Glaucoma Drainage Implant

What is a glaucoma drainage implant?

A **glaucoma drainage implant** is a small device placed in the eye to treat glaucoma.

With glaucoma, aqueous humor does not drain properly from the front of the eye. Pressure builds in the eye, which damages the optic nerve. If it is not treated, glaucoma leads to blindness. A drainage implant (also called an **aqueous shunt** or **tube shunt**) creates a new way for aqueous humor to drain from the eye. This helps to lower eye pressure.

Eye Words to Know

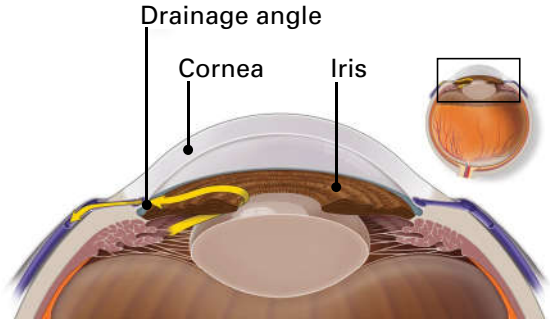
Optic nerve: A nerve at the back of your eye that connects to your brain. The optic nerve sends light signals to your brain so you can see.

Aqueous humor: Clear liquid inside the front part of our eyes. Aqueous is different from tears. It nourishes the eye and keeps its shape.

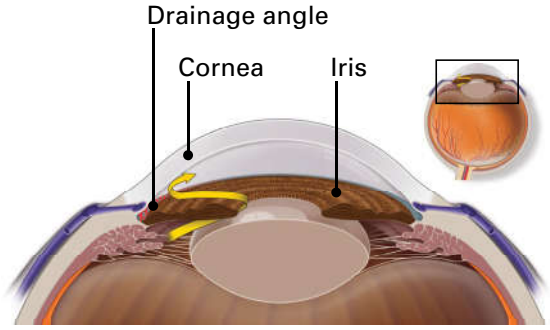
Drainage angle: The area of the eye where the aqueous humor drains from the front of the eye.

Sclera: The white part of your eye.

Conjunctiva: Clear tissue covering the white part of your eye and the inside of your eyelids.



In a healthy eye, excess fluid leaves the eye through the drainage angle, keeping pressure stable.



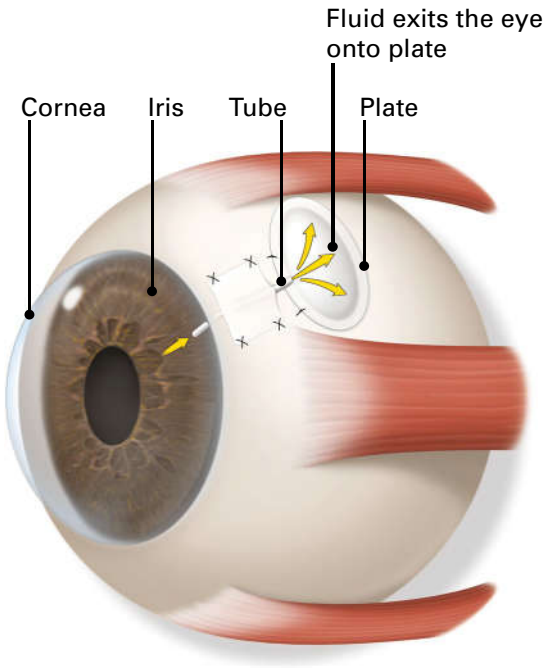
If the drainage angle is blocked, excess fluid cannot flow out of the eye, causing pressure to increase.

Your ophthalmologist may recommend a drainage implant when eyedrop medicine and laser treatments have not lowered your eye pressure enough. No treatment can fix the damage already done to the optic nerve. But drainage implants can help prevent further damage from glaucoma.

How is glaucoma drainage implant surgery performed?

Glaucoma drainage implant surgery is done in an outpatient surgery center or a hospital. The procedure usually takes about an hour or less. Here is what happens:

- You will be given an anesthesia to numb your eye area and medicine to help you relax.
- There are several types of glaucoma drainage implants. All have a soft, flexible tube connected to a small plate. That plate is very thin and curved to fit comfortably against your eyeball.
- Your eye surgeon will make a pocket under the clear conjunctiva. The plate will be placed in this pocket and sit on the sclera. The tiny tube that is attached to the plate will be inserted into the front part of your eye. Aqueous fluid flows out of your eye through this tube, lowering the eye pressure. The fluid collects in a pool over the plate (called a **reservoir** or **bleb**). That fluid is absorbed naturally by your body.
- After the procedure, your eye may be patched and you may need to wear the patch overnight. Plan to have someone drive you home after the surgery. Your vision may be blurry for several days to a few weeks.
- Your ophthalmologist will prescribe medicines to take for several weeks after the procedure. These medicines help prevent infection, discomfort and scarring.
- You should not bend over, strain or lift heavy objects as you recover. Your eye doctor will give you specific instructions and tell you when you can do these things again.



A glaucoma drainage implant creates a new way for aqueous fluid to drain from the eye.

- Most people with a glaucoma drainage implant will need to continue taking their glaucoma medications.
- You will need to see your ophthalmologist a few times in the weeks after surgery for follow-up care. Be sure to keep these appointments.

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What are the risks of glaucoma drainage implant surgery?

Like any surgery, glaucoma drainage implants carry the risk of problems or complications. Here are some of those risks:

- Scarring in or on the eyeball
- Infection in the eye
- Bleeding in the eye
- Too much fluid leaving the eye, making eye pressure too low
- Cataract (when the naturally clear lens in your eye gets cloudy)
- Vision loss
- Double vision
- Need for a second glaucoma surgery or removal of the implant

Tell your ophthalmologist if you take aspirin or blood thinners. These can increase your risk of bleeding problems with surgery.

Call your ophthalmologist immediately if your eye is red, painful or just does not feel right. This could be a sign of infection and it must be treated right away.

Your ophthalmologist will talk with you about the risks and benefits of a drainage implant for your glaucoma.

Summary

A glaucoma drainage implant is a type of device put in your eye by surgery to treat glaucoma. It may also be called an aqueous shunt or a tube shunt. The implants create a new way for aqueous humor to drain from the eye. This helps to lower eye pressure.

If you have any questions about your eyes or your vision, speak with your ophthalmologist. He or she is committed to protecting your sight.

Watch a glaucoma video from the American Academy of Ophthalmology's EyeSmart program at **aao.org/glaucoma-link**.

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