

Patient information: Age-related macular degeneration (The Basics)

Written by the doctors and editors at UpToDate

What is age-related macular degeneration? — Age-related macular degeneration, often called “AMD,” is a disease that causes vision loss. It mostly affects your central vision, so that things in the center look blurry ([picture 1](#)). It is most common among people age 65 and older.

There are 2 types of AMD, wet and dry:

- **Dry AMD** is the most common type. It affects 85 to 90 percent of people with the condition. It causes gradual vision loss.
- **Wet AMD** is less common. It affects 10 to 15 percent of people with the condition. But it moves more quickly and can cause severe vision loss or even blindness.

Some people can start out with dry macular degeneration and then develop the wet type.

What are the symptoms of AMD? — The symptoms are different depending on what type of AMD you have:

- People with **dry AMD** lose their vision slowly. They might notice a problem with one or both eyes when reading or driving. Or they might realize that they now need bright lights or a magnifying glass to see as well as they used to. People with dry AMD sometimes also notice spots that seem blurry.
- People with **wet AMD** can have sudden changes in vision. When they first notice symptoms, they might have problems in only one eye. (Later, both eyes usually develop problems.) When people with wet AMD look at straight lines, the lines actually look bent or wavy. For this reason, doctors often test people’s vision by asking them to look at a grid of straight lines ([figure 1](#)). People who say the lines look bent could have wet AMD.

Should I see a doctor or nurse? — If you notice vision loss or any of the other symptoms listed above, see an eye doctor as soon as possible.

Is there a test for AMD? — Yes. To check for AMD, doctors can use a few different tests:

- **Dilated eye exam** — For this test, the doctor gives you eye drops to make your pupils open up. Then, he or she uses a special tool to look at the back of your eye, called the retina. That’s the part of the eye that gets damaged by AMD. The doctor also looks for clumps called drusen, which form in the eyes of people who have AMD.
- **Fluorescein angiography** — This test helps doctors see the blood vessels in the retina. The test is useful because people with wet AMD sometimes develop abnormal blood vessels in the retina.
- **Optical coherence tomography (OCT)** — This test creates detailed pictures of the retina. It can show if the retina is damaged.

How is macular degeneration treated? — Both wet and dry AMD can be treated with a special combination of vitamins and minerals, called the “AREDS formula.” This formula seems to protect the eye from the damage caused by AMD. It is sold without a prescription. But ask your doctor or nurse before you start taking it. Certain vitamins can be harmful if you take them in the wrong amounts. Plus, people who smoke can have serious problems if they take some vitamins.

There are no treatments for dry AMD besides the AREDS formula. But there are other treatments for wet AMD.

Treatments for wet AMD work by destroying abnormal blood vessels in the retina, or by preventing new blood vessels from forming there. That’s important, because much of the damage of wet AMD is caused by abnormal blood vessels in the retina. Treatments include:

- **Medicines called VEGF inhibitors** — These medicines come in shots that go right into the eye. They help keep new blood vessels from forming.
- **Photodynamic therapy** — For this treatment, you get a shot of a medicine that “sticks to” abnormal blood vessels. This medicine becomes toxic when it is exposed to light. After you get the shot, a doctor or nurse shines a special light into your eye. When the light hits the medicine in the blood vessels in the back the eye, the medicine destroys the blood vessels.
- **Laser surgery** — For this treatment, doctors shine lasers into the eye and use them to destroy abnormal blood vessels in the retina.

Can AMD be prevented? — You can reduce your chances of getting AMD by not smoking, or by quitting if you already smoke. If you already have AMD and you smoke, quitting can actually help slow the disease.

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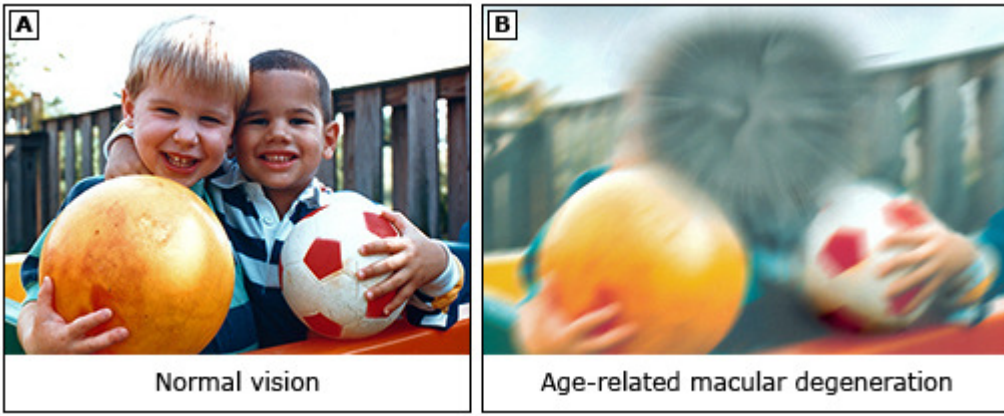
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How age-related macular degeneration affects vision

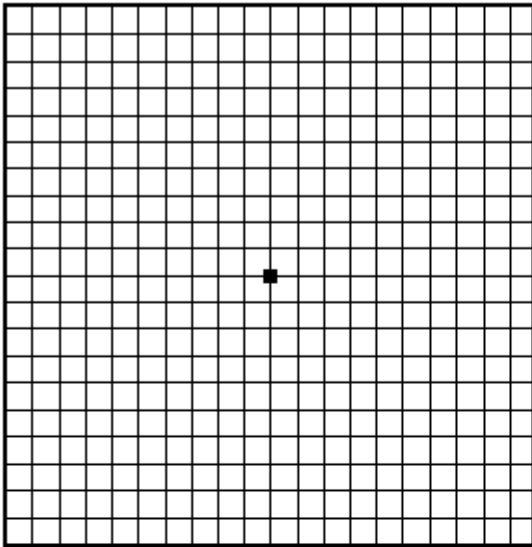


Age-related macular degeneration can make certain spots look blurry, especially in the center of where you are looking.

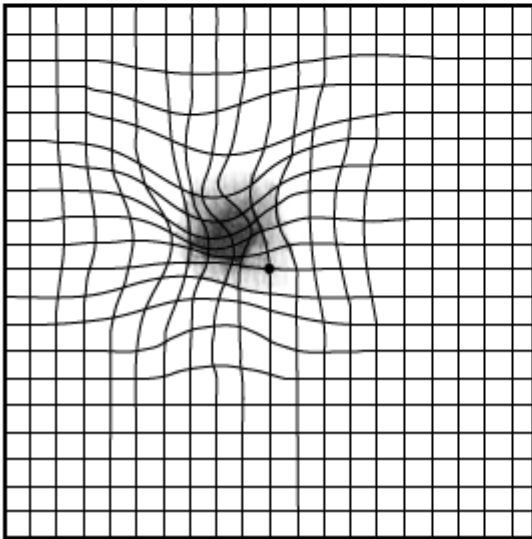
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Amsler grid



Here is what an Amsler grid normally looks like



This is what an Amsler grid might look like to someone with AMD

When people with wet age-related macular degeneration (AMD) look at straight lines, the lines actually look bent or wavy. Doctors often test people's vision by asking them to look at a grid of straight lines like this one.

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