



Corneal Collagen Cross-Linking- Information and Consent Form

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This leaflet explains more about photochemical corneal collagen cross-linkage, including the benefits and risks. If you have any further questions, please speak to a doctor or nurse caring for you.

What is keratoconus?

Keratoconus is a condition that causes the cornea (the transparent dome in front of the eye) to get thinner and change shape, which results in reduced vision. It usually appears around puberty and progresses over the years. Keratoconus affects about 1 in 1,750 people, equally males and females, and occurs in all ethnic groups.

25% of all corneal transplants in the UK are carried out on patients affected by keratoconus.

What is photochemical corneal collagen cross-linkage with riboflavin (vitamin B2) and ultraviolet light, and why should I have it?

Riboflavin/ultraviolet corneal collagen cross-linkage (CXL) is a treatment that stabilises and strengthens the cornea, and stops the progression of keratoconus. Clinical studies have shown that the treatment stops the progression of keratoconus in about 90% of patients with up to six years of follow-up care, and improves the overall corneal shape in 40% of patients.

Your doctor has recommended that you have CXL with riboflavin and ultraviolet light because your keratoconus appears to be progressing and he/she believes you will benefit from the treatment.

Which type of CXL do we perform?

We perform a rapid version of 'epithelium- off' CXL, which is an up-to-date, and potentially safer, variation of standard CXL. Standard CXL involves 30 minutes of ultraviolet (UV) light treatment. Rapid CXL speeds this process up by delivering the same total amount of UV light energy in eight minutes. Recent research has shown that the cornea may tolerate this shorter burst of UV light better than a longer treatment period.

What are the risks?

This is a fairly safe treatment but as with any procedure, there are some risks associated with it. They include:

- Infection and scarring of the cornea: this happens very rarely, in one out of every 100 patients, and can permanently reduce your vision, which may require a corneal transplant.
- Progression of the condition: this can happen in five to ten out of every 100 patients. Because the rate of progression of keratoconus is relatively slow, it will be a minimum of 12 months before we will know if the procedure has been effective. Improvements in vision and corneal shape do not usually occur until six to 12 months after the treatment.

The risks of this procedure will be discussed with you in detail. If you have any question about those risks or would like more information, please speak to a doctor or nurse caring for you.

Are there any alternatives?

There are no alternative treatments at present that have been shown to stop the progression of keratoconus. It is likely that without the treatment your condition will get worse.

How can I prepare for the treatment?

You can eat as normal before the treatment but you should only have a light meal.

You will need to organise for a responsible adult to accompany you to the hospital on the day of your treatment so they can assist you on your way home. They will also need to stay with you for at least three days after the treatment.

Please wear comfortable loose-fitting clothing.

Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

What happens during the treatment?

The doctor will first apply anaesthetic drops to your eye to ensure you do not feel any pain. The central corneal skin (the epithelium) will then be removed and riboflavin (vitamin B2) drops applied to the eye for about 10 minutes. Once the B2 drops have soaked into the corneal stroma (thick, middle layer of the cornea), the ultraviolet light will be directed onto the cornea for about 10 minutes.

The whole treatment for one eye lasts 20 minutes.

Will I have both eyes treated at the same time?

If you need CXL for both eyes, we can offer you treatment for both eyes at the same time. If you would prefer to delay the second eye treatment, please request this at the clinic appointment prior to your treatment.

Will I feel any pain?

You will not feel any pain during the treatment because of the anaesthetic drops used. Your eye will be painful for about 24 – 48 hours after the procedure. To help relieve the pain, we will give you anaesthetic eye drops and you will be advised to take over-the-counter painkillers by mouth.

What happens after the treatment?

You will be able to leave hospital, accompanied by a responsible adult, shortly after the treatment.

A contact lens bandage will be placed on your eye to help with pain relief and healing. Your doctor at your first follow-up appointment will remove it. The bandage contact lens may fall out due to excess tearing of the eye. As the contact lens is only for comfort reasons – it does not need replacing if it falls out – please do not attempt to re-insert.

Your vision will be blurred for one to two weeks and you will not be able to wear contact lenses for two to three weeks. You will be given antibiotic and anti-inflammatory eye drops to use for few weeks after the procedure. This is to minimise the risk of infection, and reduce the redness and inflammation in the eye. Dry eye symptoms can last for a few months after the treatment; discomfort, eye-pain, watering and puffy eyelids could develop after the treatment, but this is usually short-lived.

What do I need to do after I go home?

Your eye will be painful for about 24 – 48 hours after the procedure and you will need to rest. The pain in your eye may be most severe for 12 – 18 hours but it will gradually get better. **If after this time your eye gets more painful, your vision gets worse, your eye becomes more red or you notice puss or discharge from your eye, you should come back to the Eye Department at Royal Derby Hospital or go to your nearest A&E department immediately.**

Do I need to take time off work or studies?

Yes. You should allow at least one week off while most of the surface healing occurs, or two weeks if your job involves a lot of computer work, and the treatment is being done on your best eye. You will be putting regular eye drops for few weeks.

Day to day activities such as watching TV or using a computer will not do any damage to your eye, but you might find it more comfortable to rest with your eyes closed early on. Avoid swimming, contact sports, eye rubbing for 1 month.

Will I have a follow-up appointment?

A follow-up appointment for a few days after the procedure will be booked for you. It will take place in the Eye Department at Royal Derby Hospital.

Patients/ Parents Declaration

I have read and fully understood the above mentioned facts (and overleaf). I am not under any pressure by anyone to have this treatment. The choice to go ahead is mine based on the benefits and side-effects as explained to me.

Signature.....Print Name.....

Date of Birth.....

Treating Doctors Declaration:

I have discussed the contents of this form and I am satisfied that they understand the procedure, the benefits and the possible side-effects that are described. I agree to accept this patient on the above terms and provide treatment.

Surgeon..... Date.....