be taken, however, is unclear. Research

studies are under way to determine the efficacy and the dosage of lutein.

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 has 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 landmark study called the Age-Related Eye Disease Study (AREDS) demonstrated that higher than normal dosages of certain vitamins and minerals can reduce the risk of loss of vision and progression of macular degeneration in up to 25% of patients with mild to moderate AMD. The vitamin and mineral formulation used in the study included 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 each of these supplements separately, people can take a pill that contains all of the supplements in combination. There are a number of pharmaceutical companies that manufacture these combination supplements. Bausch and Lomb's Ocuvite PreserVision is one of these. It requires the patient to take one pill twice a day to achieve the dosage levels used in AREDS. Patients who smoke or who recently quit smoking 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 supplement, in a smoker's formula.

A subsequent study, the Age-Related Eye Disease Study 2 (AREDS2), is assessing the effects of oral supplements with lutein and zeaxanthin and/or omega-3 fatty acids on the progression of AMD. AREDS2 is also studying whether eliminating the beta carotene from and/or reducing the zinc in the original AREDS formulation will have the same effect as the original supplement in reducing the risk of progression of AMD.

A recent 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 macular degeneration. 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.

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.

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 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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