

# Macular Holes

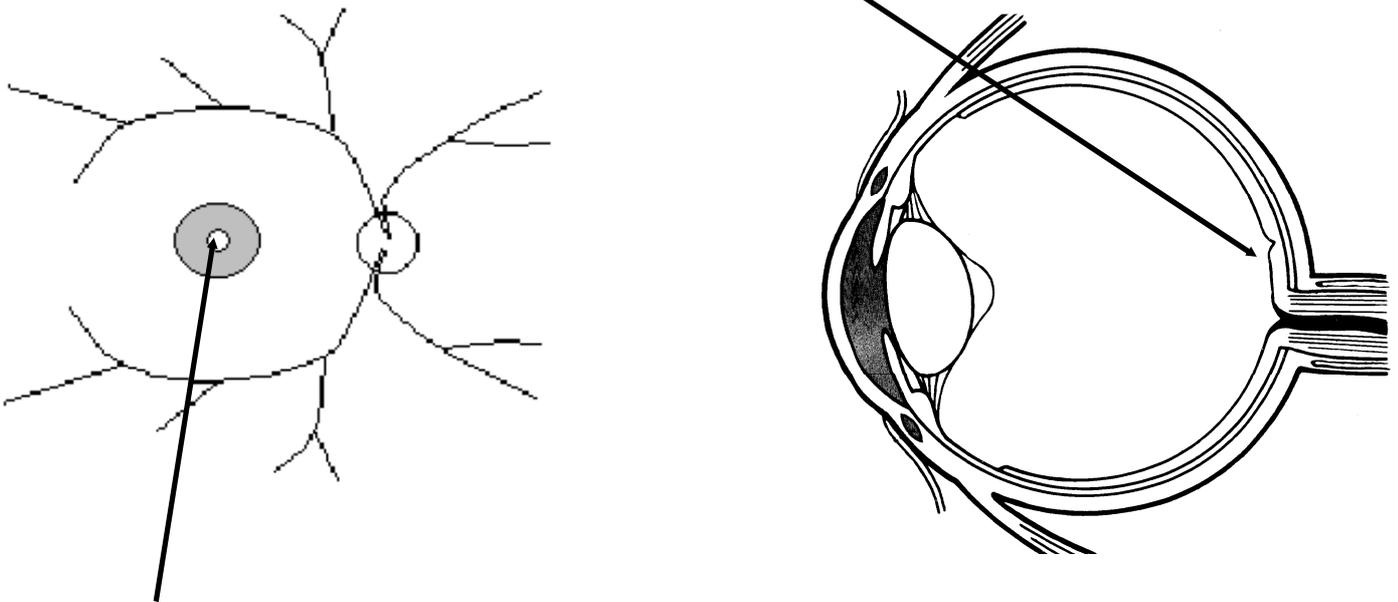
This information leaflet aims to give you some information about the condition of Macular Holes. It is a common causes of poor vision amongst retired people.

## **So What is a Macular Hole?**

This is a disorder which affects the Retina. The Retina is akin to the film in a camera. It lines the back of the eye and it is the part of the eye that converts light into electricity and into what we see.

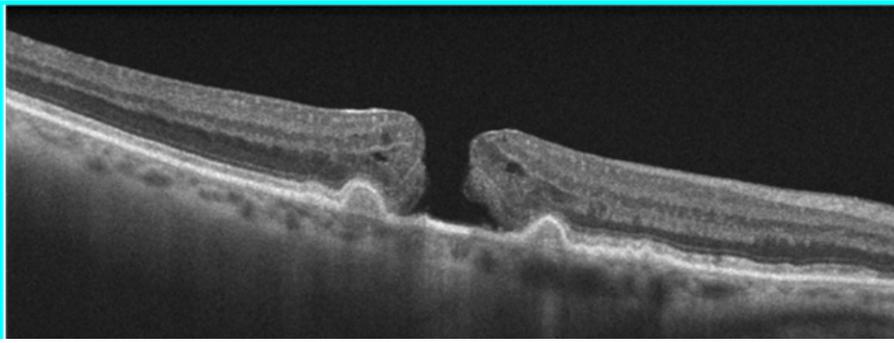
## **The Retina**

The retina is terribly busy just like a TV on 24 hours per day, it does not even rest when we sleep. It is hardly surprising that over the years parts of the retina wear out. Sometimes the retina can wear very thin centrally leading to a hole in the retina. This is akin to a hole in a worn pair of socks. When this happens the vision becomes blurred. Macular holes can also develop secondary to previous surgery for retinal detachments or previous trauma to the eye.



**Macular Area** This area is responsible for most of our vision especially our central vision. This is the part of the Retina where Macular holes develop. The shaded area represent the fluid that develops around the central hole. It does not affect the retina outside this area, which means that your peripheral vision will never be affected by this condition. It is only the CENTRAL vision which is affected.

OCT has transformed our understanding and detection of macular holes. These high-resolution scans below are taken from the Zeiss Cirrus OCT machine gives stunning anatomical pictures of a macular hole. It is now possible to detect these earlier and see incredible detail. This does help decisions about whether surgery is appropriate or not as well.



### **Who is affected?**

It is commoner in Females than Males, typically affecting the 60-70 year age group. Only 10% of people are affected in both eyes. It is quite a common condition with 3 in every 1000 people affected.

### **Can the other eye be affected?**

A macular hole is not generally thought of as a bilateral disease, although 2.5% to 27% of macular holes are bilateral. The variability noted from these reports (6 in total) is probably related to the different populations studied and the varying lengths of follow-up study. Patients with unilateral macular holes, regardless of stage, should be warned that a hole could form in the second eye. Symptoms of impending holes should be carefully watched for, because surgical intervention may be effective in preventing the progression of an impending hole into a full-thickness macular hole. Symptoms include visual distortion, decreased vision, and changes observed with home Amsler grid testing.

### **What is the Cause**

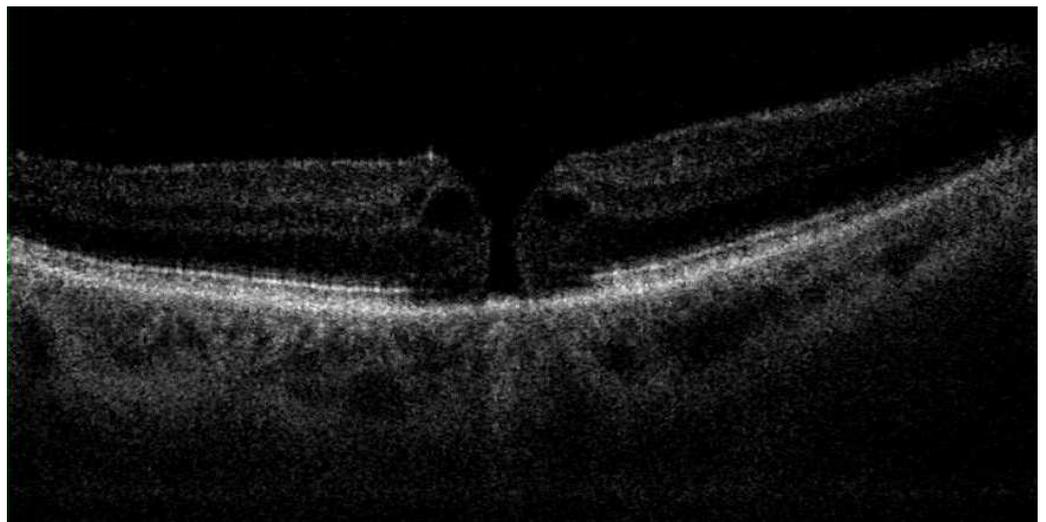
Macular holes are commoner in certain individuals such as Short sighted (Myopes), those who have had trauma to the eye or macular oedema. However most occur for no particular reason. It is thought that in some cases it is the Vitreous (Jelly of the eye) pulls on the central retina causing the hole formation. Part of the operation for this condition is in fact to remove the vitreous to relieve this traction.

### **Is There any Treatment?**

Most types are due to a wear and tear of the retina and as such are not amenable to treatment. However in certain situations treatment may be effective. Your doctor will advise you on this.

### **Optical Coherence Tomography**

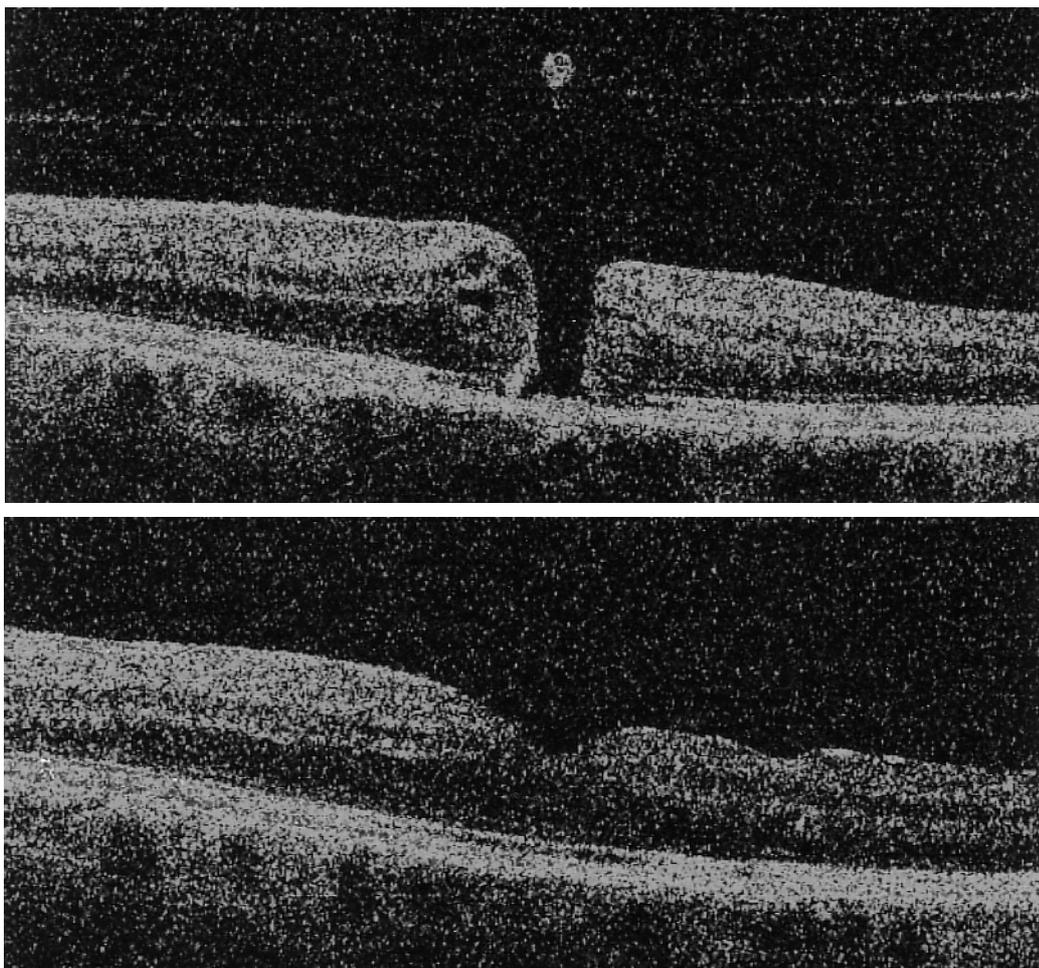
Ultra high resolution 3D Optical Coherence Tomography is a new technology that is able to look into the retina like a microscope



slide. It has revolutionized examination of the back of the eye. In this way the details of the hole can be seen at the microscopic level. An example is show here.

## Vitreoretinal Surgery

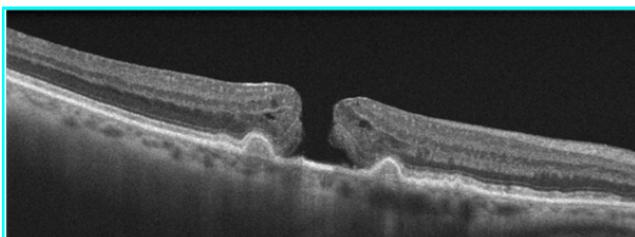
Certain types of holes can be helped to an extent by surgery on the back of the eye. This involves removing the Jelly of the eye and placing a gas bubble on the hole. However one does need to rest with ones head down on a special pillow for a week afterwards. This is normally done at home though you can get up to move around in between times. However this post operation care must be considered.



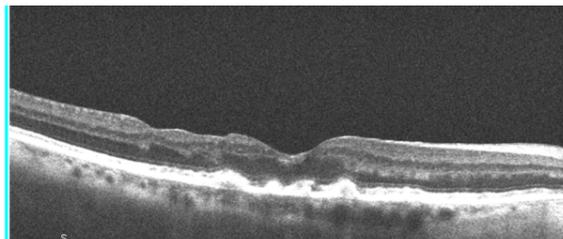
These two photographs above before and below after show how the hole can be closed with surgery.

Below is another example of the results of recent surgery. The macular hole is clearly visible and amazingly three months after surgery the hole has completely closed the retinal layers moved across. In addition the patient has improved vision from 6/12 vision to 6/6 vision. Distortion as well has also settled. One can also see that the normal foveal dip has returned as well.

Pre surgery



Post surgery by Mr Graham Duguid



In West London we refer patients to Mr Graham Duguid at the Western eye hospital who is our local vitreo-retinal surgeon who performed this type of surgery regularly. A vitreo retinal surgeon is a surgeon that specialises in surgery at the back of the eye and usually based at major teaching hospitals.

**Laser Treatment** Has been tried, but as it burns the retina to work, it does as much damage as it helps.

### **Can I do Anything to prevent it happening?**

Unfortunately not. However if the vision does get worse then a further examination is recommended.

For most people with macular holes there is no specific Treatment. It is also a condition that can get gradually worse over the years, but it will NEVER make you go completely blind, as it never affects the peripheral vision.

### **Can Glasses Help?**

You should ensure that you have an up to date pair of glasses. Full frame reading glasses are better than Bifocals or varifocals. If you are having difficulty reading, please ask to be referred to our Low Vision Aid Clinic. Here amongst other things they can advise you on Magnifying glasses. Remember **Extra Lighting** can help with reading.

### **Partial Sighted and Blind Registration**

For those whose vision is badly affected registration brings along many benefits. They will visit you in your own home and assess whether you need any additional help or appliances. They can arrange the talking book service which many find very helpful. Many people find this one of the most useful things that the doctor can do for you.

**Television** Sit closer to the TV.

**Driving** You must be able to read a number plate at 20.5 meters, the doctor can advise you on this.

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