Questions and Answers About Your Corneal Transplant

Casey Eye Institute Cornea Service

Oregon Health & Science University
What is the cornea?

The cornea is the clear tissue that covers the front of your eye. It lets light into the eye, helping you focus and see clearly. If your cornea is injured, or you have a disease or inherited condition, it may become cloudy, distorted or scarred. If this happens, light cannot reach the rest of your eye as it normally does. This causes vision problems, including blindness. If your cornea is injured or diseased, it can be very painful.
Why might I need a corneal transplant?

Cornea Diseases and Disorders

**Corneal edema (swelling)**
Your cornea can swell after cataract surgery, or if you have certain corneal diseases such as Fuchs’ dystrophy or keratoconus. If it is not treated, this swelling can cause blurry vision. Tiny blisters can form on the surface of your cornea, and these can be very painful. Your doctor can treat a swollen cornea with eye drops or ointments, but in some cases, you may need a corneal transplant.

**Corneal dystrophy (abnormal growth)**
“Dystrophy” means “abnormal growth.” If you have corneal dystrophy, your cornea’s cells are not growing normally. There are many different types of corneal dystrophy. These diseases share many traits:

- They are usually inherited.
- They are not caused by factors such as injury, activity or diet.
- They are not usually related to other disease, and they generally do not affect other body parts.
- Most corneal dystrophies happen in people who are otherwise healthy.

If you have a corneal dystrophy, you may have severe vision problems (trouble seeing), or no problems at all. Some types of corneal dystrophy cause repeated episodes of pain, but do not cause you to lose vision permanently. You may have repeated episodes of feeling you have something in your eye (foreign body sensation). These episodes are called recurrent erosions. Some patients with corneal dystrophies eventually need a corneal transplant to see well again.

**Keratoconus**
In this disease, the corneal tissue becomes thinner over time and changes shape. A healthy cornea is dome-shaped, but if you have keratoconus, your cornea will develop a cone shape. The change in shape causes distorted vision (astigmatism) and blurry vision.

Keratoconus is often discovered in people in their late teens or early twenties. In its early stages, it can easily be corrected with glasses or contacts. However, if your vision becomes too distorted or scar tissue starts to form, you may need a corneal transplant. Most patients with keratoconus have normal vision after a transplant.

Another cornea disorder called pellucid marginal degeneration is similar to keratoconus, but much less common. If you have this problem, you may also need a corneal transplant.

**Other disorders**
Other reasons you might need a corneal transplant are chemical injuries, accidents, cuts, infections or growths on the cornea. Ask your doctor if you have any questions about your eye condition.
In a corneal transplant, the doctor removes the damaged cornea and replaces it with healthy tissue from a donor cornea. The new cornea is attached with fine stitches that stay in for up to 2 years, until the cornea has healed enough to take them out.

Recently, doctors have started using lasers to remove the damaged cornea and shape the healthy donor tissue. This type of corneal transplant is called IntraLase enabled keratoplasty (IEK). Using a laser allows your doctor to do more precise surgery. Corneal tissue is made up of thin layers, and the laser can trim each layer so the new cornea fits your eye better. This precise matching can help your eye heal faster after surgery. You may also be able to see better when your eye is healed.

Casey Eye Institute doctors are the first in the Portland area to use this new technology for corneal transplants. As of this printing, they are the only doctors in greater Portland doing IEK. Leading cornea specialists, including doctors from Casey Eye Institute, have shown the following benefits of IEK:

- Doctors can do more precise surgery than with conventional methods.
- Custom incisions close better, with a precise fit between your eye and new cornea.
- Precise fit means doctors can stitch the donor cornea without pulling stitches as tight. This means less risk of vision distortion (astigmatism) after surgery.
- Custom incisions let the donor cornea adhere to your eye better, for stronger healing.
- Doing surgery with a laser lets the eye heal faster.
- You may recover your vision faster.

Having corneal transplant surgery done with a laser (IEK) can help you get your vision back sooner after the procedure. Your eye may also feel less irritated, and the incision may heal more completely.

Laser (IEK) corneal transplants are not for everyone. If you have glaucoma or severe corneal scarring, or your cornea is completely cloudy (opaque), you may need to have a conventional corneal transplant.

If you have a laser corneal transplant (IEK), you will need to use prescription eye drops for several months to help your eye heal. Your vision will come back slowly. It may take a year or longer for your cornea to heal completely, but you should be able to do normal activities soon after the procedure.
In addition, please observe the following:

- **Do not eat or drink anything after midnight the night before surgery, unless your doctor tells you to do so.** If you do eat or drink when you have been told not to, we may need to reschedule your transplant.

- **Leave a phone number where you can be reached the night before surgery.** The doctor providing anesthesia (anesthesiologist) may call to talk with you about the procedure and your anesthesia care. Also, the Casey Eye Institute surgery coordinator may call if no suitable transplant tissue is available and we need to postpone your surgery.

- **Bring a driver when you come to Casey Eye Institute for surgery.** You will probably go home the same day as your surgery, but we cannot let you go without someone to drive you. After surgery, you will not see well enough to drive. If you come from outside the Portland area, please plan to stay overnight nearby. We can give you a list of local hotels and motels. **We cannot do surgery unless you have someone to drive you home.**

On the day of surgery, come to our surgery suite on the 6th floor of Casey Eye Institute. Bring all the medicines you are taking. Tell us about any allergies.

### Should I stop my medications before surgery? How long before?

The following is a list of drugs that may interfere with blood clotting during and after surgery. Your doctor may ask you to stop the following medications.

#### Two days before surgery
- Advil (ibuprofen)
- Co-Advil
- Feldene
- Medipren
- Motrin
- Naprosyn
- Nuprin
- Any non-steroidal anti-inflammatory (NSAID)
- Voltaren
- Heparin
- Coumadin

#### Five days before surgery
- Plavix (Clopidogrel)
- Ticuin

#### Two weeks before surgery
- Alka-Selzer
- Anacin
- Aspirin
- Ascriptin
- Bufferin
- Easprin
- Ecotrin
- Empirin
- Excedrin
- Fiorinal
- Norgesic
- Any over-the-counter non-prescription cold medicines containing aspirin
Following surgery, your eye will be patched and a shield placed over the patch. You will not need to start taking any eye medications until you see your eye doctor the day after your transplant.

The eye shield and patch will be removed at your doctor’s appointment the day after surgery. After examining your eye, the doctor will put the shield back on your eye and explain how to use your eye drops and ointment.

How can I protect my eye after a corneal transplant?
Use your eye drops, ointments and any other medicines exactly the way your doctor tells you. For the first 4 months after your transplant, keep your eye protected at all times. Wear your glasses, or the eye shield we gave you after surgery.

Tell your pharmacy or call our office when you start to run out of eye drops. Do not stop using your medicine just because the bottle or tube is empty. Stop your medicine only when your doctor tells you to. Bring all your eye medicines to each appointment, including the ones you used before your transplant.

If you already use eye drops for another eye disease (glaucoma, for example), you will probably need to continue these drops in addition to the ones you are given after your corneal transplant. Check with your doctor before taking them. It is important to notify your pharmacist or our office when you begin to run out of your eye drops. Do not stop using your medication simply because the bottle or tube is empty. Stop the medication only when your doctor tells you to do so. Bring all of your eye medications with you to each appointment, including those you used before surgery.

How often should I see the doctor after my transplant?
Your doctor may see you the day after your corneal transplant, 2 days after, one (1) week and 2 weeks after surgery. After that, how often you see the doctor will depend on how your eye is healing. Keeping regular appointments is important to make sure your eye heals properly.

If you live outside the Portland area, the doctor who referred you to Casey Eye Institute may see you for some of your appointments to check on the transplant.

When will I see better?
Your vision may be blurry for up to one (1) year after surgery. As your eye heals, your vision will slowly improve. Your doctor may take out some of the stitches a few weeks after your corneal transplant, or wait until later, depending on how your eye is healing.

Your doctor may prescribe glasses or contacts as soon as 6 months after surgery. After your transplant, it may take as long as 2 years for your vision to reach its best.
How soon can I do normal activities?

You may start doing most daily activities soon after a corneal transplant. You may shower or bathe, but do not get soap or water in your eye. Do not swim until the doctor says it is all right to do so.

For 2 weeks after surgery, do not lift anything that weighs more than 25 to 30 pounds. You may bend over or stoop, but you should hold onto something for balance. Try to keep your head above your heart. Avoid vigorous exercise, like running, tennis or other sports. If you have questions about specific activities, ask your eye doctor.

Do not sleep on the same side as your corneal transplant for 2 weeks after surgery. It is very important to protect your eye from being bumped or poked. Do not press on or rub your eye.

You may do the following activities after your transplant:
- Read and watch TV or movies
- Have other surgery or dental work
- Travel, including flying in an airplane
- Cooking, sewing and other hobbies

You may do anything else you feel able to do in moderation. You may go back to work as soon as you feel well enough. Most patients take one (1) to 2 weeks off.

I’ve heard that corneal transplants are sometimes rejected. Should I be concerned?

Corneal transplants are one of the most common and successful transplant surgeries done in the United States. About 40,000 corneal transplants are performed in the U.S. each year. The rejection rate within the first year is about 10% (1 in 10). Rejection means your body recognizes the new cornea as foreign tissue, and tries to destroy it. If this happens, the new cornea clouds up and vision gets worse, although the tissue stays in place.

Rejection can happen any time, from weeks to years after a corneal transplant. It can happen more than once. If rejection is detected and treated early, it can often be reversed with medication.

What are the signs of rejection?

R – S – V – P is an easy way to remember the signs of corneal transplant rejection.

Redness: the eye becomes very red.
Sensitivity: the eye becomes very sensitive to light.
Vision loss: the vision in that eye seems to get worse suddenly.
Pain: the eye becomes very painful.

If you have any of these after your corneal transplant, call the Casey Eye Institute Cornea Service right away at 503 494-7674. Outside business hours (8:30 a.m. – 5:00 p.m.), call 503 494-8311 and ask for the eye doctor on call.

Most patients do not have complications after corneal transplants, and having a transplant does not usually limit your activities very much. However, it is important to keep all your medical appointments after surgery, so your doctor can treat problems early if they occur. This gives you a better chance of having a successful corneal transplant.

If you have any questions after reading this brochure, call the Casey Eye Institute Cornea Service at 503 494-7674.
Our experts

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It’s easy to get to Casey from any direction. For detailed written instructions, call 503 494-7674.

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