



Glaucoma tube shunt implantation

- The most important thing to know about this procedure is that the pressure will act like a roller coaster for 3-4 months after the surgery. The pressure at one month after surgery could be even higher than before surgery. This is temporary and part of the healing called the “hypertensive phase.” Patients will be on glaucoma drops during this time period
- Also called a seton, valve or glaucoma drainage device
- The most commonly used models are the Baerveldt implant and the Ahmed Glaucoma Valve
- A better glaucoma surgical procedure for patients at high risk of failure from trabeculectomy, such as patients with prior eye surgery with scarring, inflammatory (uveitic) or neovascular glaucoma
- Outpatient surgery, anesthesia is local with IV sedation, the surgery is not painful
- The conjunctiva (skin of the eye) is lifted up and a space is created to place the tube shunt

- The back part or plate of the tube shunt is sewn down to the sclera, the white of the eye
- Whether a Baerveldt or Ahmed is chosen is an individual decision your doctor can discuss with you
- The Baerveldt implant must be temporarily tied off or it would act like a siphon and the eye pressure would go too low; a dissolving suture is placed around the tube, typically dissolving around 6 weeks after surgery
- A “ripcord” suture may also be placed inside the tube portion of the Baerveldt; it helps prevent a sudden drop in eye pressure and can easily be removed painlessly in the office
- After the plate portion of the tube shunt is sewn-in, the tube is cut to the appropriate length and placed into the anterior chamber, the front portion of the eye between the cornea (clear front of the eye) and the iris (colored part of the eye)
- The tube has to be covered on top or it would erode through the conjunctiva. It is covered with a patch graft made of donor cornea, pericardium or sclera. The patch grafts are sterile and processed so there is no chance of infection or rejection
- The conjunctiva is then sewn back into position with dissolving sutures
- An eye patch and a plastic shield are placed over the eye which are removed the next day in the office

Postoperative expectations

- It is normal for the eye to be a little blurry, sore, swollen, scratchy and teary, but not painful
- Tube shunt surgery does not improve vision; it is done to lower the eye pressure to prevent or slow the glaucoma damage
- The vision may fluctuate for several weeks
- There are postoperative visits typically at day 1, week 1, 2, 3, 4, 6, 8 and 12

- There are very frequent postoperative eye drops needed for several weeks after the surgery
- The patient will be on and off glaucoma drops during this time as well as anti-inflammatory drops
- If these drops are not used as frequently as prescribed, the surgery may scar down and fail
- The ability to drive the next day depends most on how well the other eye sees and how much glaucoma damage it has. Most patients return to driving quickly
- It is important to be on light activity with no bending or lifting for 2-3 weeks. Some exercise such as walking or riding an exercise bike may be permitted
- Sleeping with the eye shield for 4 weeks help protect from pressing on the eye during sleep
- It is extremely important not to rub the eye
- There is no way to adjust the pressure exactly either during or after surgery as you would adjust a thermostat. The frequent postoperative visits help adjust your eye pressure so that it does not go too high or too low. It is common to still require glaucoma drops long term along with the tube shunt
- Some patients have swelling or drooping of the upper eyelid after surgery; sometimes this can be permanent
- Tube shunt surgery may not last a lifetime and may need to be supplemented with eye drops or to be repeated in the future
- Your doctor can discuss your individual risks and benefits with you