Glaucoma Surgery: Implant Devices

There are many implant options available to treat glaucoma. Your doctor will discuss which implant will work the best for you.

Glaucoma Surgery

You will need to prevent permanent damage to your optic nerve and vision. The goal of surgery is to lower the pressure in the eye by making a new channel to drain the fluid.

How It Works

The implant device looks like a small plastic plate attached to a tube. The plate is tucked under the tissue beneath your eyelid to hold a space for fluid to drain. The tube is placed in the front part of the eye. Fluid flows from your eye through the tube to the area over the plate where it is then absorbed by the body.

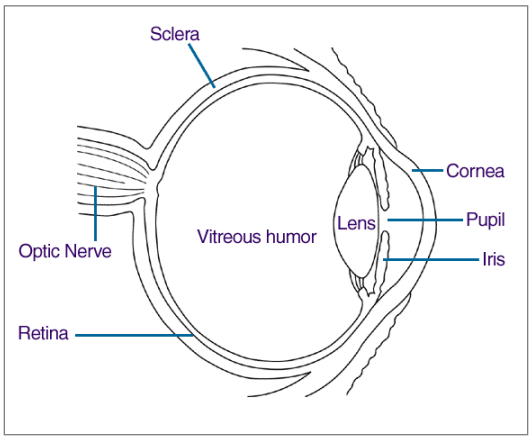
Implant Surgery

We will first place an IV (needle in the vein of the arm) and give you medicine to help you. We may also give you drops in the eye if needed. We will numb the eye and the area around it.

We will clean the eye and skin with a yellow cleaning liquid and then drape a protective sheet over your face.

The surgeon will make a cut in the **conjunctiva** (the thin outer cover of the eye). The implant device is placed on the **sclera** (white part of the eye) about halfway back on the eyeball. After placement, the device is stitched down. Part of the device may pass under some of the muscles of the eye.

The surgeon will make a small near where the clear **cornea** (front of the eye) meets the sclera. They will then



tuck the tip of the implant tube into this hole and it will remain inside the front part of the eye. A patch of tissue will cover the tube where it lays on the white of the eye.

In some cases, the tube's tip may be tied off for a few days to weeks after it is put in. The doctor will decide when to open the tube. This depends on how your eye heals. The surgeon will then sew the hole in the conjunctiva shut. When the tube is opened, the fluid inside the eye will flow through the tube to the space made by the plate between the

conjunctiva and sclera. The body will then absorb this fluid.

Implant surgery takes about 1-2 hours. We will place a patch over the eye, and a shield over the patch. Once the IV line has been removed from your arm and you feel well enough, you can return home.

Surgery using an implant device is often a success. Five years later, over half of all implants are still working. Most patients will still need pressure-lowering medicines as well.

The body's scarring response can still cause problems even with an implant device. A thick cyst can form around the plate, which can prevent drainage of the eye fluid. This will depend on your age, if you have had eye surgery before, and how severe your glaucoma is.

Risks

The most common risk is that **the new drain works too little or too well.** If the drain works too little, the pressure in the eye remains too high and further treatment is needed.

If the new drain works too well, fluid may build up behind the retina (inner lining of the eye) and may cause a loss of vision for a short time. You may need to have a second surgery to refill the eye and correct the problem.

You will see the doctor often to adjust your medicines or remove the tie that closes the implant tube.

The tube which leads from the front of the eye to the plate and the plate itself are covered with eye tissue during the surgery. Over time, **the tube or plate may wear through the tissue**. If this happens, you may need to have it repaired. This is not a common problem but call your doctor if you notice any change in the way your eye looks.

The tissue around the plate may also get thick and scarred. If this happens, the fluid cannot absorb, so the eye pressure may go up. You may need further treatment to lower your eye pressure.

The implant device may be placed under some of the muscles in your eye. **If the tissues thicken and scar around the plate or if the device itself is too thick, the muscles can be pushed out of place.** You may notice double vision after the surgery. In most patients this goes away, but some patients may need special glasses or a second surgery to correct your vision.

The tube is carefully placed in the front of the eye during the surgery. You may be able to see its tip if you look very closely, though it should not be noticed by others. **If the tip of the tube touches the cornea (front surface of the eye) it may cause**

damage. If the tip touches the lens of the eye, it may form a cataract. It is rare for this to happen.

Your vision might not be as sharp after your surgery. This should last only a short time. Rarely, the vision may be reduced long-term.

Before the Surgery
You will have a clinic visit to make sure that it is safe to have the surgery. This exam may include blood tests, an EKG (heart tracing), and a chest x-ray.

A nurse will call you the day before surgery to tell you what time to arrive and give you eating and drinking instructions.

After the Surgery
Leave the patch and shield on the eye for the first day and night. You will see the doctor the next day and on a regular basis after that time. You will be given medicine to help the eye heal and to prevent swelling and infection.

You will be given instructions about the glaucoma drops in your surgical eye after the implant is placed. Keep using the glaucoma medicines you may have been taking in the other eye.

Glasses or the eye shield should be always worn for the first few weeks. The eye shield should be worn at night to protect the eye.

Activities

- **No** physical activity which makes you strain or hold your breath.
- **Do not** lift over 15 to 20 pounds.
- **Do not** bend over from the waist; bend at the knees to reach low objects.
- You may resume sex when you feel ready.
- Be careful the first few weeks.

When to Call
Call the clinic if you have:

- A sudden decrease in vision
- Increased pain or discharge in the eye
- A large increase in redness or swelling
- Nausea or vomiting
- Any questions or concerns.

Who to Call
University Station Eye Clinic
Monday – Friday 8 am to 4:30 pm
(608) 263-7171 or **1-800-323-8942**

After hours, your call will be sent to the hospital paging operator. Ask for the "Eye Resident on Call." Give your name and phone number with area code. The doctor will call you back.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 8/2025 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#5085