

Glaucoma Drainage Implants

This material will help you understand the basics of your glaucoma drainage implant surgery, which is also called glaucoma “tube” surgery.

What is a glaucoma drainage implant?

A glaucoma drainage implant is a type of medical shunt used to help lower your eye pressure. The shunt consists of two parts: a small tube and a plate. The small tube is inserted into your eye to let the fluid drain out. The plate is attached to the tube. It is placed beneath the skin of the eye to form a small pool, where the fluid will drain, called a bleb. This allows the fluid to drain out of your eye through your shunt instead of draining through your eye’s natural drain. In glaucoma, the eye’s natural drain does not work very well. This surgery helps bypass the natural drain and lower the eye pressure.

What should I expect before I have my glaucoma drainage implant placed?

The operating room will call you with your arrival time. They will provide you with instructions about your medicines. The nurse will go over any questions you may have. You will be told what time to stop eating and drinking to prepare for surgery. Be sure to arrange for a responsible adult to come with you, stay during surgery, and go back home with you. You cannot drive for 24 hours after surgery because of the anesthesia you will receive during surgery.

What should I expect on the day of my surgery?

On the day of surgery, you will arrive at the Kellogg Eye Center and go up to the 4th floor to check in. You will meet your nurses, anesthesiologists, and operating room team. You will have an IV placed so that you can receive relaxing medicines and pain medicines during the surgery. We will take you

back to the operating room and lie you down flat. We will numb your eye with drops.

Once surgery starts, your eye doctor will numb your eye. Then, s/he will create an opening in the conjunctiva, or the skin of the eye. S/he will place the plate of the glaucoma drainage implant underneath the conjunctiva and then place the tube into the eye. The tube will come to rest inside the eye over the iris, or the colored part of the eye. Your doctor will sew a piece of donated sclera (the white part of the eye) over the part of the tube that rests on your sclera. When you open and close your eyes, your eyelids rub on the tube. If there was no donor sclera there to protect it, the conjunctiva over the tube would rub away and the tube would be exposed to the world, leaving you at risk for infection. This is why the donor sclera is important.

Your doctor will then sew the conjunctiva shut over the newly placed drainage device. As fluid drains through the tube and over the plate, a bubble forms under the conjunctiva. This is the bleb. Your bleb is located under your eyelid. Your eyelid will help protect it from injury. The fluid will collect in the bleb and be absorbed back into the body, bypassing the eye's natural drain. Following surgery, your eye doctor will look at the bleb to make sure it is draining fluid well and is not leaking.

What should I expect after my surgery?

After surgery, your eye doctor will patch your eye and put a hard shield over it to protect it. You need to keep this patch and shield on overnight. Your doctor will remove this patch and shield when you come to clinic the first day after your surgery.

Your doctor will give you eye drops to ease your pain and calm the inflammation from the surgery. It is important to use these eye drops. The

anti-inflammatory drops will keep your new drain from scarring shut. Your body's natural healing response would cause the surgery to "heal" too quickly and scar shut. Since your body's natural tendency is to scar any cut, you have to use the anti-inflammatory drops to prevent this.

You will also need to protect your new bleb when you are sleeping. You do not want to damage it on your pillow. You will need to wear your shield at night until your doctor tells you that you no longer need it. To protect your bleb as it is healing, you will not be able to:

- Bend with your head below your knees
- Lift anything heavier than 5 pounds
- Strain in any way, and
- Do serious exercise.

All of these activities put strain on your bleb. Your doctor will tell you when it is safe to resume your normal activities based on how you are healing.

Are there complications after having the glaucoma drainage implant?

Your doctor will discuss all of the possible complications of surgery with you. The most common complication is scarring of the bleb. This prevents fluid from draining into the bleb. If the bleb is not working properly, more surgery may be needed.

You can also develop a worse cataract after your glaucoma drainage implant surgery. You may need additional surgery to have your cataract removed if it starts to affect your vision.

The glaucoma drainage implant can also cause you to have double vision. This can be addressed by adding prisms to your glasses or doing additional surgery if it is really needed.

One of the most serious problems that can come from having a glaucoma drainage implant is infection. After you have had your glaucoma drainage device implanted, your bleb becomes your body's connection to the outside world. Instead of having the fluid of your eye drain internally as it would normally, it is draining into your bleb on the outside of your eye. This leaves you more open to infection than before the surgery.

If at any time after surgery your vision gets worse, you develop pain in the eye or your eye turns red, you need to come in to see your doctor right away. If an infection of the bleb is caught early, it can be treated without any vision loss. If an infection of the bleb is not treated early, it can spread to the whole eye and can cause serious vision loss.

If at any time you feel like your eye is tearing uncontrollably, this is cause for concern. Your bleb may have "sprung a leak." You need to come in to see the eye doctor right away. If the bleb is leaking, you become at higher risk for infection. Early treatment helps prevent severe infections.

So it is important to go see your doctor urgently if you have any of the following:

- pain or redness
- reduced vision
- too much tearing.

Be sure to tell the front desk that it is urgent. State that you have a glaucoma drainage implant and are experiencing one of these symptoms. If you call the

clinic after clinic hours, you will be told how to get in touch with the eye doctor on call. There is an eye doctor on call every day of the year.

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