**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

Implantation of glaucoma drainage devices also known as Setons, Valves, Tubes, or Shunts is a common type of glaucoma surgery. It is usually recommended when the eye pressure cannot be lowered enough with medicine, laser treatment, trabeculectomy, and\or in specific types of glaucoma. Inserting a small tube into the front of the eye creates a new fluid drain. This tube is covered to prevent complications. Usually it is covered with sclera ( the tough white outer layer of the eye ) obtained from a donor through the eye bank. This tissue has passed all the appropriate screening tests. The drain is usually located at the top portion of the eye underneath the eyelid. Fluid drains through the tube to a reservoir, which is a plastic plate behind the eye attached to the tube. The tissues around it then reabsorb the fluid. The reservoir is inserted between the eyeball and the skin around or outer coat of the eye. This creates the bleb or a “blister-like” bump on the white part of the eye.

Valve implantation is performed in an operating room on an outpatient 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 by 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 your eye. This enables Dr. Hayhurst to see clearly the very fine details of the eye. Tiny stitches, thinner than a human hair, are used to close the surgical incision. This surgery is performed in about an hour. It may take longer if there has been previous eye surgery, inflammation, abnormal blood vessels, or eye problems.

Immediately following glaucoma surgery, the eye is soft and delicate. Your physical activity should be restricted to avoid lifting, bending, and straining. Vision may be 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 the appearance of the tissues and the condition of the eye.

Patients are typically seen many times during the first 6 weeks following surgery so Dr. Hayhurst may observe your eye and adjust your treatment. As the eye heals, it is not necessary to be seen as much.

Vision can change daily after surgery. Dr. Hayhurst will examine the following:

- Filtering bleb and external appearance of the eye. The bleb should appear like a fluid filled blister. If the eye is too red, it may because of inflammation relating to surgery.
- Surgical wound to determine whether it is leaking.
- Cornea and fluid containing chamber in 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 usually is low early after surgery, its exact value is not too important. In general, the eye pressure should neither be too high nor too low.

Under certain circumstances, Dr. Hayhurst may inject a substance ( an antimetabolite such as 5-FU) to slow down healing in the area of the surgery.

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

**COMMON CONCERNS AFTER GLAUCOMA DRAINAGE DEVICE IMPLANTION ARE:**

- 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 few days to weeks after the surgery. Fluid may collect in the back of the eye and further blur the vision ( see complications and chroidal detachment). This fluid can move around within the eye, causing marked changes in vision with time of day or head position. Profound loss of vision, especially with severe pain, often means bleeding in the back of the eye . Permanent loss of vision may occur with glaucoma surgery, but this rare.

- PAIN- pain is unusual after valve placement. Tylenol, or its equivalent, is usually sufficient to reduce eye pain. Aspirin, Naprosyn, Aleve, Advil, Motrin, and Ibuprofen should be avoided immediately following surgery. Eye irritation or mild discomfort is common. Feeling something in your eye or itching is common from the stitched wound. When the bleb protrudes from the surface of the eye ( as it commonly does) you may have a dry spot in the front of the eye and feel like

there is something in your eye. This is usually relieved with eye lubricants or ointment. Sudden, severe, deep-seated eye pain associated with loss of vision, may mean a hemorrhage in the eye and should be reported to Dr. Hayhurst 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 . The healing of the eye and formation of the reservoir takes weeks to months to develop and may change 1 year later. The exact value of the eye pressure during the first 10 days probably has no bearing on the final outcome. Later, eye pressure may be too high or too low, and Dr. Hayhurst may need to adjust your therapy. When high eye pressure persists after surgery, it is often the result of a large scar forming within the bleb, which impedes the drainage of the fluid from within the eye.

**COMPLICATIONS AFTER THE SURGERY MAY BE:**

- ENCAPSULATED BLEB- this occurs when there is a 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 this 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.

- CHROIDAL 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 CHROIDAL DETACHMENT- also rarely occurs after surgery when a blood vessel is suddenly broken and there is a hemorrhage. There often is severe pain and sudden 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 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 can 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 tube clogging or scar tissue sealing the opening. Eye drops to reduce eye pressure may be needed again in some patients, while others may require additional surgery.

- PROBLEMS WITH THE TUBE- although the tube is carefully placed inside the eye and designed to be permanent, it may shift position and cause difficulty. The tube may rub through the skin of the eye and require repair.

- CORNEAL SWELLING- in some patients the presence of the tube may cause or aggravate swelling of the front surface of the eye (cornea). This may require repositioning of the tube and\or a corneal graft.

- DOUBLE VISION- the reservoir is placed close to, and between the muscles, which control eye movement. Therefore, the function of the muscles can be impaired. This can lead to double vision, which may be difficult to control.

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

*****PLEASE PURCHASE 1" PAPER SURGICAL TAPE, AS YOU WILL NEED TO PATCH OPERATED EYE WHILE YOUR EYE IS HEALING FOR ABOUT 3 WEEKS WHILE YOU SLEEP.*****

***** **PLEASE DO NOT USE ANY ASPIRIN, PRESCRIPTION BLOOD THINNER, MOTRIN, NAPROSEN, ALEVE, ADVIL, 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.** *****

The basic procedure of the proposed glaucoma operation, the management of possible complications, the advantages and disadvantages of the operation, and the various alternative means of treatment 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 complete 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 the surgery.

I have decided to proceed with the surgical treatment discussed for glaucoma in my right\left eye.

**Patient signature: _____**

**Patient name: _____**

**Date: _____**