RETINA australia

Age-related macular degeneration (AMD)

Age-related macular degeneration (AMD) is a disease that causes the gradual loss of sight due to blurring or loss of central vision. This is often as a result of a deterioration of the macula, a yellow pigmented structure at the back of the eye that is responsible for our detailed colour vision. The severity of the disease depends on each person and on how quickly it is detected.

AMD is a chronic disease – it cannot be cured and in many patients sight cannot be restored after it is lost. However certain forms of the disease can be treated. Early detection is important to potentially stop the spread of the disease and to protect your sight. The 2016 Australian National Eye Health Survey estimated that around nine per cent of visually impaired people in Australia have AMD. AMD is the leading cause of sight loss in older Australians, with the number of people affected due to increase in the coming years due to our aging population.

There are two forms of AMD, Early and Late.

In Early AMD the signs that the retina is being damaged are only visible to the eye care practitioner (optometrist or eye doctor). At this stage the damage does not affect sight and people are unaware of the condition. This highlights the importance of regular eye examinations to detect AMD in its early stages.

Some people progress from Early to Late AMD, where the condition causes loss of vision.

There are two forms of Late AMD, Dry and Wet AMD.
The wet form is more severe, and vision degenerates more rapidly, however this form is less common. Abnormal blood vessels grow under the macula which bleed and leak fluid, this causes central vision to become damaged or distorted. This is called choroidal neovascularization (CNV). The dry form is more common (around 85% of people with AMD have the dry form) but it is less severe and vision degenerates over a longer period of time. Dry AMD is caused when deposits, called 'drusen', form at the macula. Only your eye care professional can tell you which form you may have. Although sight loss caused by AMD can cause difficulty doing everyday tasks like driving, reading and watching TV, AMD rarely causes total blindness.

What are the symptoms of AMD?
Key early symptoms of AMD include a blurring of central vision and straight lines appearing distorted, for example doorframes and steps. Everyday activities such as driving, watching TV, and even recognising faces can become seriously affected over time. It is important to have your eyes tested every two years. If you notice any change in your vision, especially blurring, see your optometrist or doctor right away.

Today, many optometrists can take a photograph of the back of your eye to detect irregularities. They may also shine a small light into the back of your eye to detect presence of drusen, a characteristic of dry AMD.

- Check Your Vision:

  One easy at-home test for AMD is the Amsler Grid. You can download a copy of the Amsler grid from the website of the Macular Disease Foundation Australia.
- How to test with the Amsler Grid:

  Hold the grid at reading distance, about 12 inches (30cm) away from your face. If you wear reading glasses, leave them on. Do not take the test while wearing varifocal or distance glasses. Cover one eye and focus on the centre dot. Make sure you can see all four corners of the grid. If the lines appear missing or wavy, you may have AMD. Contact your doctor immediately. Remember, even if the grid looks normal, you should still attend regular eye exams for early detection of AMD.

What is the cause of AMD?

The exact cause of AMD is unknown, but over the past 20 years, many risk factors for AMD have been discovered. Researchers know that certain genes cause AMD , but they don't know what triggers the gene. While AMD can be inherited, many lifestyle choices can make progression of the disease worse.

You may be at risk of developing AMD if you are over the age of 50, have a family history of AMD, smoke and if you are overweight or have a poor diet. Other factors include having fair skin and light eyes and having a history of cataracts. Studies have shown that women are more likely to develop AMD.

There are simple steps you can take today to help save your sight. These include eating a balanced vegetable rich diet, exercising regularly and quitting smoking. Many of these are part of living a healthy lifestyle, so your heart and lungs will thank you too.

What treatments are available?

If your optometrist detects something wrong with your eye or suspects you have AMD, he or she will refer you to an ophthalmologist. This person will be able to medically treat your eyes and talk to you about the best course of action for your particular condition.

Your eye care practitioner will suggest lifestyle changes that will help slow the progression of AMD, such as stopping smoking and eating a healthy diet. Vitamin supplements may also be recommended.

If Wet AMD is suspected, you may have a test called Fluoroscein Angiography. A special dye is injected into your arm and carried through your bloodstream. As it passes through the blood vessels in your eye, doctors can detect the severity of the leaking and bleeding. If you have Wet AMD, a treatment of anti-VEGF therapy may be recommended to treat the damaged blood vessels in your eye. The success of this therapy depends on early detection and treatment before irreversible scarring and damage occurs.

Retina Australia has funded research into AMD in 2005 and 2011 and has funded many studies focussing on the process of retinal degeneration and macular dystrophy which have also produced new findings relevant to AMD.

Internationally, researchers are trying to understand why some people get AMD and others do not. While we understand some of the risk factors and lifestyle choices that may lead to the disease, researchers are also investigating the role of the immune system in the disease progression.

Researchers are also designing ways to deliver medication to the eye that are less invasive methods than current methods. Another key area of research is looking at ways of preventing the early stages of macular degeneration, when natural cell waste materials build up in the retina. This leads to toxic chemicals forming, which cause retinal cells to die. Drugs are being trialled to see if they can slow the build-up of the toxins.

Neuroprotective drugs are also being investigated to see if they can protect the cells of the retina. For people living with AMD, general eye check-ups are extremely important, because these individuals are still at risk for other kinds of eye problems that can affect the general population and may be treatable. Regular visits to your eye doctor can also make you aware of current advances as we learn more about treating these prevalent diseases.