

## How are your eyes examined?

When your eyes are examined, they will be dilated using eye drops. During this examination, which is painless, your eye doctor will observe if there are any changes to your eye including the retina and vitreous.

## What are the risks of surgery?

The most common risk following macular hole surgery is an increase in the rate of cataract development. In most patients, a cataract can progress rapidly, and often becomes severe enough to require removal. Other less common complications include infection and retinal detachment either during surgery or afterward, both of which can be immediately treated. For a few months after surgery, patients are not permitted to travel by air. Changes in air pressure may cause the bubble in the eye to expand, increasing pressure inside the eye.

## How successful is this surgery?

Vision improvement varies from patient to patient. People that have had a macular hole for less than six months have a better chance of recovering vision than those who have had one for a longer period. Discuss vision recovery with your doctor before your surgery. Vision recovery can continue for as long as three months after surgery.

Compliments of  
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## A Closer Look at Macular Hole



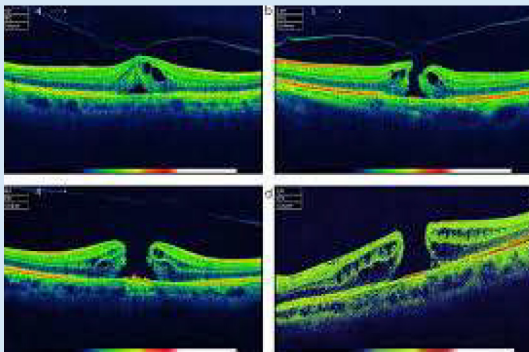
## Patient Education

## What is Macular Hole?

A Macular hole is a small break in the macula, located in the center of the eye's light sensitive tissue called the retina. The macula provides the sharp, central vision we need for reading, driving, and seeing fine details.

A Macular hole can cause blurred and distorted central vision. Macular holes are related to aging and usually occur in people over age 60.

The size of the hole and its location on the retina determine how much it will affect a person's vision. When a stage III macular hole develops, most central and detailed vision can be lost if left untreated; a macular hole can lead to a detached retina, a sight-threatening condition that should receive immediate medical attention.

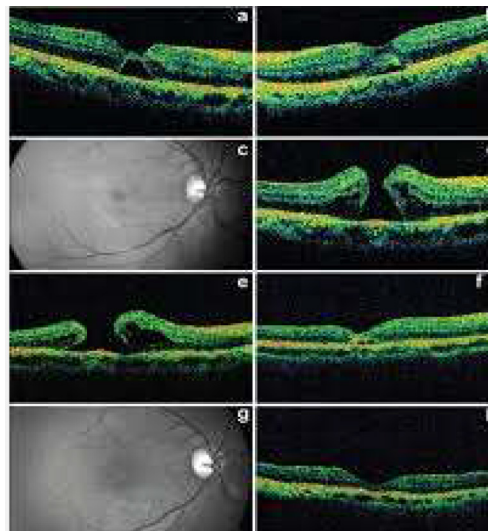


## What causes a Macular hole?

Most of the eye's interior is filled with vitreous, a gel-like substance that fills about 80 percent of the eye and helps it maintain a round shape. The vitreous contains millions of fine fibers that are attached to

the surface of the retina. As we age, the vitreous slowly shrinks and pulls away from the retina surface. Natural fluids fill the area where the vitreous has contracted. This is normal. In most cases, there are no adverse effects. Some patients may experience a small increase in floaters, which are little "cobwebs" or specks that seem to float about in your field of vision. However, if the vitreous is firmly attached to the retina when it pulls away, it can tear the retina and create a macular hole. Also, once the vitreous has pulled away from the surface of the retina, some of the fibers can remain on the retinal surface and can contract. This increases tension on the retina and can lead to a macular hole. In either case, the fluid that has replaced the shrunken vitreous can then seep through the hole onto the macula, blurring and distorting central vision.

Macular holes can also occur in other eye disorders, such as high myopia (nearsightedness), injury to the eye, retinal detachment, and, rarely macular pucker.



## Symptoms

Macular holes often begin gradually. In the early stage of a macular hole, people may notice a slight distortion or blurriness in their straight-ahead vision. Straight lines or objects can begin to look bent or wavy. Reading and performing other routine tasks with the affected eye become difficult.

## Treatment

Although some macular holes can seal themselves and require no treatment, surgery is necessary in many cases to help improve vision. In this surgical procedure called vitrectomy the vitreous gel is removed to prevent it from pulling on the retina and replaced with a bubble containing a mixture of air and gas. The bubble acts as an internal temporary bandage that holds the edge of the macular hole in place as it heals. Surgery is performed under local anesthesia and often on an outpatient basis.

Following surgery, patients must remain in face-down position normally for a day or two, but sometimes for as long as two or three weeks. This position allows the bubble to press against the macula and be gradually reabsorbed by the eye, sealing the hole. As the bubble is reabsorbed, the vitreous cavity refills with natural eye fluids. Maintaining a face down position is crucial to the success of the surgery. Because this position can be difficult for many people it is important to discuss this with your doctor before surgery.