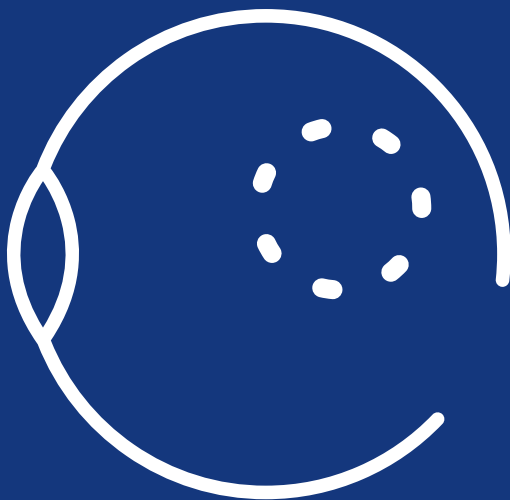

GENERAL INFORMATION

MACULAR DEGENERATION



vision
eye institute

WHAT IS MACULAR DEGENERATION?

Macular degeneration (also called age-related macular degeneration or AMD) is a group of degenerative diseases of the retina – the light-sensitive tissue at the back of the eye.

The condition affects the specific part of the retina called the macula, which is responsible for central and fine-detail vision, causing people to lose the ability to distinguish faces, read, drive and see fine detail.

Macular degeneration can be classified into wet and dry forms. Most people with macular degeneration have the dry form.

Many people are not aware that they have macular degeneration until the disease is in the advanced stages. This is because the condition is painless and often progresses slowly. In addition, the healthy eye can compensate for the affected eye, masking vision loss. Early diagnosis and treatment offers the best hope of minimising damage.

MACULAR DEGENERATION IS THE LEADING CAUSE OF BLINDNESS AND SEVERE VISION LOSS IN AUSTRALIA.¹





What are the symptoms of macular degeneration?

- Blurred vision
- Shadows or missing areas of vision
- Distorted vision
- Straight lines appear wavy
- Difficulty discerning colours
- Poor adaption to dark conditions (from brighter environments)
- Numbers and letters appear jumbled

If you experience any of these symptoms, have your eyes checked immediately.

Who is likely to get macular degeneration?

Anyone can get macular degeneration, but some people may be at higher risk than others.

Risk factors include:

- Age (50+)
- Family history
- Smoking.

HOW DO YOU SCREEN FOR MACULAR DEGENERATION?

REGULAR EYE EXAMINATIONS

Everyone (particularly those aged 50+) should have regular eye checks with an optometrist to detect diseases such as macular degeneration that may not have any noticeable visual changes early on. If there are any unusual signs or you are in a high-risk group, your optometrist may recommend further tests to examine the retina and may refer you to a retinal specialist.

HOME SCREENING

You can perform some simple screening tests for macular degeneration at home, using an Amsler Grid (a grid containing a series of horizontal and vertical lines with a dot in the middle – see page 11) or simply looking at a straight edge (e.g. of a door or window) **one eye at a time**. If the lines or straight edges appear wavy or parts are missing, have your eyes checked immediately.





HOW IS MACULAR DEGENERATION DIAGNOSED?

OPTICAL COHERENCE TOMOGRAPHY (OCT)

OCT is a non-invasive test that captures detailed images of the retina. The scan allows the ophthalmologist to identify areas of retinal thinning, thickening, or swelling caused by fluid build-up and leaky blood vessels. Your pupils will be dilated for this test and the procedure takes less than 10 minutes. As the OCT scanner is a kind of camera, it does not need to touch your eyes.

FLUORESCEIN ANGIOGRAPHY

This test (sometimes called retinal photography or eye angiography) uses a fluorescent dye to show any blockages or leaks in the blood vessels supplying the retina. The dye is usually injected into a vein in your arm and flows through the blood system to the retinal blood vessels. Your ophthalmologist will use a special camera to take photographs.

Please note that you will be given eye drops to dilate your pupils, so your vision may be blurred for about 4–6 hours after the test.

**THE BEST WAY TO PROTECT
YOUR SIGHT IS TO HAVE
REGULAR EYE CHECKS.**

HOW IS WET MACULAR DEGENERATION TREATED?

There is no cure for wet macular degeneration, although some treatments can slow or stop progression of the disease and vision can be maintained (or even improved) for many people. Treatments, which may be used together, include:

- **Eye (intravitreal) injections** are the gold standard treatment for wet macular degeneration. They can be used to stop abnormal blood vessels leaking and dry up the abnormal macular fluid (oedema). Repeated injections and regular monitoring can prevent further vision loss in 95% of sufferers.² Vision is significantly improved in up to 40% of those treated.³ Most patients receiving eye injections will require regular, lifelong treatments to maintain their vision.
- **Photodynamic therapy (PDT)** is occasionally used for a small number of patients who have a specific type of AMD. A special dye, known as a photosensitiser, is injected into an arm vein and flows through the blood system to the retinal blood vessels at the back of the eye. A cold laser is then used to activate the dye, with the resultant photochemical effect shrinking and sealing abnormal blood vessels. Most people will need to be treated about every 3–4 months.



A photograph of the back of the eye showing wet macular degeneration.



HOW IS DRY MACULAR DEGENERATION TREATED?

Unfortunately, there is no approved treatment for patients with the dry form of macular degeneration.

Research studies investigating disease progression and potential therapies, some of which involve Vision Eye Institute retinal specialists, are currently ongoing.



**A RETINAL SPECIALIST
DIAGNOSES AND TREATS
DISEASES OF THE RETINA
AND MACULA, INCLUDING
MACULAR DEGENERATION.**

HOW CAN I PREVENT MACULAR DEGENERATION?

QUIT SMOKING

Smokers are three times more likely to develop macular degeneration⁴ (in addition to many other serious health-related issues), so now is the time to quit.

EAT FISH, GREEN AND GOLD

Research has shown eating foods rich in carotenoids are particularly beneficial.⁵ These include dark green leafy vegetables (e.g. spinach and kale) and coloured vegetables (particularly gold-coloured ones, e.g. corn, yellow capsicum, sweet potato). Foods rich in vitamin C, omega-3 fatty acids (e.g. oily fish such as salmon) and zinc are also good for eye health.



FAQs

How common is macular degeneration?

One in seven Australians over the age of fifty has some evidence of macular degeneration,¹ so it's probably much more common than you realise.

Are some people more at risk than others?

While anyone can develop macular degeneration, research shows that you have a higher risk if you smoke or have a family history of macular degeneration.

It's extremely important that you get your eyes checked regularly, particularly if you are in a high-risk group.

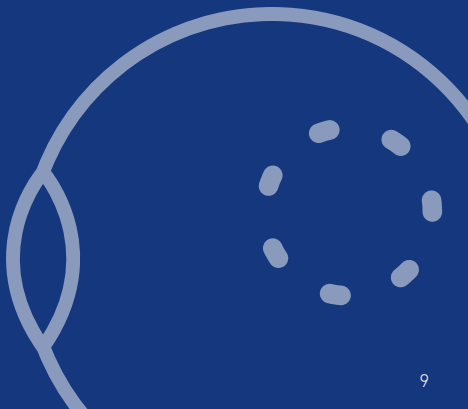
How do I know if I have macular degeneration?

Regular eye checks after the age of 50 are important. If you have difficulty reading, distinguishing faces, or start to see dark or empty patches in your central vision, get your eyes checked immediately.

There are also simple home tests that can indicate if you have any visual changes worth investigating.

Why don't prescription glasses help?

Prescription glasses can bend light to help it focus on the retina, but they can't correct any damage to the retina itself.



Does macular degeneration affect children?

The forms of macular degeneration that affect younger people are very rare and usually caused by a specific gene defect. The most common form is Stargardt's disease, which may develop from 10 years of age (although vision loss may not occur until your twenties or thirties).

Knowing your family history in relation to eye diseases is extremely important.

What is the difference between wet and dry macular degeneration?

The advanced stage of macular degeneration can be divided into two types:

- Dry macular degeneration (also called atrophic) is the most common type. Here the macular tissue thins (atrophy) and eventually stops functioning properly. Vision loss is insidious and gradual.
- Wet macular degeneration (also called neovascular or exudative) affects about 10% of people with advanced macular degeneration. Abnormal blood vessels grow beneath the macula and can leak fluid or bleed, causing the macula to swell and scar. Vision loss is sudden and often occurs much more quickly than with the dry form.

REFERENCES

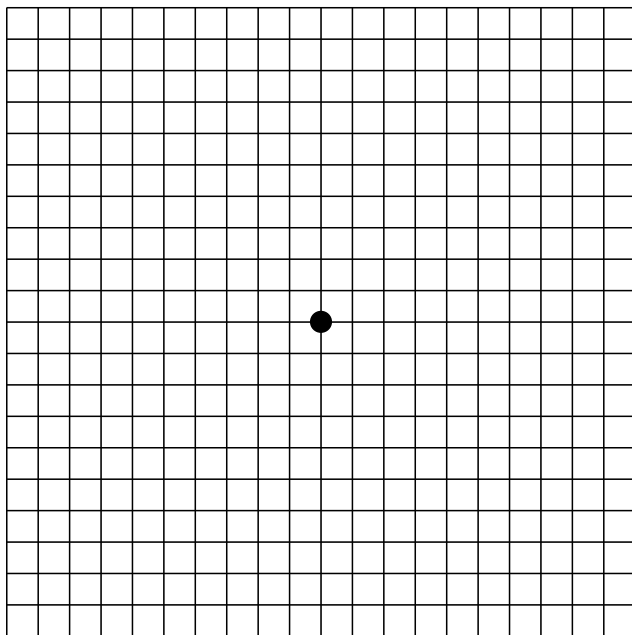
1. Macular Disease Foundation Australia www.mdfoundation.com.au/content/what-is-macular-degeneration (accessed online 15 May 2018).
2. Bauman CR. Wet age-related macular degeneration: treatment advances to reduce the injection burden. *Am J Manag Care*. 2020;26(5 Suppl):S103-S111.
3. Haddrill M. Macular degeneration treatment, FDA approved. Irving, TX: All About Vision; [date unknown]. Available from: <https://www.allaboutvision.com/conditions/amd-treatments.htm> [Accessed 04 October 2022]
4. Macular Disease Foundation Australia. Risk factors. Sydney (NSW): Macular Disease Foundation Australia; [date unknown]. Available from: [https://www.mdfoundation.com.au/content/risk-factors-macular-degeneration](http://www.mdfoundation.com.au/content/risk-factors-macular-degeneration) [Accessed 04 October 2022]
5. Wu J, Cho E, Willett WC et al. Intakes of lutein, zeaxanthin, and other carotenoids and age-related macular degeneration during 2 decades of prospective follow-up. *JAMA Ophthalmol*. 2015;133(12): 1415-1424.



A 10-SECOND TEST THAT COULD SAVE YOUR EYESIGHT

This Amsler Grid is used for the early detection of macular degeneration.

1. If you normally wear glasses to read, put them on.
2. Look at the grid, holding the page at your normal reading distance.
3. Cover one eye and look at the dot in the centre.
4. Without moving your eye off the dot, see whether any of the lines in the grid are wavy, missing or blurred. If this happens, please see your usual eyecare provider immediately.
5. Repeat with the other eye.



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VISION PROBLEMS**



**RECONSTRUCTIVE
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OUR RETINAL CLINICS

For more information or to find a Vision Eye Institute clinic that treats macular degeneration, visit visioneyeinstitute.com.au/services/macular-degeneration/

This information is general in nature. All medical and surgical procedures have potential benefits and risks. Consult your ophthalmologist for specific medical advice.



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