

**GLAUCOMA INSTITUTE OF AUSTIN**  
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**PLEASE READ AND SIGN THE LAST**  
**PAGE AND BRING IT WITH YOU TO**  
**YOUR PRE-OP APPOINTMENT**  
**ON:**

**WHAT TO EXPECT WITH GLAUCOMA SURGERY**

Trabeculectomy, or “filtering surgery”, is the most common type of glaucoma surgery. It is usually recommended when the eye pressure cannot be lowered enough with medical and/or laser treatments. A new drain for the fluid is created within the wall of the eye. This drain is usually located at the top portion of the eye underneath the eyelid.

After the surgery, eye fluid drains through the newly created passage to a reservoir, known as the bleb. This is formed during surgery from the skin, or outer coats, of the surface of the eye. This bleb appears as a “blister-like” bump on the white of the eye, usually under the upper eyelid. The appearance of the bleb is used by your doctor to judge the condition of the eye and success of surgery.

Trabeculectomy is performed in an operating room on an out patient basis. A local anesthetic, which is given by injection at the side of the eye, is used to prevent discomfort during the operation. Sedation will be given before the anesthetic to relax you.

The surgery is performed while lying on your back, with your head supported on a pillow. Except for the eye, the face is covered with a sterile sheet. An oxygen tube is placed by your nose to insure comfortable breathing.

The surgery requires a special microscope, which is suspended over the eye. This enables your doctor to see clearly the very fine details of the eye. Tiny stitches, thinner than a human hair, are used to close the surgical incision. Sometimes a drug to reduce scarring (an antimetabolite) is applied during surgery. Trabeculectomy usually is performed in about an hour. It may take longer if there has been previous eye surgery, inflammation, abnormal blood vessels, or other eye problems.

Immediately following surgery, the eye is soft and delicate. Your physical activity should be restricted to avoid lifting, bending, and straining. Vision is usually quite blurred during the recovery period. Your care after the surgery is as important to the long-term success of the operation as the surgery itself.

Each person heals differently after surgery. Therefore, your care must be individually adjusted depending upon appearance of the bleb and the condition of the eye.

Patients are typically seen many times during the first 6 weeks following the surgery so that your doctor can observe your eye and adjust your treatment. As the eye heals, it is not necessary to be seen as often.

Vision can change daily after surgery. Your doctor will examine the following:

- Filtering bleb and the external appearance of the eye. The bleb should appear like a fluid filled blister. If the eye is too red, it may be because of inflammation relating to the surgery.
- Surgical wound to determine whether it is leaking
- Cornea and fluid containing chamber in the front of the eye. The cornea should be clear and the chamber filled with fluid (aqueous humor).
- Back of the eye (retina and optic nerve) to look for fluid or hemorrhage (blood).
- Eye pressure.

Although eye pressure is usually low, its exact value is not too important early after surgery. In general, the eye pressure should be neither too high nor too low. Under certain circumstances, your doctor may inject a substance (an antimetabolite such as 5-FU) to slow down wound healing in the area of the surgery.

Occasionally your doctor may ask you to assist in healing by massaging your eye. He will provide detailed instructions if this is needed.

After your examination, the next visit is scheduled and new instructions given.

### **COMMON CONCERNS AFTER TRABECULECTOMY:**

- **VISION-** although the operation is done to preserve vision, it does not improve vision, only lowers eye pressure. Typically, vision is quite blurry during the first 6 weeks after surgery. Fluid may collect in the back of the eye and further blur vision. This fluid can move around within the eye, causing marked changes in vision with time of day and position of head. Profound sudden loss of vision, especially with severe pain, often means bleeding in the back of the eye. Permanent loss of vision can follow glaucoma surgery, but is rare.
- **PAIN-** pain is unusual after a trabeculectomy. Tylenol or its equivalent is usually sufficient to reduce eye pain. Aspirin, Advil, Motrin, Naprosyn, Aleve and ibuprofen should be avoided immediately after surgery. Eye irritation or mild discomfort is common. Feeling something in your eye or itching is common from the stitched wound. If the bleb protrudes from the surface of the eye excessively, you may have a dry spot on the front of the eye and feel like there is something in your eye. This usually is relieved with eye lubricants or ointments. Sudden, severe, deep-seated pain, associated with loss of vision, often means a hemorrhage in the eye and should be reported to your doctor immediately.

- **EYE PRESSURE-** the purpose of the operation is to lower eye pressure. Pressure is lowered by allowing the eye fluid to be released into the newly created reservoir or bleb. The healing of the eye and formation of the bleb takes weeks to months to develop and may change up to 1 year later. The exact value of the pressure the first 10 days has no bearing on the final outcome. Later, the eye pressure may be too high or too low, and your doctor may need to adjust your therapy. When high pressure persists after surgery, it is often a result of a scar forming within the bleb, which impedes the drainage fluid from within the eye.
- **SUTURES-** are placed that are removed in the office to allow the surgery site to work better. Additionally, a very small needle may be used to break scar tissue forming at the surgery site. Both of these interventions have a small but real risk of having the eye pressure drop too low. If that occurs, your doctor will instruct you on further therapy.

## **COMPLICATIONS AFTER TRABECULECTOMY:**

- **ECAPSULATED BLEB-** this occurs when there is thick scar tissue lining the wall of the bleb, preventing adequate drainage. This problem causes the bleb to be rounder and higher which may be uncomfortable, as well as increasing pressure. Although it is common, it usually improves after several months. Eye drops to lower pressure may be needed during this period. If the eye pressure does not respond, additional surgery may be required.
- **FLAT ANTERIOR CHAMBER-** the anterior chamber is the fluid filled chamber at the front of the eye. When the fluid of the eye drains more rapidly than it is formed, the anterior chamber may collapse and be flattened. In this situation, the eye is soft and unstable. Vision is blurred. Initially, this condition is treated with eye drops and restriction of activity. The chamber will usually reform on its own. Occasionally, other office treatments are needed. Rarely the anterior chamber may need to

be reformed. This may involve placing new fluid in the anterior chamber or, more rarely, removing the fluid from the back of the eye.

- **CHOROIDAL DETACHMENT-** occasionally after surgery the pressure may be low and fluid can collect in the back of the eye. This usually resolves without loss of vision on its own, and rarely requires drainage. **HEMORRHAGIC CHOROIDAL DETACHMENT-** also rarely occurs after surgery when a blood vessel is suddenly broken and there is a hemorrhage. There often is severe pain and loss of vision when this happens. The blood may absorb slowly over time or require surgical drainage, but loss of vision or even the eye itself can occur.
- **CATARACTS-** cataracts (cloudy lenses) commonly advance to a varying degree after glaucoma surgery. Usually this slow, and not noticeable. Sometimes it may occur more rapidly with decreasing vision.
- **INFECTION-** after any surgery within the eye, infection may occur. It can be disastrous, with loss of vision or even the eye. Fortunately, it is extremely rare. Antibiotics are given before, during, and after surgery to reduce the risk of infection.
- **FAILURE OF THE FILTRATION SURGERY-** in some cases the surgery will fail to adequately reduce eye pressure. Most often, this results from the scar tissue sealing the opening. Eye drops to reduce eye pressure may be needed again in some patients, while others may need additional surgery.

**Glaucoma surgery is safe and effective in most patients. Although complications may occur, most are correctable with further treatment.**

**\*\*\*PLEASE DO NOT USE ANY ASPIRIN, PRESCRIPTION BLOOD THINNER, MOTRIN, ADVIL, NAPROSYN, ALEVE OR ANY FORM OF IBUPROFEN 1 WEEK PRIOR TO SURGERY. IF YOU ARE NOT SURE OF YOUR MEDICATIONS PLEASE CALL OUR OFFICE OR THE PRESCRIBING PHYSICIAN. \*\*\***

**Informed consent for Trabeculectomy surgery:**

The basic procedure of the proposed glaucoma operation, the management of possible complications, the advantages and disadvantages of the operation, and the various alternative treatments have been explained to me by my physician and staff of the Glaucoma Institute of Austin. Although it is impossible for me to be informed of every possible complication that could occur, all of my questions have been answered to my satisfaction. I have appropriate understanding of the disease, the surgical procedure and its possible risks, complications and benefits. I also understand I must make periodic visits, as instructed by my doctor, for an examination for several months after surgery.

I have decided to proceed with the surgical treatment discussed for glaucoma and consent to have  Russell Hayhurst M.D. /  Blythe Monheit M.D. to perform this procedure on my  right eye /  left eye and had an opportunity to have my questions answered.

x \_\_\_\_\_ Date: \_\_\_\_\_  
**Patient Signature (or person authorized to sign)**

\_\_\_\_\_  
**Please print (Patient Name or person authorized to sign)**

x \_\_\_\_\_ Date: \_\_\_\_\_  
**Physician Signature**

**Informed consent: Mitomycin-C and 5-Fluorouracil in  
Glaucoma Filtering Surgery**

Anti-metabolite medications, originally developed for the treatment of various types of cancer, have also been found to be of value with certain types of glaucoma filtration operations. These agents applied during or after the surgery, reduce the growth of scar tissue, a common cause of failure in glaucoma surgery. When anti-metabolites are used with other medications that reduce inflammation, the success rate is greatly improved, especially in patients at high risk for excessive scarring. Definitive criteria for using or not using anti-metabolites have yet to be established in glaucoma filtration surgery, although there is evolving consensus when these agents are of most value. Reasons to use these medications include surgery on previously operated eyes, failure of previously operated eyes, failure of previous glaucoma operations in the same or fellow eye, co-existing pre-operative inflammation (uveitis), glaucoma due to new blood vessel formation within the eye, combined glaucoma and cataract surgery, in patients of “relative youth”, the more deeply pigmented races, an established need for very low postoperative pressures and unoperated eyes at risk for postoperative filter scarring.

Mitomycin-C and 5-Fluorouracil are the most commonly used anti-metabolites in ophthalmology today; these medications are used in conjunction with other preoperative and postoperative medications designed to increase the success rate in glaucoma operations. In spite of these anti-metabolites increasing the success rate in glaucoma surgery, most ophthalmologists, including glaucoma specialists, do not use anti-metabolites in every glaucoma case because of problems caused by these medications. In addition to the usual complications of glaucoma surgery, the “anti-metabolite” filter, especially when Mitomycin-C is used, may provide over-filtration, initially associated with a soft eye and blurring of vision, which, although usually transient, may become permanent.

The cornea, the transparent window in the front of the eye, may recover more slowly in operations in which the antimetabolites are used. As with any glaucoma operation in which “thinning” of the filtration tissues occur, there is a risk of lifelong infection or leaking.

Mitomycin-C is applied to the operative site at the time of surgery and 5-Fluorouracil is used both intraoperatively and postoperatively, may be applied as an injection. These medicines are adjusted in both dosage and duration of treatment in order to optimally slow the healing process. The decision to use these agents is based on the evaluation of the advantages and potential disadvantages in each individual case. Conversely, the decision not to use the anti-metabolites may be valid because of the particular circumstance and risk factors involved.

I have read the above information and have discussed it with the physician undersigned and concur with the decision to:

- Use the anti-metabolites as may be found indicated in my operation.
- Not to use the anti-metabolites in my operation.

X \_\_\_\_\_  
Patient Signature (or person authorized to sign)

x \_\_\_\_\_  
Date

X \_\_\_\_\_  
Physician Signature

x \_\_\_\_\_  
Date