Macular Hole Information

What is a 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 detail.

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

Are there different types of a macular hole?
Yes. There are three stages to a macular hole:

- Foveal detachments (Stage 1). Without treatment, about half of Stage I macular holes will progress.
- Partial-thickness holes (Stage 2). Without treatment, about 70 percent of Stage II macular holes will progress.
- Full-thickness holes (Stage 3 and 4).

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.

Frequently Asked Question About Macular Hole:

Is a macular hole the same as age-related macular degeneration?
No. Macular holes and age-related macular degeneration are two separate and distinct conditions, although the symptoms for each are similar.
Both conditions are common in people 60 and over. An eye care professional will know the difference.

Causes and Risk Factors:

What causes a macular hole?
The cause of macular holes is not fully understood. In most cases, the hole forms spontaneously and without any warning symptoms. The occurrence of a macular hole cannot be predicted in advance or prevented.

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

Is my other eye at risk?
If a macular hole exists in one eye, there is a less than 10 percent chance that a macular hole will develop in your other eye over your lifetime. Your doctor can discuss this with you.

Symptoms:

What are the symptoms of a macular hole?
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:

How is a macular hole treated?
Macular holes rarely seal themselves. Surgery is necessary in many cases to help improve vision. In this surgical procedure--called a 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 on an out-patient basis.

Following surgery, patients must remain in a face-down position, normally two to 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. Depending upon the type of gas bubble used, the bubble will resolve over two week to two months.

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.

**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.

As long as the gas bubble is present in the eye, 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 to six months after surgery.
What if I cannot remain in a face-down position after the surgery?

If you cannot remain in a face-down position for the required period after surgery, vision recovery may not be successful. People who are unable to remain in a face-down position for this length of time may not be good candidates for this surgery. However, there are a number of devices that can make the "face-down" recovery period easier on you. There are also some approaches that can decrease the amount of "face-down" time. Discuss these with your doctor.