

Age Related Macular Degeneration

According to the World Health Organisation (WHO) age related macular degeneration is the third cause of blindness globally. This edition of the CMScript will focus on the degeneration of the macula in the eye.

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Anatomy of the human eye

The human eye is not completely round and consists of an anterior section (front part that you can see when looking in a mirror) and the posterior section (the area behind the front part that is not visible to the naked eye).

The anterior segment of the eye includes the:

- Iris – the coloured part the eye
- Cornea – a transparent, protective layer over the iris
- Pupil – the round opening that is visible as the black circle and allows light to enter the eye
- Sclera – the white part of the eye
- Conjunctiva – a thin layer of tissue that covers the entire anterior area except the cornea of the eye

Behind the iris, lies the lens which is responsible for focusing light on the back of the eye.

The posterior segment of the eye starts behind the lens and firstly consists of the vitreous gel. The entire inside of the eye is covered by light sensing cells. This layer is called the retina.

The macula is found at the back of the posterior segment. It is a very small, extra-sensitive part of the eye needed for sharp, central vision and the ability to see straight ahead. In this article we focus on the degeneration of this specific area in the eye.

What is Age Related Macular Degeneration (AMD)?

Age related macular degeneration (AMD) is a common eye condition affecting mostly the people older than 50 years. The condition causes damage to the macula.

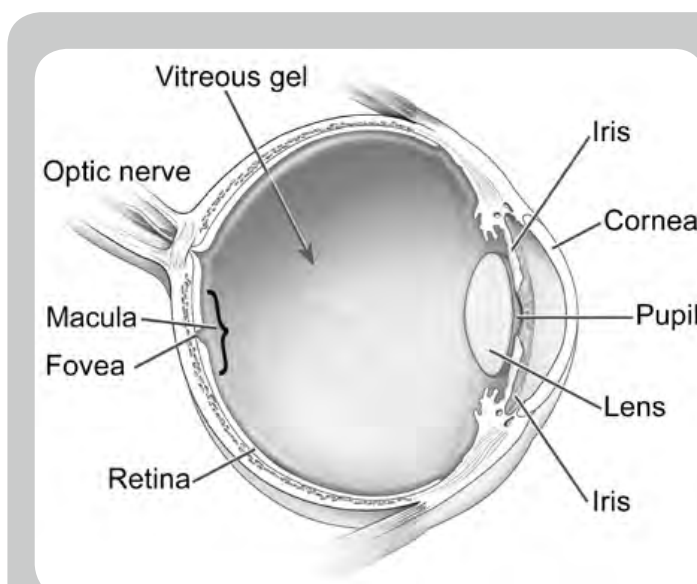


Figure 1: Anatomy of the human eye

The exact cause of the condition is not known. It is not inherited in a specific manner although there are genes associated with the condition and family members have a very high risk of developing the condition.

Certain factors that may increase the risk of developing the condition have been identified. These include:

- Smoking
- A diet that does not include green, leafy vegetables and fish
- Over exposure to high levels of ultra violet light
- AMD may advance very slowly in certain people and loss of vision does not occur for a long time. In others, the condition progresses faster and may cause loss of vision in one or both eyes. As the condition progresses a blurred area near the center of vision



Figure 2: Blank spots develop in the central vision on people with AMD.

is a common symptom. Straight lines may appear wavy or distorted. The blurred area may grow larger, or blank spots develop in the central vision. Objects also may not be as bright as it used to be.

Types of Age Related Macular Degeneration

There are two types of AMD, namely “dry” or atrophic (destroying or decrease of an organ or tissue in the body) AMD and “wet” AMD.

In this article we are only focusing on “wet” AMD.

“Wet” or Neovascular AMD is the result of the growth of new blood vessels in the choroid (vascular layer in the eye) and as such it causes an accumulation of fluid in the macula which leads to retinal damage.

Age Related Macular Degeneration (AMD) and Prescribed Minimum Benefits

Age Related Macular Degeneration (the formal diagnosis is H35.3 - Degeneration of macula and posterior pole) is a Prescribed Minimum Benefits (PMB) condition under Diagnostic Treatment Pair (DTP) code 904B. This DTP refers to Retinal detachment, tear and other retinal disorders.

Diagnosis

In the early and intermediate stages, Age Related Macular Degeneration (AMD) may be symptom free and can only be detected through a comprehensive eye examination by an Ophthalmologist (eye specialist).

The eye specialist may perform the following tests as part of the diagnosis. Although all the listed tests are included in the PMB level of care, only tests that are clinically necessary should be performed.

- Visual acuity test – this is a test where an eye chart is used to measure how well you see at various distances.
- Fundus contact lens or 90D lens examination / Peripheral fundus examination – the test involves the widening of the pupil by placing specific eye drops in the eye to provide a better view of the back of the eye, specifically the retina and the optical nerves.
- Keratometry – the test measures the anterior corneal curvature of the eye.
- Fundus photography – the test is basically taking a photograph of the retina to document the diagnosis, progress and treatment of the condition.
- Optical Coherent Tomography (OCT) of the Optic nerve or macula – the test uses light waves to achieve very high-resolution, three dimensional im-

ages of the eye tissue.

- Fluorescein Angiography - a fluorescent dye is injected into the arm. Pictures are taken as the dye passes through the blood vessels in your eye. This makes it possible to see if there are any leaking blood vessels, which occur in a severe, rapidly progressive type of AMD.

Treatment

Wet AMD is now being treated with anti-vascular endothelial growth factor (anti- VEGF) injections into the retina. These injections are most effective when administered in the early stages of the condition.

The current Prescribed Minimum Benefit (PMB) treatment component specified for this condition, according to the PMB Regulations is Vitrectomy; laser treatment.. These procedures are however seldom used. Treatment with anti-VEGF injections into the retina is currently the national standard of care in the state sector and therefore included in the PMB level of care. The anti-VEGF drugs registered for treatment of AMD are Lucentis® (Ranibizumab) and Eylea® (Aflibercept).

The national standard of care for wet AMD in the state sector is the anti-VEGF drug called Avastin ® (Bevacizumab), even though this drug is not actually registered for the treatment of AMD. It is therefore regarded as off-label use for this condition.

Ophthalmologists (eye specialists) prefer to use Lucentis® (Ranibizumab) and Eylea® (Aflibercept), only in advanced cases or cases that do not respond to Avastin ® (Bevacizumab), due to the high cost of these two drugs. Avastin qualifies as PMB level of care due its status as the national standard in the state sector, as well as the cost-effectiveness of this drug.

References

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WHAT ARE PRESCRIBED MINIMUM BENEFITS?

Prescribed Minimum Benefits (PMBs) are defined by law. They are the minimum level of diagnosis, treatment, and care that your medical scheme must cover – and it must pay for your PMB condition/s from its risk pool and in full. There are medical interventions available over and above those prescribed for PMB conditions but your scheme may choose not to pay for them. A designated service provider (DSP) is a healthcare provider (e.g. doctor, pharmacist, hospital) that is your medical scheme's first choice when you need treatment or care for a PMB condition. You can use a non-DSP voluntarily or involuntarily but be aware that when you choose to use a non-DSP, you may have to pay a portion of the bill as a co-payment. PMBs include 270 serious health conditions, any emergency condition, and 25 chronic diseases; they can be found on our [website](#)

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