Macular Holes

www.macularholesurgeons.org

What is a macular hole?

The eye is like a camera, and the retina is like the film in the camera-it's what takes the picture. The center of the retina, the part of the retina that you use for reading and color vision, is called the macula. The macula is about 3mm in diameter. Patients who have a macular hole, have a defect, or hole in the center of the macula. They note that objects have blind or blurred spots and may be distorted. Technically speaking, a macular hole is not really a hole, but a 'dehiscence'. If you stretch a piece of well-chewed chewing gum, eventually a hole (dehiscence) will form. A membrane that stretches the retina probably causes macular holes. Removing the membrane treats macular holes. Macular holes are more common in women and may be more common in family suggesting a genetic predisposition. If you have a hole in one eye there is a 10-30% chance one may develop in the fellow eye.

What will happen if nothing is done?

Macular holes almost always just affect the very center of your vision, and do not affect peripheral (side) vision. A small hole can enlarge and reduce vision to the level that you will not be able to read or see the big 'E' on the chart. One in 100 eyes will spontaneously improve. The literature states that the chances of getting a hole in your other eye is between 10 and 50%. Our personal experience is that it's closer to 10% than 50%.

Must the hole be repaired immediately?

The best results are obtained when surgery is performed within 6. As with most medical problems the earlier it is treated, the better. Macular hole surgery is not urgent (does not have to be repaired today), but should be repaired within a month or so if possible, for the hole can enlarge with time. There are reports of vision returning to the 20/50 level (reading vision) as long as ten years after the hole was noted, but the odds of getting better vision drop with length of time the hole has been present. Best chances of visual recovery occur when the hole has been present for less than one year.

What is involved to repair the hole?

The operation is done in a sterile operating room, usually as an outpatient. Medical clearance may be necessary from your personal physician to O.K. you for surgery. We will usually require a recent physical exam, CBC, EKG, and electrolytes. Do not take aspirin or blood thinners within 2 weeks of surgery. If you take insulin or blood sugar medication CALL YOUR DOCTOR TO DETERMINE WHAT YOU SHOULD TAKE THE DAY OF SURGERY (VERY

IMPORTANT).

The operation usually takes about 1 hour, gives or takes 15 minutes and is performed under local anesthesia (unless you have an issue that keeps you from being still during the operation such as a head tremor, restless leg syndrome, can't lie on your back without pain, are claustrophobic or just want to be 'out'.) Sometimes the procedure is combined with cataract surgery, which then may take longer to perform and general is usually advised. The procedure requires that the vitreous jelly inside your eye be removed as well as the membrane(s) that causes the hole. A dye is usually used (ICG or Brilliant Blue) to stain these membranes, which aids greatly in their complete removal. The eye is then filled with a gas bubble, which lasts 2 to 8 weeks, and resorbs spontaneously. If your lens is not removed, you will have to maintain a face down position for several weeks. You may get up to eat or go to the bathroom; otherwise you must remain face down. Face down positioning is necessary to keep the gas bubble pressed against the hole to keep it closed, and to keep the bubble from touching your lens. If the bubble touches the lens a cataract will form immediately. Unfortunately, about 80% of patients over 50 years old who undergo vitrectomy for any reason will develop a cataract within a year or two, a reason we usually recommend, for this age group) the lens be removed before or during the vitrectomy to provide better visibility for the surgeon and easier post op care for the patient and avoids the need to go back for cataract surgery.

In eyes that the lens is removed and an implant inserted (most cases), face down positioning is **not necessary. We will frequently recommend the cataract be removed a few weeks before the macular hole operation or at the time of the vitrectomy, even if the cataract is not 'ripe'. Our studies and others including the Mayo Clinic have shown that face down posturing is not necessary for success.**

The operation is done as an outpatient. You are asked to arrive at the facility an hour or two before the operation to dilate your pupil and prepare you for surgery. You will then spend one hour or less after surgery in the recovery room (depends on whether the surgery was performed under local or general anesthesia). At this point a nurse will go over your postoperative instructions.

<u>Postoperative care</u>
Your operated eye will be patched for twenty-four hours. You will wear a protective shield for naps and bedtime for two weeks to protect the eye. Drops will be started the next day. Drops will be used to prevent infection, minimize inflammation, keep the eye pressure at a safe level, and relax the muscles inside the eye. The drops will be used for two to six weeks. You will receive a patient information sheet to inform you how to take care of your eye. Please read the

document and feel free to ask us any questions. You may also receive a pill for eye pressure, and a pain pill. The pill for eye pressure (Diamox, generic= acetazolamide) contains sulfa, so don't take it if you have a known allergy to sulfa. It should also not be taken if you have a history of kidney stones. If you develop flank (back, kidney) pain while taking the medicine, stop it immediately and call me. If you are asked to take Diamox, take it with 8 oz. of water. Diamox may also make your fingers tingle, may cause loss of appetite, and may make you feel depressed. Try to take the pill for at least two days or call us if you are having problems.

Pain

There is usually very little pain following this type of surgery. If you have severe pain, not adequately relieved by the pain medication prescribed, please call me immediately. If you have a severe deep eye ache, eyebrow pain, or persistent nausea and/or vomiting, call us immediately. It could mean that the pressure in the eye is elevated.

Restrictions

You should avoid heavy lifting (15 lbs.), bending or straining for 3 weeks. Avoid all unnecessary reading until the bubble has completely resorbed. Because the bubble will expand as you ascend in altitude and could significantly raise the pressure inside your eye, do not ascend to an altitude over 2,000 feet until we tell you it's OK. Also, do not fly until the bubble has resorbed. We suggest you restrict your activity for 3 weeks until the bubble has resorbed. Some people can return to work several days to two after the operation, but this will depend upon their occupation. Showers or baths are OK but no swimming pools, ocean swimming, or hot tubs etc. for a month.

Visual return

Your vision will be poor while the bubble is inside your eye. You will see light and movement but not much more. As the bubble resorbs your vision will improve. The top of your visual field will be the first to return. As the bubble resorbs, it may break-up into smaller bubbles. This is normal. Once the bubble has completely resorbed, you may or may not note an improvement in the blurring or distortion. About 80% of what will return will occur by 3 months post operatively. 90% of visual recovery will return by one year, and usually all the vision that can return will return by 2 years.

Success rate

In our hands about 95% of eyes will experience successful closure of the hole with one operation. Of these eyes, about half will get back reading vision (i.e., 20/50 or better). If the operation fails, a second try may be suggested; sometimes (uncommonly) more gas will be injected in the office.

Complications and Risks

As with any surgery, there are risks, which include bleeding, infection, retinal detachment, or a vascular occlusion of the eye or optic nerve. Fortunately, such an occurrence is rare, in the 1% or less range. There are certain anesthetic risks including stroke and death. These too, are very rare. Every precaution is taken to prevent such complications. However, if they do happen, permanent damage can sometimes be minimized. For example, if a retinal detachment occurs, 99% can be repaired. You must, however, understand that sometimes eyes lose all sight (central and peripheral vision) permanently as a direct complication of the operation. This is major eye surgery and before you proceed with the operation you must carefully weigh the risks, alternatives, possible benefits and possible complications as well as no intervention.

When should I contact the doctor if I think I am having a problem?

Please contact the surgeon immediately if you think you are having any problem or concerns such as decreased vision, persistent or severe pain, a yellow discharge (one of the drops will leave white stringy material on the eye), or if your eyelids develop more swelling, redness or become more tender.

Summary

Macular hole surgery has a good prognosis for hole closure, and visual return if the hole is less than 500 microns in diameter. If the hole is very large (>1000 microns) or long standing surgery may not be advised. Without surgery, 99% of patients will have no improvement in vision. The operation is not perfect, and is not 100% successful but has a better chance of restoring sight than doing nothing. The risks are relatively small, but if complications occur, all sight could be lost in the affected eye. Before deciding to go ahead with surgery you must determine how much this visual loss affects your life style. If you are doing all the things you like to do with minimal difficulty, we advise against surgery. If you feel that the quality of your life is significantly negatively affected, surgery should be considered.

I HAVE READ THE ABOVE AND ALL MY QUESTIONS WERE ANSWERED.

Please sign one copy and return to the office so it may be

placed in your chart.

SIGNATURE **DATE**

More info can be found on our website:
www.retinaconsultantssd.com
www.macularholesurgeons.org