

Instructions for DSEK patients

DSEK, short for “Descemet’s Stripping Endothelial Keratoplasty,” is a surgery that removes the least amount of your corneal tissue as possible and replaces it with healthy donor tissue. This clears the swelling of the cornea and restores your vision.

Before Surgery:

Do not eat or drink **anything** for at least **8 hours** prior to the time of your surgery. You may take any medication pills that you need to take with a TINY sip of water.

On the day of surgery, please continue to use any medical eye drops (e.g. for glaucoma) that you would normally use.

The Operation:

The surgery is usually performed under local anesthesia where the anesthesiologist puts you to sleep for 5 minutes during which time we give some anesthetic shots to completely numb the eye. The shots prevent you from seeing the surgery or moving the eye. The anesthesiologist will give you medicine by vein to keep you comfortable and a little sleepy during the surgery. Using local anesthesia avoids many of the risks to your heart or lungs that complete general anesthesia involves. (General anesthesia is when you are completely asleep during the surgery).

During the surgery a small incision, only 4 – 5 mm long, is made in the cornea and the diseased endothelial layer of your cornea is removed. The healthy donor tissue is then placed through the incision and positioned to replace the removed diseased tissue. The initial incision is closed with 3 – 4 small sutures and the procedure is completed. A small air bubble is left inside the eye to help ensure the stability of the donor transplant tissue. It is only effective when you are lying down on your back, facing the ceiling. This air bubble is absorbed by your body within 48 hours.

The surgical procedure will take about one hour to perform. If you also have a cataract of the lens of the eye, cataract surgery can be performed at the same time as DSEK surgery. If cataract and DSEK surgery are done, then the surgery takes about one and a half hours. You will be in the recovery room for about 20 – 30 minutes after the surgery, lying flat on your back facing the ceiling, before your family can see you. Surgery is usually done as an outpatient procedure at our surgery center and you are sent home with a patch on your eye that same day. You should have minimal discomfort after surgery, and standard over-the-counter pain medications can be taken if necessary. You may also be given other pill medications to take for the eye if indicated. Keep the eye patched until your doctor sees you the next day.

Immediate Post-operative Instructions:

*Please try to stay lying down on your back, facing the ceiling as much as possible after the surgery for the first 24 hours. (Do not sit up watching TV or working on a computer that first night.) You are quite free to stand up and walk around for going to the bathroom or to sit up for eating meals as much as necessary in that first 24 hours after surgery and it is not a danger to your transplant to do so, but **whenever possible**, try to rest in bed lying on your back and facing the ceiling. This will allow the small air bubble inside the eye to best stabilize the transplant tissue.*

You will return to see your doctor the next day. The patch will be removed and your eye will be examined. You will be placed on antibiotic and steroid drops to prevent infection and to help with healing. You will return to the office one week after surgery, and then again at one and three months.

Medication Dosage and Schedule: (Note: you can use your various drops at the same time, just separate them from each other for about 2 minutes so each drop has time to sink in.)

Prednisolone Acetate 1%: (a milky white drop): *(shake it up really well before application)*

Begin using this drop FOUR times a day (breakfast, lunch, dinner and bedtime) from the first day post-op until 3 months after the surgery. From 3 to 6 months after surgery, use it 3 times a day. From 6 to 9 months after surgery, use it 2 times a day. From 9 to 12 months after surgery, use it once a day. After that your doctor may discontinue it or wean it down in frequency even more or switch to another medication.

This drop (Prednisolone acetate 1%) is what keeps your body from rejecting your transplant tissue, and so it is extremely important that you do NOT stop taking this medication unless advised by your corneal doctor.

Vigamox (a yellow color antibiotic drop in a small bottle)

Begin using this drop FOUR times a day (breakfast, lunch, dinner and bedtime) from the first day until 2 weeks after surgery, and then stop using it.

This drop (Vigamox) is an antibiotic and keeps your eye from getting infected.

Please use any other eye medications (especially any glaucoma medications) that you were using prior to your surgery, use them on the day of surgery and start them again the morning after surgery when the patch is removed.

Activities:

Immediately after surgery, we like you to be lying flat on your back facing the ceiling and resting as much as possible for the first 24 hours. (see comments above)

Go slowly on the food the night after you have had surgery, as anesthesia sometimes can cause people some nausea. Start with soup, then progress to solids if comfortable.

The day after surgery, the patch is removed and does not need to be re-applied. You will, however, be asked to wear a protective shield over the eye (without a patch) at night while sleeping for about 5 days. No protection is needed during the day, but if you normally wear glasses for the other eye, go ahead and wear them.

After you are seen by the doctor one day after surgery, you can then shower, wash your hair, etc. However, you are at risk for infection for the first two weeks after surgery, so do not do activities that put you at risk (like gardening, cleaning out stalls or attics, etc.) Finally, avoid any activities that may lead to taking a direct hit to the eye. (e.g. playing with small children, wrestling with animals, etc.)!

No sports activities of any kind for 2 weeks after surgery. No swimming under water for 4 weeks, but doing water exercises (head always out of water) is fine after two weeks.

Vision Expectations:

The day after surgery, the patch will be removed and the vision will be absolutely terrible! This is normal.

Expect that the vision will allow you to only see well enough to count my fingers at about 2 feet away, but not much better than that. The reason why the vision is so poor is that the donor tissue is still swollen and although it starts to clear your cornea nearly immediately, it does so in patches and those clear patches of cornea are rarely over the visual axis on the first day.

By one week after surgery the vision is about 20/100 and most patients are aware that their cornea is getting better.

By one month the vision is usually around 20/60 and all patients feel that success is at hand.

By three months, the vision is usually around 20/50 or better, but this is highly variable, with many patients achieving 20/30 or so.

At one year after surgery, over 65% of patients have 20/40 or better vision. (This is the vision that allows one to drive a car with no visual restrictions). The patients that have no other ocular problems (like macular degeneration or other retinal disease) have the best vision of all after DSEK surgery.

The vision continues to improve over time, with many patients improving their vision even from one to two to three years after surgery.

These are the “average” visions at various time gates after surgery to give you some idea of what you might expect. The ultimate vision after DSEK surgery, however, will depend more upon the health of the patient’s retina and central vision of the macula than upon the clarity of the cornea, as nearly all DSEK patients attain a clear cornea with good surface focus after this surgery. Vision of 20/20 is possible, but even with a crystal clear cornea, the vision is dependent upon the function of the retina and may not attain 20/20. It is most important to remember that while the vision will be better after surgery than it was before surgery, there is high variability between patients on the amount of vision improvement and the rapidity of vision improvement. Generally speaking, patients who are younger than 65 years old, and who start off with vision better than 20/60 prior to surgery have the fastest visual recovery. Some of our patients have been 20/25 at just one week after surgery, but these are the exceptions. Patience is still a virtue, even with DSEK surgery.

Donor Disc Dislocation:

On the first day and even up to one week after surgery, you are at higher risk for donor disc dislocation. At your office visit, if the donor disc is NOT in proper position (can be seen one to seven days after surgery), then the disc will have to re-positioned by me in the office and may take an additional 30 – 60 minutes. Fortunately, a dislocated donor disc can be successfully re-positioned with good function and restoration of vision over 90% of the time. In some instances, the disc cannot be successfully repositioned with a simple air bubble. In this situation, the donor transplant can be replaced in the operating room and the vision ultimately restored.

Please feel free to contact me if you have ANY questions.

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