



Age-Related Macular Degeneration (AMD) ~ Overview

Approximately, one million Canadians have some form of age-related macular degeneration. AMD is an eye disease in which people lose the central part of their vision as they age. People with AMD have trouble seeing things directly in front of them, although their side vision may be fine.

Medical Description of AMD

In people with AMD, the layer of cells in the central part of the retina (called the macula) becomes thinner. The vision cells, called photoreceptors, slowly die. The central part of the person's vision begins to appear dark, blurred or distorted. This gradual loss of central vision is called **dry AMD**. It is the most common form of the disease.

Sometimes people with dry AMD develop a more severe condition known as **wet AMD**. In this condition, the blood vessels under the thinning macula become abnormal. They begin to grow in an irregular way and may leak blood and fluid. The medical term for this condition is choroidal neovascularization (CNV). Leakages of blood and fluid can cause rapid and severe vision loss, so it is important for a person with wet AMD symptoms to receive medical attention and prompt treatment. Only about 10% of people with AMD develop the wet form of AMD, but 90% of AMD vision loss is due to this condition.

Updated Sept 2010: Reviewed by Dr. William Stell, FFB Director of Programs and Professor of Ophthalmology at the University of Calgary.

AMD Symptoms

In the earliest stages, people with AMD may not notice their symptoms, so it is important to have regular vision check-ups. During a check-up, an eye doctor will look for drusen (yellowish deposits in the retina) that are the first signs of AMD. People developing dry AMD, may begin to notice a blurring in their central vision or have difficulty focusing on fine details, even with glasses.

If the following symptoms appear, you should see your eye doctor as soon as possible, as they may be signs of dry or wet AMD:

- Blurred central vision
- Distortion of lines and shapes (a line of text appears wavy)
- Difficulty distinguishing colours
- A blind spot in your vision

People with dry AMD should continue to watch for these symptoms – and contact their doctor promptly about any changes. You can call the Foundation Fighting Blindness to request an Amsler Grid to help monitor your eye sight.

Causes and Risk Factors

No one knows what causes AMD, but research is helping us understand the risk factors. Some are unavoidable. Aging increases your risk of the disease, as does a family history of AMD. Women are more likely to develop AMD as are people who are farsighted (hyperopic). We also know that people with light skin or eyes are more likely to develop AMD.

Support sight-saving research with a donation to the Foundation
Fighting Blindness 1.800.461.3331 or online at www.ffb.ca



There are ways that you can decrease your risk of developing AMD. Experts suggest the following:

- Don't smoke. And if you do smoke, quit.
- Enjoy colourful vegetables and fruits (carrots, corn, squash, tomatoes, cantaloupe and berries) as well as dark green leafy vegetables.
- Eat fish such as salmon, tuna and mackerel, once or more a week
- Avoid high-fat foods, particularly processed foods.
- Stay physically active.
- Control your blood pressure and cholesterol.

Treatment

The available treatments for dry and wet AMD are still limited, although new options for wet AMD have recently emerged.

Dry AMD - The only treatment currently available for people with dry AMD is a combination of **vitamins and minerals** tested in the Age-Related Eye Disease Study (AREDS). This high-dose mix of vitamins C, E, beta-carotene, and zinc can reduce by 25% the likelihood that a person with high risk dry AMD will develop more severe vision loss within the next five years. Several companies now market vitamin formulations containing the vitamins tested in AREDS, which are:

- 500 milligrams of vitamin C;
- 400 International Units of vitamin E;
- 15 milligrams of beta-carotene;
- 80 milligrams of zinc (zinc oxide);
- 2 milligrams of copper (cupric oxide).

Although AREDS formulation vitamins can be purchased without prescription, speak to your doctor before you begin taking them. Some people should not take these vitamins due to other health complications.

Wet AMD - Until recently, the only treatment for wet AMD was to use **laser therapy** to seal the tiny blood vessels behind the retina and prevent further damage to the eye. This generally caused scar formation and additional vision loss. It is now rarely used.

Photodynamic therapy was developed about 10 years ago. It can be used to slow vision loss – although it does not reverse the effects of wet AMD. Visudyne (verteporfin) is the only approved therapy of this type. It is given to a patient intravenously and then a special laser is used to activate the drug in the eye and destroy any abnormal blood vessels. It does not have a risk of scarring like laser therapy and is still used for some people.

In the last five years, a new class of drugs has been developed called **anti-VEGF therapies**. These drugs counteract the uncontrolled growth of blood vessels behind the retina protecting a person's vision. In some cases, they can reverse some of the vision loss associated with wet AMD. Anti-VEGF therapies currently include Macugen (pegaptanib) and Lucentis (ranibizumab) and the cancer drug, Avastin (bevacizumab). A doctor must inject these drugs into the eye monthly.

Research

The Foundation Fighting Blindness supports scientists working to understand what causes AMD and to improve AMD treatments. Additional treatments for wet AMD are expected to be approved in the next year and clinical trials of some dry AMD treatments have begun in the USA. Call **1.800.461.3331** today or email **info@ffb.ca** to subscribe to our print and e-newsletters for the latest in vision research.