



North Shore Eye Centre

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VEGETABLE OILS AND MACULAR DEGENERATION

Nutrition

Macular degeneration is a condition that is not only related to age, but factors such as lifestyle and diet can also contribute to it. Many researchers and practitioners believe that certain nutrients such as zinc, lutein, as well as vitamins A, C and E help to slow down the progression or reduce the risk of developing macular degeneration.

Diet

We can't change our age, but we can definitely change our diet by reducing our intake of certain fats to help lower the risk of developing macular degeneration, or reduce the progression if you do have it.

The main concern is that processed vegetable oils and fats contain substances that the body cannot breakdown. Even small amounts of fats and oils can eventually lead to a buildup of waste beneath the retina and lead to macular degeneration. Eye professionals are either opposed to the intake of vegetable oils, or are uncertain about them, especially following recent research in the area of vegetable oils and macular degeneration. However, the following recommendations are all agreed upon:

- Wear protective sunglasses
- Don't smoke – smoking increases the risk of macular degeneration.
- Exercise regularly; keep your weight and health (e.g. blood pressure) under control.
- Eat plenty of fruit and vegetables
- Eat at least one serving of nuts per week. This may reduce the rate of progression of the disease.
- Eat at least one serving of fish per week. This may reduce your risk of developing the disease.
- If you are over the age of 50 it is important to see an eye specialist at least every 2 years in order to detect any early signs of eye problems.
- If you have a family member with macular degeneration, it is a good idea to see an eye specialist.

In addition, some specialists recommend cutting down on animal and vegetable fats. Vegetable fat and oil are sometimes labeled as canola, safflower or sunflower and are found in most of the food we eat. They are evident in salad oil, tinned fish and margarine, sauces but are also contained in food which we may be unaware of such as peanut butter, bread, some dried fruits, and is even added to milk.

There is some inconclusive evidence that an increased intake of vegetable oils and margarine in our diet contributes to an increase in the incidence of macular degeneration.

Types of Fats

Our food consists of 2 types of fat:

1. Saturated Fats: are hard at room temperature, are more unstable than unsaturated fats and commonly found in animals. Found in beef, pork, milk, butter, cheese and yogurt.
2. Unsaturated Fats: consist of 2 groups-
 - (i) Monosaturated Fat, which is found in olive oil, almond oil and canola oil.
 - (ii) Polyunsaturated Fat, which consists of omega6 (e.g. corn oil, sunflower oil) and omega-3 fatty acids (pumpkin seeds, walnuts). It includes 'essential fatty acids' that are essential because our bodies need them but are unable to produce them. Therefore they must be acquired from the food we eat.

Hydrogenation may be performed to increase the shelf life as well as the stability of food. hydrogenated fats (e.g. margarine) should be avoided. It is believed that they tend to increase the risk of heart disease and create health risks. Both saturated and unsaturated fats are associated with an increase in risk of developing macular degeneration.

Research

There have been four recent research studies, which have highlighted two different interpretations.

- The importance of reducing intake of vegetable fats and oils.
- The importance of focusing on a healthy diet and lifestyle.

Research has suggested the usefulness of consuming omega-3 fatty acids. Recent study findings have indicated that increasing intake of food with omega-3 and reducing omega-6 fatty acid may reduce the risk of developing macular degeneration.



The four research studies have demonstrated a significant relationship between vegetable oil and macular degeneration. The most recent study, which is reported in Archives of Ophthalmology (December 2003) was conducted by Dr Johanna Saddon. The study indicated that macular degeneration progressed 3.8 times faster in people who included a higher intake of vegetable fat in their diet.

Another study also suggests the usefulness of consuming omega-3 fatty acids. The findings, published in the August 2001 issue of Archives of Ophthalmology demonstrate that individuals who have a high intake of vegetable fat had greater risk of developing macular degeneration than subjects who had minimal vegetable fat in their food intake. Those who ate food high in polyunsaturated fats (e.g. margarine) had an 86% increased risk of developing macular degeneration, and those who ate food high in monosaturated fats (e.g. olive oil) had a 71% increased risk. Consumption of omega-6 acids (prevalent in vegetable oils) was associated with increased risk. However, individuals who had diets rich in omega-3 and low in omega-6 had a protective effect and lowered risk of developing macular degeneration.