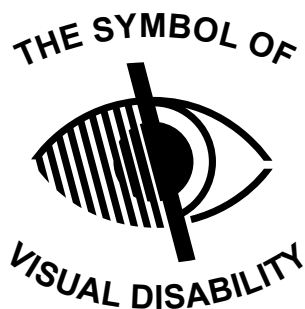


# The Partially Sighted Society



## MACULAR DEGENERATION

*“There has been some bleeding at the back of your eyes.”*

*“There’s nothing I can do, but don’t worry – you won’t go blind.”*

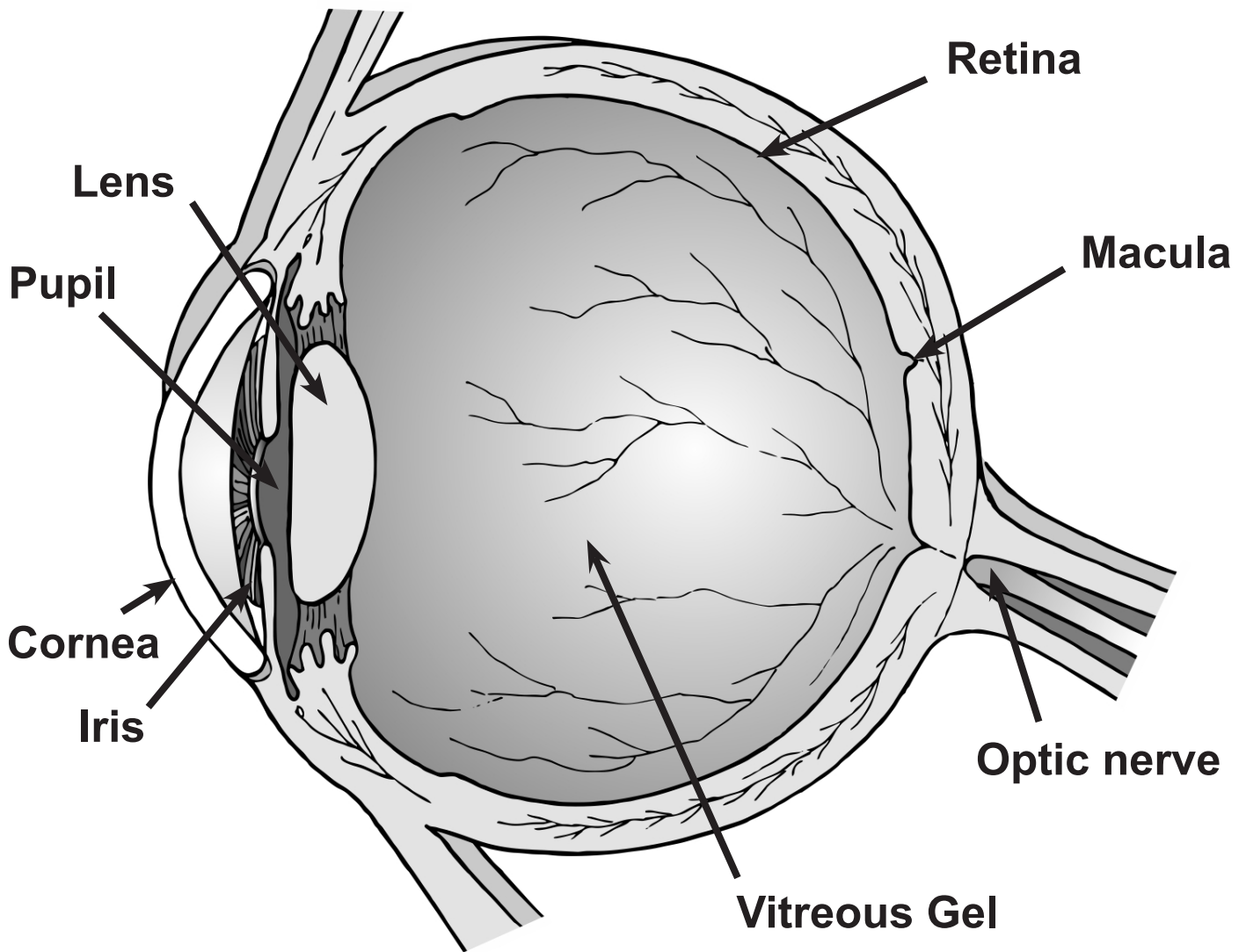
If you have recently been diagnosed with Macular Degeneration (AMD) then this may have been what your specialist told you. Macular Degeneration (AMD) is the most common cause of sight loss in people over the age of 50 and does not lead to blindness. But it can cause difficulties that may affect your ability to see and function in your day-to-day life.

### **So what is Macular Degeneration (AMD)?**

At the back of our eyes we have a light-sensitive coating called the retina. The retina contains two kinds of light-sensitive photoreceptor cells called rods and cones. The rod and cone cells transmit the images that we see to the brain. The cone cells are situated in the macula which is responsible for enabling to see colour and detail. The rod cells are situated around the periphery of the retina and are responsible for our peripheral and night time vision.

AMD is a condition that occurs when the cone cells in the macula are affected.

Damage to the macula affects your central vision which is needed for reading, writing, driving, recognising people’s faces, etc. Therefore, without a macula you can still see enough to get around, be aware of objects and people, and be independent. This peripheral vision is still extremely useful in being able to see and function.



## **How will I know if I have AMD?**

The first symptom people notice is that it becomes harder to see detail. Straight lines become distorted, reading the newspaper or a magazine becomes difficult, even with reading glasses. You may find there is a smudge in your vision – especially when you look straight at something.

You may also become sensitive to light and or see odd shapes and lights. Quite often these changes only happen in one eye.

If you are experiencing any of these symptoms, see your optometrist or eye professional. Occasionally the vision can change quickly. Then you should go to the A&E department of your local hospital to see an eye specialist.

## **Types of AMD**

There are two types of age-related macular degeneration: Dry; and Wet.

### **Dry AMD**

This is the most common form. Dry macula degeneration is characterised by a build up of drusen (dots of yellow crystalline deposits that build up behind the macula) and thinning of the layer or retinal pigment epithelial cells (RPE) in the macula. These RPE cells support the light sensitive photoreceptor cells (rods and cones) that gather the images and send them to the brain, where vision takes place.

Drusen are the most common early sign of dry age-related macular degeneration and may be the result of a failure of the eye to dispose of waste products that are produced when the photoreceptors of the eye discard older parts of the cell. Dry or atrophic MD reduces the central vision and can affect colour perception. It usually takes several years for vision to become seriously affected. Many people with dry AMD do not totally lose their reading vision.

### **Wet AMD**

Wet AMD occurs when there is a bleed (haemorrhage) from new blood vessels which have grown into the Macula area of the retina. These vessels are not normal. They are fragile and tend to leak blood and fluid. This can damage the cones, and cause scarring in the macula, causing vision loss.

If the vision of only one eye is affected, you may not notice any symptoms, as the other good eye often compensates. When both eyes are affected you are more likely to notice symptoms. It is important to have regular eye tests to check each eye separately for early AMD (and to check for other eye conditions such as glaucoma). Always see a doctor or optometrist promptly if you develop visual loss or visual distortion.

## **How is age-related macular degeneration diagnosed?**

Often people only realise they have AMD when they go to their optometrist for an eye test. If you have developed symptoms suggestive of AMD, your doctor or optometrist (optician) will refer you to an eye specialist (ophthalmologist). This should be done urgently, especially if there is any suggestion of wet AMD.

The ophthalmologist may ask you to look at a special piece of paper called an Amsler Grid with horizontal and vertical lines to check your visual fields.

If you find that any section of the lines is missing or distorted, then AMD is a likely cause of the visual problem. The ophthalmologist will examine the back of your eye to look for the typical changes that occur with dry AMD and wet AMD and will take digital photographs of the retina.

If wet AMD is diagnosed or suspected, then a further test called fluorescein angiography may be done. For this test a dye is injected into a vein in your arm. Then, by looking into your eyes with a magnifier and taking pictures with a special camera, the ophthalmologist can see where any dye leaks into the macula from the abnormal leaky blood vessels. This test can give an indication of the extent and severity of the condition.

## **Is there any treatment for age-related macular degeneration?**

For the more common dry AMD, there is no specific treatment. There are, however, certain things that can be done to maximise the sight you do have and to improve your eye health. Stopping smoking and protecting the eyes from the sun's rays by wearing sunglasses are important as well as following a healthy diet.

For the less common wet AMD, treatment may halt or delay the progression of visual loss in some people. Treatments which may be considered include treatment with anti-vascular endothelial growth factor (anti-VEGF) drugs, photodynamic therapy and laser photocoagulation.

## **Diet and AMD**

There has been much research into diet and AMD which has shown that people who eat a diet high in vegetables and fruit and who eat oily fish 3 times a week have a lower incidence of age-related macular degeneration. Dark green, leafy vegetables are particularly helpful. Conversely, people who eat a lot of saturated fats have a higher risk of AMD.

### **Why are fruit and vegetables so important?**

Fruit and vegetables contain antioxidants which are protective. Dark green leafy vegetables like spinach, kale, mustard greens and collard greens contain high levels of lutein, a critical antioxidant. Antioxidants are also present in fruits and vegetables with bright colour, including red grapes, peppers, corn, oranges, cantaloupe and mango. Look for fresh produce in a variety of colours to get a wide range of vitamins in your diet. Eat 5-9 servings a day. While this may sound like a lot, a serving is really only  $\frac{1}{2}$  cup of most foods or one cup of leafy greens.

### **Why fish?**

Studies have shown that people who eat fish 2-3 times a week have a lower risk for AMD. Oily fish contains omega-3 which seems to be a critical nutrient for the heart and eyes. The best fish are either wild salmon or small fish like sardines. If you cannot tolerate fish or obtain it easily, an omega-3 supplement is another option. Fish oil capsules are widely available.

### **What about fat?**

Studies found that while the amount of fat consumed makes a difference, the real issue for AMD is the amount of saturated fats in the diet. The biggest source of saturated fat is animal products – beef, lamb, pork, lard, butter, cream, whole milk and high fat cheese. Plant oils, such as coconut oil, cocoa butter, palm oil and palm kernel oil also have saturated fat. Processed foods and baked goods, often have high amounts of saturated fats. Instead, consume healthy fats like olive oil or avocado.

A healthy balanced diet rich in antioxidants may be beneficial, as may the addition of dietary supplements. You should talk to your GP or ophthalmologist before starting any supplements.

# **I have been diagnosed with AMD, what now?**

- **If you smoke, try to stop. If you are a smoker, there are numerous health benefits to quitting. Smoking is a risk factor for many illnesses, including AMD.**
- **Eat a healthy balanced diet to try to make sure you get plenty of the types of vitamins that may help in AMD.**
- **Stay safe with regards to driving. If you are registered with sight impairment you should not drive and should notify the DVLA. The DVLA website: [www.dvla.gov.uk](http://www.dvla.gov.uk) provides detailed guidance on fitness to drive and minimum standards with regard to sight. This includes being able to read, wearing your normal glasses, a vehicle number plate at a distance of 20 metres.**
- **Have regular sight tests as you get older. You should visit an optometrist every two years, even if there is no change in your vision. An eye test can often pick up the first signs of an eye condition before you notice any change in your vision.**
- **There are a wide variety of adaptations and aids available to help you cope with living with AMD. Being diagnosed with any sort of eye condition is distressing. But there are a lot of things that can be done to maximise the vision you have left.**

**At the Partially Sighted Society trained professionals are available to offer help, support, advice and training in the use of visual and non-visual aids which making living with a condition such as AMD easier.**

**For more information contact The Partially Sighted Society on 01302 965195 or email [anita.plant@part sight.org.uk](mailto:anita.plant@part sight.org.uk)**

# How can we help?

## Assessment and Therapy Service

The Partially Sighted Society provides a free enhanced low vision assessment service from our modern and comfortable premises in Doncaster. We can also provide a sight test from our fully equipped optometry facility and work with optometrists who are highly experienced in the field of low vision. We offer advice, support, equipment and training to anybody with a visual impairment in order to help them to continue to live active, independent lives after sight loss.

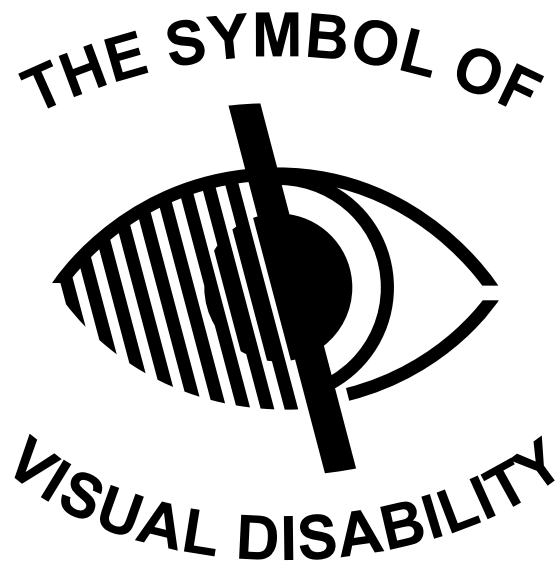


## What else do we do?

The Partially Sighted Society provides Visual Awareness training to professionals and carers, either in-house or at the client's premises, has monthly support group meetings, provides computer and technology training and is active socially as well as on Facebook and Twitter. We also have an inhouse printing facility where we produce heavy lined stationery for both schools and the public alike.



Find us at 1 Bennetthorpe, Doncaster DN2 6AA, phone us at **01302 965195** to ask for an appointment for an assessment or to order something from our catalogues. You can also find us on the internet at **[www. partsight.org.uk](http://www.partsight.org.uk)**



**© The Partially Sighted Society  
1 Bennetthorpe  
Doncaster  
DN2 6AA  
Tel: 01302 965195  
Website: [www.partsight.org.uk](http://www.partsight.org.uk)**

The Partially Sighted Society is a Registered Charity (No. 254052)  
and is a Company Limited by Guarantee (no. 917003)  
Registered Office: 1 Bennetthorpe, Doncaster, DN2 6AA