

Epithelial Debridement/Superficial Keratectomy

Epithelial debridement removes a portion of the eye's clear outer layer of the cornea called the epithelium. The corneal tissue then is smoothed and resurfaced. The purpose is to help remove irregular/unhealthy skin on the surface of the cornea to allow more healing of a scratch on the eye's surface. This is the first step of a **superficial keratectomy**.

This procedure is used to treat many conditions of the corneal surface to improve vision and/or comfort. Your surgeon will review the condition(s) you have and advise if treatment is needed. Make sure all questions are answered before you proceed.

Anterior Basement Membrane Dystrophy
This common condition leads to a buildup of membranes that grow under/within the clear skin that covers the cornea. This buildup of creates irregular ridges on the surface of the cornea. This can:

- Limit vision
- Destabilize the tear film
- Worsen dry eye symptoms
- Change vision clarity
- Cause recurrent corneal erosions

Recurrent Corneal Erosion

Corneal erosions can happen for many reasons. This includes:

- Prior scratches of the eye
- Basement membrane dystrophy
- Other genetic eye issues
- Prior surgery
- Other conditions

Erosions happen when the cornea's outer layer is:

- Loose
- Doesn't stick well to the tissue underneath

The layer lifts/pulls off easily. This creates a painful scratch on the eye. The pain occurs when you blink or open your eyes after sleeping.

Nodular Corneal Dystrophy (Salzmann Nodules)

This is a buildup of white/gray deposits on the cornea surface. It can create astigmatism and limit your quality of vision.

Surface Dystrophies of the Corneal Stroma/Bowman's Layer

These are abnormal deposits that may occur in genetic corneal disease. One example is Granular Corneal Dystrophy/Reis Buckler's Dystrophy. It may be partially removed or smoothed to improve vision/comfort. This helps reduce painful erosions.

Other conditions include:

- Band keratopathy (buildup of calcific plaques on the corneal surface)
- Corneal scarring
- Removing infected/damaged tissue

Getting Ready

One eye is treated at a time even if both eyes are being treated. Treatment is performed in an office setting. You should pick up all medicine sent to your pharmacy before this visit.

The Day of Your Procedure

Do **not** wear any:

- Eye makeup
- Perfume
- Aftershave

You may bring a pair of sunglasses with you to wear after.

Do **not** plan to drive yourself home. Make sure you have a ride home.

During the Procedure

The visit only takes a few minutes. You will be lying on your back. Numbing drops and cleaning solutions will be applied to the eye. You should not feel any pain during this procedure.

The eyelids will be kept open with an eyelid holder. Your surgeon will gently remove the clear film over the treatment area of the cornea.

Depending on your condition, you may also need:

- Removal of irregular tissue.
- Removal of lesions or scar tissue.
- Polishing of the underlying layer.
- Use of special medicines to help dissolve away calcific deposits.

Corneal tissue is made clear and smooth. Your surgeon will apply eyedrops to the eye's surface. They will then apply bandage contact lens.

After the Procedure

You may notice some short-term sensitivity to light. You will have a prescription for antibiotic eyedrops to prevent infection. You may be prescribed steroid eye to reduce inflammation.

You may have some eye pain 20-40 minutes after the procedure when the numbing drops wear off. You may feel some burning or stinging in the eye and notice a lot of eye watering. The surface layer of the cornea heals quickly and pain should improve 2-4 days after the procedure.

We cannot provide numbing drops after. The drops slow healing of the eye. The bandage contact lens placed at the end of your procedure should decrease pain. You can see through this lens. It should remain in place until we remove it at your follow-up visit.

You may want to keep eyes closed as much as you can to improve comfort. Some patients use a cold compress or keep lights off in their room.

If your bandage contact lens falls out, **do not** try to put it back in yourself. Keep using your drops until your follow-up visit.

Side Effects

The most common side effects are:

- Short-term pain/watering of the eye
- Mild, brief clouding of the eye
- Inflammation

Infection is rare. The use of antibiotic drops limits these risks.

Protecting the Eye

- **Do not** rub your eyes after your procedure.
- Keep dust and water out of the eye until the protective bandage is removed.
- You may shower during this time but **avoid** getting water into the eye.
- **Avoid** wearing eye makeup until the contact is removed.

Vision

Vision often gets worse in the first few days before it begins to get better. Vision is often back to normal by 6 weeks though it can take up to 12 weeks.

Who to Call

Please call us at **608-263-7171**. Follow the prompts to talk with the on-call provider.

When to Call

Call if you have:

- Severe or worsening pain
- Redness, or discharge from the eye

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 © 11/2024 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7659