## What is corneal collagen cross-linking with Riboflavin?

It is a treatment which uses ultraviolet light to promote increased cross-linking between collagen fibres within the cornea (the front transparent structure of the eye).

By increasing the amount of cross-linking the strength or rigidity of the cornea is increased. Strengthening the cornea by cross-linking its building blocks (collagen) can stop the progression of keratoconus and has also been reported to reverse partially the corneal steepening that has already taken place.

Corneal Collagen Cross-linking with Riboflavin (C3R) is also known as 3-CR or CXL.

## What does the procedure involve?

The cornea is first anaesthetised using drops. The procedure is performed in the clinic in a semi-reclined chair or stretcher.

Strong antibiotics are also given to prevent infection.

The surface layer of the cornea (epithelium) is disrupted using a special instrument and then Riboflavin (Vitamin B2) drops are placed in the eye every few minutes. The drops are yellow and become absorbed by the cornea and the front of the eye.

A clip is placed in the eye to keep the lids open and the calibrated ultraviolet device is then focused on the eye and switched on for 10 minutes. It is important not to move during the procedure and we will check your eye periodically to make sure the device is in the correct position. The yellow pigment of the Riboflavin absorbs the ultraviolet A light. The thickness of the cornea will be measured before applying the ultraviolet light.

Once the procedure is completed, a soft bandage contact lens will be placed in the eye and antibiotic drops will be administered. The contact lens will be removed on your next visit within a week. You will be on eye drops for at least a week.

## How long does it take for the procedure to work?

Cross-linking takes place as a result of exposure to ultraviolet light. The cornea increases in rigidity soon after the procedure, although the process of cross-linking continues for a period of a few days afterwards. The effect on corneal shape takes longer and flattening (i.e. partial reversal of keratoconus) does not always occur in eyes that have had treatment. The principal aim of this treatment is to stop the progress of keratoconus.

## How often will I need to be seen?

You will be seen within a week after the procedure to remove the contact lens. You will then be seen at intervals of one month, six months and one year. Following this, it is important for you to be seen on an annual basis by your optometrist as usual.

## When can I wear contact lenses again?

You may return to wearing lenses after one month. Your lenses may need to be changed if your cornea changes shape.

## Are there any risks?

As the surface layer of the cornea is disrupted, there is a very small risk of infection. This is rare and prevented through the use of antibiotics before and after the procedure.

## Further questions

Should you have any further questions or concerns, please do not hesitate to contact us.

**Eye Clinic Reception:**
**01342 414470 / 4166**

**(Appointments only or rearranging appointments)**

**Eye emergencies only: 01342 306782 between 09.00 - 17:00**

**Ross Tilley Ward: 01342 414451**
**Weekends, Bank holidays and Out of hours**

**Switchboard: 01342 414000 weekends, bank holidays and out of hours**

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**Patient information**