Corneal Cross-Linking
Patient FAQ

What is keratoconus?

Keratoconus, often referred to as “KC”, is a non-inflammatory eye condition in which the typically round dome-shaped cornea progressively thins and weakens, causing the development of a cone-like bulge and optical irregularity of the cornea. This causes “static” in your vision and can result in significant vision impairment.[1]

What is cross-linking?

Cross-linking is a minimally invasive, FDA approved, outpatient procedure that combines the use of prescription eye drops, Photrexa® Viscous (riboflavin 5’-phosphate in 20% dextran ophthalmic solution), Photrexa® (riboflavin 5’-phosphate ophthalmic solution), and ultra-violet A (UVA) light from the KXL® system for the treatment of progressive keratoconus.

What can I expect during the procedure?

- After numbing drops are applied, the epithelium (the thin layer on the surface of the cornea) is gently removed.
- Photrexa Viscous eye drops will be applied to the cornea for at least 30 min;
- Depending on the thickness of your cornea, Photrexa drops may also be required.
- The cornea is then exposed to UV light for 30 minutes while additional Photrexa Viscous drops are applied.

[1] http://kcglobal.org/content/view/14/26//

What is ultra-violet A (UVA) light?

UVA is one of the three types of invisible light rays given off by the sun (together with ultra-violet B and ultra-violet C) and is the weakest of the three.

Does corneal cross-linking require removal of the epithelium?

Yes, your doctor will apply topical anesthesia to numb the eye prior to the removal of the eipthelium. This process helps to prepare your eye so that the drug can penetrate the tissue of the cornea to have an effective cross-linking procedure.

Am I awake during the procedure?

Yes, typically you will be awake during the treatment. You may be given a medication to help you relax, and numbing anesthetic drops.

How long does the treatment take?

The actual procedure takes about an hour, but you will be at the office for approximately two hours to allow sufficient time for preparation and recovery before you return to the comfort of your own home.

What can I expect after the procedure?

- You should not rub your eyes for the first five days after the procedure.
- You may notice a sensitivity to light and have a foreign body sensation. You may also experience discomfort in the treated eye and sunglasses may help with light sensitivity.
- If you experience severe pain in the eye or any sudden decrease in vision, you should contact your physician immediately.
- If your bandage contact lens from the day of treatment falls out or becomes dislodged, you should not replace it and contact your physician immediately.

Does it hurt?

There is some discomfort during immediate recovery but usually not during the treatment. Immediately following treatment, a bandage contact lens is placed on the surface of the eye to protect the newly treated area. After the numbing drops wear off, there is some discomfort, often described as a gritty, burning sensation managed with Tylenol and artificial tears. If pain is severe, oral narcotic medications may be used.

What results can I expect?

In clinical trials, progressive keratoconus patients had an average K_{max}[2] reduction of up to 1.4 in Study 1 and 1.7 diopters in Study 2 (which is flattening) at 12-months post-procedure, while the control group had an average increase of up to 0.6 diopters at 12-months (which is steepening). Individual results may vary.

Can anyone tell by my appearance that I have had cross-linking?

No. There is no change in the appearance of your eyes following cross-linking.

Is cross-linking right for me?

Patients who have been diagnosed with progressive keratoconus should ask their doctor whether they may be an appropriate candidate for corneal cross-linking.

Will I need to be out of my contact lenses for this process?

Yes. Typically, patients are asked by their doctor to stop wearing hard contact lenses prior to surgery for a period of several weeks. Once treated, patients will not be allowed back into contact lenses for 1 month.

[2]. K_{max} is the measurement of the maximum corneal curvature.

Is corneal cross-linking covered by my insurance?

FDA approved cross-linking is widely covered by insurance.

For additional information on insurance coverage and to view the latest list of insurers that are known to have policies that cover cross-linking, visit the Insurance Information page on LivingwithKeratoconus.com.

How much does corneal cross-linking cost?

Please contact our practice for specific pricing information.

Summary of Information About Corneal Cross-Linking

APPROVED USES

Photrexa® Viscous (riboflavin 5'-phosphate in 20% dextran ophthalmic solution) and Photrexa® (riboflavin 5'-phosphate ophthalmic solution are used with the KXL® System in corneal cross-linking to treat eyes in which the cornea, the clear dome shaped surface that covers the front of the eye, has been weakened from the progression of the disease keratoconus or following refractive surgery, a method for correcting or improving your vision.

Tell your healthcare provider if you are pregnant or plan to become pregnant.

IMPORTANT SAFETY INFORMATION

Ulcerative keratitis, a potentially serious eye infection, can occur. Your doctor should monitor defects in the outermost corneal layer of the eye for resolution.

The most common ocular side effect is haze. Other ocular side effects include inflammation, fine white lines, dry eye, disruption of surface cells, eye pain, light sensitivity, reduced sharpness of vision, and blurred vision. The risk information provided here is not comprehensive. To learn more, talk to your healthcare provider.

Go to Prescribing Info to obtain the FDA-approved product labeling.

You are encouraged to report all side effects to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

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