BUNBURY & BUSSELTON EYE SPECIALISTS

PATIENT INFO AND ADVICE

What is macular degeneration?

Macular degeneration is a disease of the **macula** — a small area in the retina at the back of the eye (equivalent to the photographic film in a camera). The macula allows you to see fine details clearly and do things such as read and drive. When the macula does not work properly, your central vision can be blurry and have areas that are dark or distorted. Macular degeneration affects your ability to see near and far, and can make some activities — like threading a needle or reading — difficult or impossible.

Macular degeneration is the most common cause of severe vision loss in people older than 50.

Macular degeneration may not affect your vision very much. In other cases, however, vision loss may be more rapid and severe.

Many older people develop macular degeneration as part of the body's natural aging process. There are different kinds of macular problems, but the most common is age-related macular degeneration (AMD or ARMD).

Major risk factors for AMD are:

- being more than 50 years old;
- having a family history of AMD;
- cigarette smoking.

Another risk factor for developing AMD may include having abnormal cholesterol levels.

Many people with AMD have deposits under the retina called **drusen.** Drusen alone usually do not cause vision loss, but when they grow in size or number, there is an increased risk of developing advanced AMD.

The two most common types of AMD are **dry (non-neovascular)** and **wet (neovascular).**

DRY MACULAR DEGENERATION

Ninety percent of people with AMD have the "dry" form. This condition is thinning of macular tissue. Vision loss is usually gradual. Many people with this form also have difficulty adjusting to changes in light. For example, they may find it takes them some time to adjust to seeing indoors when they come in from outside.

WET MACULAR DEGENERATION

Ten percent of people who have AMD have the “wet” form. Many of these people develop significant vision loss. Wet AMD results when abnormal blood vessels form underneath the retina. These new blood vessels leak fluid or blood and blur central vision. Vision loss may be rapid and severe.

What are the symptoms of macular degeneration?

Macular degeneration can cause different symptoms in different people. Some people hardly notice AMD in its early stages. Sometimes only one eye loses vision while the other eye continues to see well for many years. But when both eyes are affected, you notice the loss of central vision quickly.

Usually, you will notice vision loss when you find:

- words on a page look blurred;
- a dark or empty area appears in the center of vision;
- straight lines look distorted, as in the following diagram.

How is macular degeneration diagnosed?

Many people do not realize that they have a macular problem until blurred vision becomes obvious. Your ophthalmologist can detect early stages of AMD.

This exam includes:

- a simple vision test in which you look at a chart that looks like graph paper (called an Amsler grid);
- an exam of your macula with special lenses;
- having special photographs taken of your eye with an optical coherence tomography (OCT). These tests are used to find abnormal blood vessels, fluid or blood under the retina.

How is macular degeneration treated?

NUTRITIONAL SUPPLEMENTS

Antioxidant vitamins and zinc may reduce the impact of AMD in some people. A large scientific study found that people at risk for developing advanced stages of AMD lowered their risk by about 25 percent when treated with a high-dose combination of:

- vitamin C (500 mg);
- vitamin E (400 iu);
- beta carotene (15 mg);
- zinc (80 mg), and
- copper (2 mg).

Another large study in women showed a benefit from taking folic acid and vitamins B6 and B12. And a large study evaluating the benefits of lutein and fish oil (omega-3) is ongoing.

Among those who either have no AMD or very early AMD, the supplements do not appear to be beneficial. Family members of patients with AMD should check with their doctor before taking these vitamins themselves.

It is very important to remember that vitamin supplements are not a cure for AMD, nor will they give you back vision that you may have already lost from the disease. In certain cases, there may be some risks with taking supplements. However, specific amounts of these supplements do play a small role in helping some people at high risk for advanced AMD to maintain their vision.

Talk with your ophthalmologist to find out if you are at risk for developing advanced AMD, and to learn if supplements are recommended for you.

ANTI-VEGF TREATMENTS.

The most common treatment for wet AMD involves injecting a drug into the eye that stops blood vessel growth and bleeding. These drugs, known as **VEGF blockers** or **anti-VEGF treatments,** target a specific chemical in your body that causes abnormal blood vessels to grow under the retina. That chemical is called vascular endothelial growth factor (VEGF). These anti-VEGF treatments improve vision in some people with wet AMD.

MAKING THE MOST OF THE VISION YOU HAVE

To help you use the vision you do have, your optometrist can prescribe low-vision equipment to help with everyday tasks or refer you to a low-vision specialist or centre. There are many support services and rehabilitation programs to help stay active and independent. Because your side vision is usually not affected, your remaining sight is very useful. Often, you can continue with many of your favorite activities by using low-vision equipment, such as a variety of magnifiers, portable electronic aids, special television equipment, large-print reading materials and talking or computerized items.

You should check your vision daily by using an Amsler grid like this one. You may find changes in your vision that you wouldn’t notice otherwise. Putting the grid on the front of your refrigerator is a good way to remember to look at it each day.

To use the grid:

1. Wear your reading glasses and hold this grid 12 to 15 inches away from your face in good light.

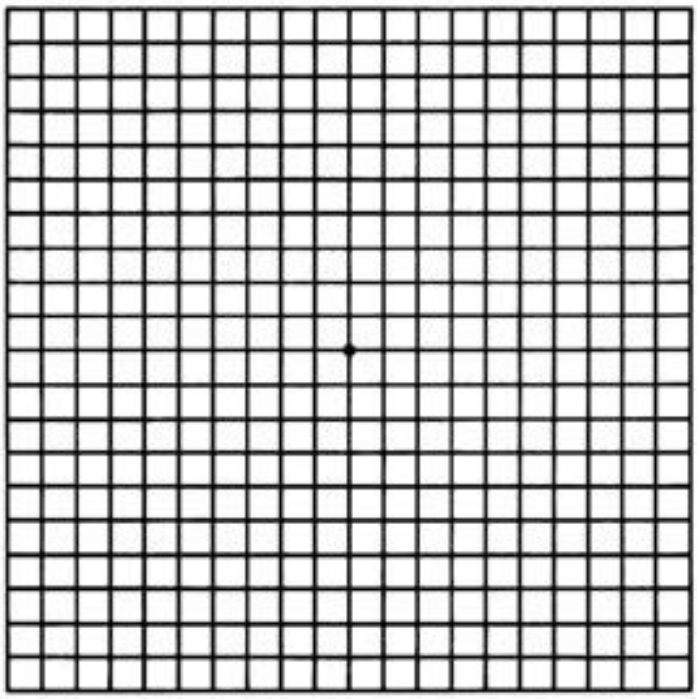
2. Cover one eye.

3. Look directly at the centre dot with the uncovered eye.

4. While looking directly at the centre dot, note whether all lines of the grid are straight or if any areas are distorted, blurred or dark.

5. Repeat this procedure with the other eye.

6. If any new area of the grid looks wavy, blurred or dark, call your ophthalmologist promptly.



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