

Macular degeneration

The retina is the photographic film at the back of the eye that changes the light focused on it by the front of the eye into electrical impulses that pass along the optic nerve to the brain to give us our vision.

The central part of the retina is called the macular and is used for high definition vision and colour vision. The macula allows us to read, write and recognise faces. It is the most hard-working tissue in the body and has the greatest need for oxygen and sugar from the blood in order for it to function. The cells that change the light into electricity are called the rods and cones or photoreceptors. They have their own blood supply called the choroid and are also assisted by a layer of cells called the retinal pigment epithelium (RPE) that recycles material from the rods and cones so they can work efficiently.

We are unfortunately designed to only live to our forties, but with a healthy diet and modern medicine many of us are living to a much greater age. The most common result of age related “wear and tear” in the macular is dry macular degeneration. This causes a gradual blurring of the central vision in one or both eyes, and sometimes gradual distortion of vision (straight lines looking kinked or crooked). It is due to the recycling process becoming less efficient and waste material called drusen accumulate under the retina.

Many patients have mild dry macular degeneration and maintain good vision, but some patients can develop larger areas in the macular where the rods and cones stop working with more significant central visual loss. This is sometimes called geographic atrophy.

A small proportion of patients with dry macular degeneration progress to wet macular degeneration. Whilst this is still a problem with central vision, it is usually more sudden in onset and more severe if left untreated. It is due to abnormal blood vessels growing from the choroid and into the retina and these blood vessels can leak causing a swelling of the retina, or rupture causing bleeding into the retina, both of which results in sudden blurring and/or distortion of central vision. This usually affects only one eye at a time, but if one eye has wet macular degeneration there is an increased risk that the other eye could be affected in due course.

Macular degeneration is not a blinding condition.

Patients with very severe macular degeneration will retain peripheral (side) vision to enable them to get about and remain independent and usually still read with magnifying and other aids.

There are injection treatments available for patients with wet macular degeneration which usually prevents the vision from deteriorating and, in some patients, will allow the vision to improve. Patients with wet macular degeneration who are diagnosed quickly and have a mild form of wet AMD may still maintain driving vision.

Dry macular degeneration does not, at present, have a medical or surgical treatment available and so treatment is dependent on optical aids such as magnifiers.

Most patients with wet macular degeneration will have a course of 3 injections into the eye with one injection being given every month for 3 months, then top-up injections are usually needed from time to time, depending on what treatment regimen is recommended and how the eye is responding to treatment.

Very rarely injection treatments for wet macular degeneration can result in a serious complication with infection being introduced into the eye which can significantly reduce the vision if it is not diagnosed and treated as soon as possible. If, after an injection, the eye becomes very painful with reduced vision immediate medical review is needed. This usually occurs within the first 48 hours after the injection.

The injection treatment is very quick and with little discomfort. Anaesthetic drops are given to numb the surface of the eye and then the skin around the eye is cleaned with iodine to prevent infection. A piece of light paper cloth is placed over the face with a small hole in it to expose the eye to be treated. It is held away from the face and therefore is not claustrophobic. A small wire clip is placed to keep the lids from blinking and the injection is given with a very fine needle which is over in a matter of seconds. Sometimes a slight sharp sensation is noted at the time of the injection, but it is not a very painful procedure.

Patients with more severe forms of dry macular degeneration, or patients with wet macular degeneration in one eye, may benefit from vitamin supplements to reduce the likelihood of the dry macular degeneration converting to wet or reducing the likelihood of developing wet macular degeneration in both eyes. The vitamin supplements must have the AREDS2 combination of vitamins to give maximum benefit.

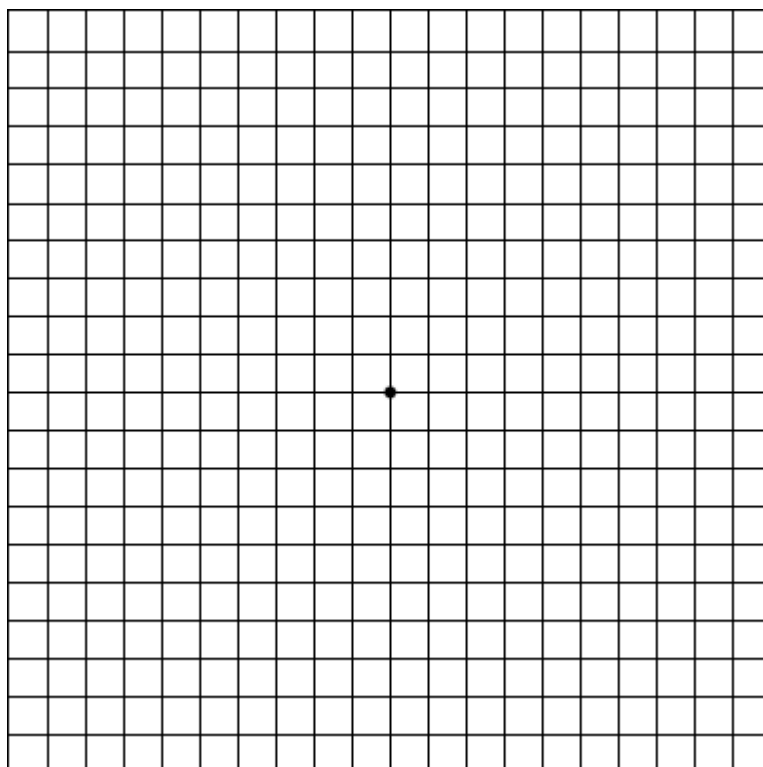
Smokers with macular degeneration should try to give up as this is a definite risk factor for developing this condition and causing the condition to progress.

If you are struggling to read it is important that your doctor ensures that you are referred to a low vision clinic to try and enhance your vision with various optical aids which usually relate to some form of magnification.

If you have more severe visual loss from macular degeneration then your doctor may recommend that you are placed on the sight impaired, or severe sight impaired register to allow you to gain access to more help and ensure that the social services are aware of your situation and modify your home environment to make things as easy for you as possible, and also provide some financial assistance if required.

As well as central blurring and distortion of vision, some patients with early macular degeneration find they wake up in the morning with a blurred patch in the centre of vision which disappears after a few minutes, and also find it difficult to adjust quickly when going from a light to dark environment. Some patients with more severe macular degeneration also experience visual hallucinations which can be quite vivid and frightening if the patient is not aware that it is part of having this condition.

Please follow the guidance given to you by your Consultant on how to check your vision using the Amsler Chart below:



Should you wish to find out more about macular degeneration:

The Macular Society
PO Box 1870
Andover
SP10 9AD

Website: www.macularsociety.org
Helpline: 0300 3030111
General Enquiries: 01264 350551

Email: help@macularsociety.org
Email: info@macularsociety.org

Website: www.rnib.org.uk
RNIB Helpline: 0303 1239999

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