

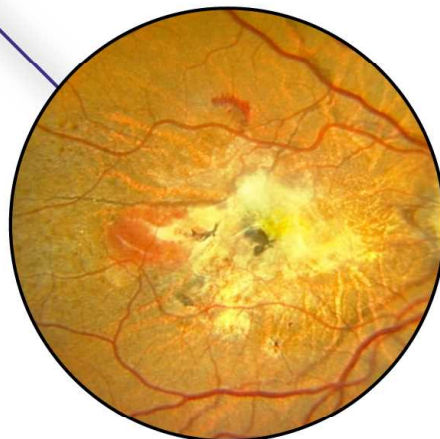


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## Age Related Macular Degeneration



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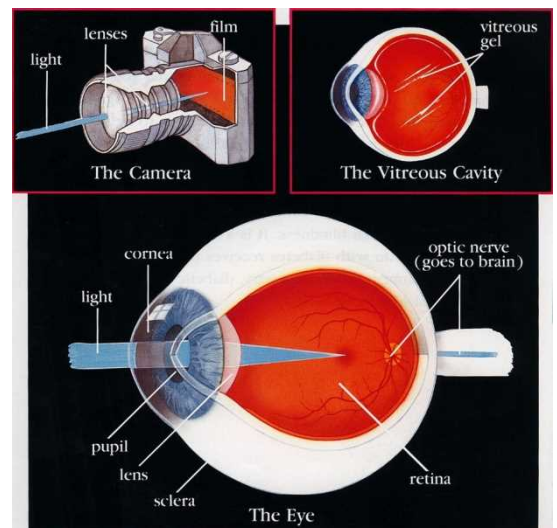
**UNIVERSITY OF NICOSIA**  
**Medical School**

# **AGE RELATED MACULAR DEGENERATION**

This booklet provides information about Age-Related Macular Degeneration (AMD) and answers questions about its causes, symptoms, diagnosis and treatment. AMD is a chronic eye disease and one of the leading causes of severe vision loss in people 60 years of age and older. It is also one of the leading causes of adult blindness in the world.

## ***How the eye works***

Before we talk about what can go wrong, it is important to understand how the eye works when it is working properly. The eye is like a camera. When you take a picture, the lens in the front of the camera allows light through and focuses that light on the film that covers the back inside wall of the camera. When the light hits the film, a picture is taken.



The eye works in much the same way. The front parts of the eye (the cornea, pupil, and lens) are clear and allow light to pass through. The light also passes through the large space in the centre of the eye called the vitreous cavity. The vitreous cavity is filled with a clear, jelly-like substance called the vitreous or vitreous gel. The light is focused by the cornea and the lens

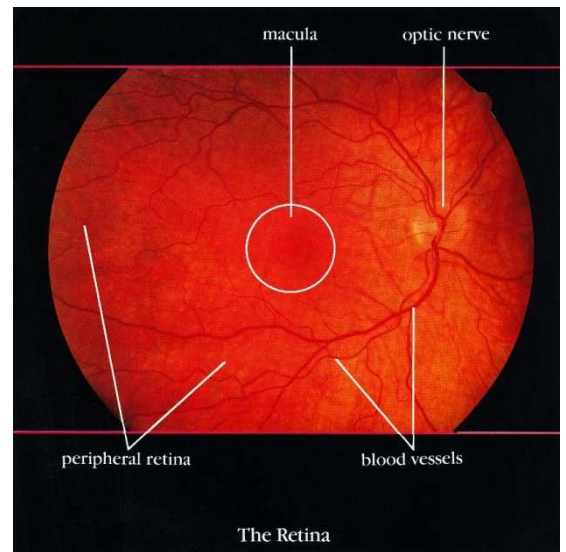
onto a thin layer of tissue called the retina, which covers the back inside wall of the eye. The retina is like the film in a camera. It is the seeing tissue of the eye. When the focused light hits the retina, a picture is taken. Messages about this picture are sent to the brain through the optic nerve. This is how we see.

## ***The retina***

The retina has two parts: the peripheral retina and the macula. The peripheral retina gives us vision to the side, called peripheral vision. It is this part

of the retina that is at work when we see something out of the corner of the eye. Because the peripheral retina is not able to see detail clearly, we cannot use the peripheral vision to read, drive, or even recognize a face. If you see someone off to your side, out of the corner of your eye you may be able to tell who it is because you recognize the person's general shape, but you won't be able to see the expression of the person's face.

In order to see fine detail, you must look straight ahead, using the macula, the centre of the retina. Even though the macula makes up only a small part of the retina, it is one hundred times more sensitive to detail than the peripheral retina. The macula allows you to see tiny detail, read fine print, recognize faces, thread a needle, read the time, see street signs, and drive a car.



## **What is AMD?**

AMD is a disease that can affect the sharp central vision needed for ~~straight-ahead~~ activities like reading, driving, telling time and recognizing faces.

Sometimes AMD advances so slowly that you notice little change in vision. Sometimes AMD progresses quickly, resulting in rapid vision loss. AMD causes no pain, but it can rob you of your ability to see what is in front of you. There are two types of AMD . dry and wet.

### **Dry AMD**

In dry AMD, which makes up about 85% of all AMD cases, light . sensitive cells in the retina die, affecting ~~straight-ahead~~ vision. The most common symptom of dry AMD is slightly blurred vision. Dry AMD tends to develop slowly, but may develop into a more severe form of AMD called wet AMD.

### **Wet AMD**

In wet AMD abnormal blood vessels grow under the macula. This may lead to bleeding, scar formation and permanent damage. Damage occurs more rapidly than in the dry form and tends to lead to more severe loss of central or ~~straight-ahead~~ vision. If spotted in time, treatments for certain forms of wet AMD may reduce or delay vision loss.

## Who is at risk

The two greatest risk factors for developing AMD are:

- **Increasing age:** About 25% of people over 65 years of age have AMD
- **Having AMD in one eye:** Of those with AMD in one eye, about 40% will develop AMD in the other eye within five years.

## Other risk factors for developing AMD include:

- Smoking
- A family history of the disease
- Low dietary intake of certain vitamins and minerals
- Gender . women are at greater risk than men

## What are the symptoms

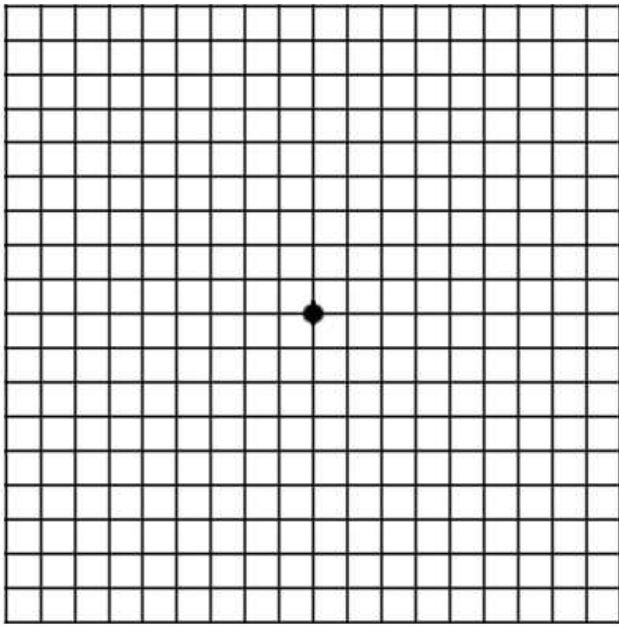
- Dim, fuzzy or less sharp vision
- A blind spot in your central vision
- Seeing objects as wavy or curved
- Colours that seem washed out and dull



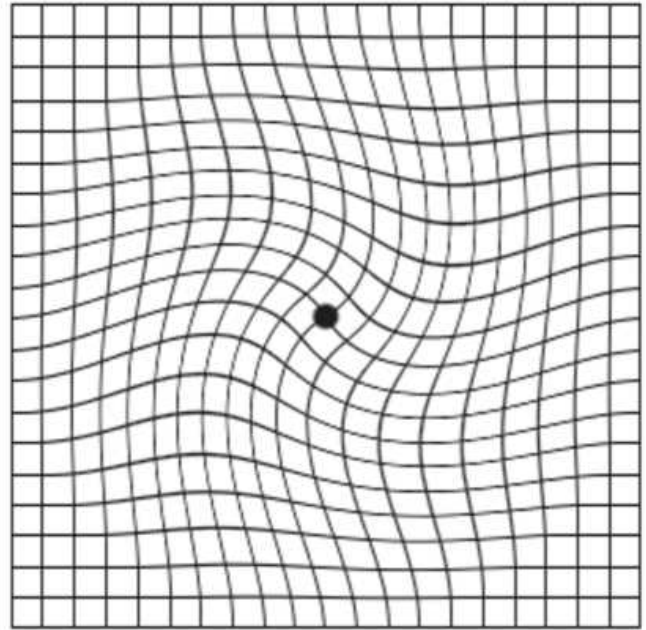
Distortion & Loss of Central Vision (Scotoma)



## Can I test my vision



NORMAL AMSLER GRID



AMSLER GRID IN MACULAR DISEASE

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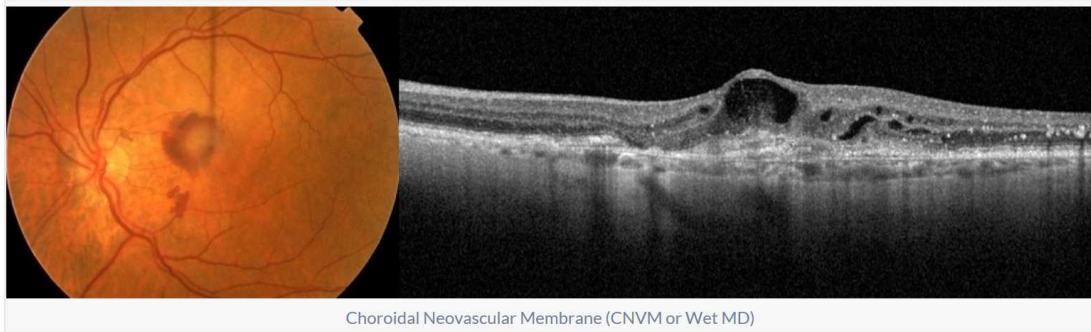
There is no substitute for regular eye examinations with your eye doctor, but there is a way to check for vision symptoms at home. To test your vision for AMD, use a checkered square known as the Amsler grid.

Use it in good illumination with your reading glasses on at your normal reading distance. Using one eye at a time focus on the central spot in the grid and observe if there is any distortion on the surrounding lines. If there is loss of lines or distortion of the lines then this is abnormal.

Ask your eye doctor for an Amsler grid so you can test your vision regularly. If you detect changes, schedule an eye exam immediately.

## **Why should I visit an eye doctor?**

Regular screening examinations can detect early signs of AMD. An eye doctor can help you determine your risk for developing AMD, perform an OCT scan to tell you if you have AMD and assist you with treatment options if AMD is diagnosed. Early diagnosis and treatment may help preserve the sight you still have.



## **Treatment**

There's currently no cure for either type of age-related macular degeneration (AMD), although the disease process may be slowed down or stopped with the appropriate treatment if used early enough.

### **Wet AMD**

If you are diagnosed with wet AMD the treatment that you will be offered is injections in the eye of a medication called anti vascular endothelial growth factor (anti-VEGF). You may need multiple injections in the eye depending on the response to treatment and in order to achieve stabilisation of vision. The earlier you start the treatment the better the results in gaining



vision. Not everyone will see an improvement. The anti-VEGF medications that are usually given are, Aflibercept (Eylea), Ranibizumab (Lucentis) and Avastin (Bevasizumab).

## **Dry AMD**

If you were diagnosed with dry AMD the deterioration of vision is usually slow. You may go on to develop wet AMD so monitoring is necessary. There is some evidence a diet high in vitamins A, C and E . as well as substances called lutein and zeaxanthin . may slow the progression of dry AMD, and possibly reduce the risk of getting wet AMD.

Foods high in vitamins A, C and E include:

- . oranges
- . kiwis
- . leafy green vegetables
- . tomatoes
- . carrots

Leafy green vegetables are also a good source of lutein, as are peas, mangoes and sweetcorn.

Dietary supplements are also available if you feel your dietary intake of vitamins is inadequate.

## **Remember:**

- Timely diagnosis and assessment for treatment of AMD is extremely important
- Treatment cannot usually bring back vision that is already lost, but the sooner you are treated, the more likely you are to have a better outcome.
- Your eye doctor can help.

If you require further information do not hesitate to speak to one of our doctors or nurses

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forth roundabout**

**From Paphos – second  
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Hospital

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