



## Macular Hole Repair

*Macular hole repair is a type of retinal surgery used to repair a macular hole (see separate handout on macular holes to learn more). The surgery is a same-day procedure at a hospital or surgery center, usually under local anesthesia with sedation but in some cases under general anesthesia.*

### WHAT KIND OF SURGERY IS MACULAR HOLE REPAIR?

Macular hole surgery is a type of vitrectomy procedure. Vitrectomy is the general name for retinal surgeries that involve removal of the vitreous, which is the gel inside the back of the eye. Vitrectomy surgery is minimally invasive and the instruments used in surgery are smaller than the diameter of a needle used to draw blood. The incisions are very small and often seal on their own without sutures (eyes with thin or soft tissue in the wall of the eye may need sutures).

### FACE DOWN POSITIONING

In a macular hole repair, the surgeon may peel a very thin surface layer of the retina in order to facilitate closure of the hole. A bubble of gas is then placed inside the eye. When the eye is pointed at the ground, the bubble floats upwards towards the center of the retina and helps push the edges of the hole together. This is the reason for face-down positioning after macular hole repair surgery. Your surgeon will tell you how many days of face down positioning is required, as this may vary based on the specifics of each case.

When positioning face down, keep both eyes pointed downwards towards the floor. The two eyes move together, so moving the other eye will cause the surgery eye to move as well. You may take breaks of 10 minutes per hour to sit upright, for example while eating or using the restroom. When sleeping, it can be difficult to maintain a strict face down position, in which case you may sleep on your side with your head pointed downwards. Your BARA surgeon may provide additional instructions or restrictions related to positioning. Avoid laying flat on your back until the gas bubble is gone. Your body will absorb the gas bubble typically over several weeks following surgery.

### RECOVERY OF VISION

Vision immediately after macular hole repair will be limited because the gas bubble blocks the central vision in that eye. As your body absorbs the gas bubble and the bubble moves past the half-way point, your central vision will slowly improve and you may see lights and other changes in the vision due to light reflecting off the surface of the gas bubble. Once the gas bubble has absorbed, your BARA surgeon will use a scan to look at the result of the hole closure. Even after the hole has closed, the vision may take several months to improve because the tissue needs time to heal.

## CATARACT PROGRESSION AFTER VITRECTOMY SURGERY

If you did not have cataract surgery before macular hole surgery, you should expect to experience cataract progression in the surgical eye after surgery. This may take a few months or more than a year, and your BARA surgeon will monitor your eye for cataract progression after surgery and keep your primary eye care provider updated as well.

## RISKS AND SAFETY

Every intraocular surgical procedure has risks. Vitrectomy surgeries carry an approximately 1 in 4,000 risk of infection, retinal detachment or major bleeding. Anesthesia carries risks as well, even if you do not undergo general anesthesia, and your life is in the anesthesiologist's hands while your BARA surgeon operates on your eye. This is why we ask you to see your primary care provider or appropriate specialist for medical clearance prior to surgery, our first priority is your safety during surgery.

## SUCCESS RATE

Macular hole repair typically has a success rate of more than 90%, meaning that the hole closes after surgery. The success rate is reduced if the hole has been present for a long time or if the hole is very large. It is very uncommon for macular holes to re-open once they have closed.



Even after a successful macular hole closure, the vision is not expected to return to “normal” because the layers of neurons and other cells may not return to the same structure as tissue that never had a hole.

Vision after successful closure of a macular hole may also be limited by other retinal diseases that affect the center of the retina, such as age-related macular degeneration.



**Bay Area Retina Associates**

*Diseases and Surgery of the Retina and Vitreous*

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Bay Area Retina Associates is a group practice of retinal surgeons. All members of the group are board-certified by the American Board of Ophthalmology and have completed fellowship training in the medical and surgical care of retinal diseases. All BARA surgeons have expertise in the treatment of common diseases such as age-related macular degeneration, diabetic retinopathy and retinal detachment, as well as rare diseases. We have served the Bay Area community for 35 years.