

Ophthalmology department

# Toric intraocular lens (IOL) in cataract surgery

Information for patients, relatives, and carers

## Introduction

This leaflet aims to give you information about the **toric intraocular lens** (IOL). We hope it answers some of the questions which you or those who care for you may have. It is not meant to replace the discussion between you and your medical team. It aims to help you understand more. If you have any questions about the information below, please contact us. Use the details provided in the end of this leaflet.

## What is a toric IOL?

This is a type of replacement lens used in cataract surgery. It can help your vision after surgery if you've got a common cause of blurry vision called regular astigmatism.

## What is astigmatism?

To achieve perfect focus on the retina you need a clear lens and perfect shaped cornea. When the lens become cloudy that is then called a cataract.

For normal, undistorted vision, the cornea and the lens should be smooth and equally curved in all directions. With astigmatism, the cornea or the lens, or both, are warped. This means they curve more in one direction than the other.

There are different types of astigmatism:

- if the curve is like the shape of a rugby ball rather than a football it is **regular astigmatism**. This can be corrected with glasses or contact lenses.
- if the curve is more like the shape of a bent traffic cone it is **irregular astigmatism**. (It might also be a condition called keratoconus). This usually cannot be fully corrected by glasses.

Astigmatism can be seen on eye scans.

Moderate astigmatism can be due to poor quality tear film and dry eye.

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Many eyes have minor astigmatism that does not need to be corrected during cataract surgery. However, high astigmatism will benefit from being corrected during surgery. Otherwise, you might get obvious blurring and sometimes distorted vision, and need to wear distance glasses with a thicker lens.

Using a toric IOL can reduce the impact of astigmatism on your eyesight.

## Cataract surgery for irregular astigmatism

Irregular astigmatism is where the corneal shape is distorted like a bent cone. There also might be areas of steepness and flattening due to corneal scarring.

This means a toric IOL implant will not be useful. A standard monofocal lens implant is often the best choice for patients with irregular astigmatism.

## How we decide if you would benefit from a toric IOL

We look at the measurements of your eye, which is called biometry. This includes:

- refraction, which is how the cornea and lens bend light rays to focus them on the retina, and
- keratometry, which measures the curvature of the front surface of the cornea

Using this information, we can decide if you are eligible to have a toric IOL. We will let you know, and you'll have the choice to opt for it.

## Benefit of having a toric IOL

A toric IOL will reduce the amount of astigmatism present after cataract surgery, this means less thickness of your reading glasses (the +/- distance) after cataract surgery.

If you do not have toric IOL, you'll need thicker distance glasses after cataract surgery. You'll also need reading glasses too.

About 30 in every 100 (30%) of all patients still need distance glasses as well as reading glasses after cataract surgery. (This is the same for both toric and non-toric intraocular lenses).

## Disadvantages of having a toric IOL

- there will be a longer delay before having cataract surgery. This is because the toric lens must be custom ordered for your eye. The delay is usually 6 to 8 weeks delay, sometimes longer

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- you may need another operation. The position of the toric IOL may need to be fine-tuned after the cataract operation. There are always risks with having another operation (pain, infection, swelling in the retina)
  - the toric IOL may not make much difference. You may still have quite thick glasses for distance and for reading after the cataract surgery

Other complications are rare, like any cataract surgery. The type of lens used does not make any difference to these risks. In most cases, complications can be treated effectively with drops or additional surgery, or both.

Occasionally, the delicate lens capsule is torn during the cataract operation. If this happens, a toric IOL will not be implanted. The team doing your cataract surgery will decide if a standard IOL can be implanted on the same day. However, it may have to be done on another day. The lens capsule needs time to heal so it can support the IOL.

## Alternatives to toric IOL

- standard monofocal lens implants still work well to give good vision in eyes with corneal astigmatism. However, you will need distance glasses with a slightly thicker astigmatism correction, as well as reading glasses
- contact lenses can be used to correct the astigmatism after cataract surgery
- laser corrective surgery can also correct astigmatism, though this is not available through the NHS

Please note, whatever lens implant type is used, you will need reading glasses (+/- thin distance glasses). We recommend seeing your optician six weeks after surgery.

## What to expect after surgery

- your vision might be a bit blurry to start with. It will begin to clear within a few days after surgery
- you will need reading glasses for close focus
- you may also need thin distance glasses for sharpest focus
- you may feel a dull ache or discomfort around the eye. This will also settle over one to two days

## Who to contact for more information

- Emergency Department at Western Eye Hospital – 020 3312 3245
- Outpatients at Western Eye Hospital – 020 3312 3236
- Outpatients at Charing Cross Hospital – 020 3311 1109 / 1233/ 0137

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## How do I make a comment about my visit?

We aim to provide the best possible service and staff will be happy to answer any of the questions you may have. If you have any **suggestions** or **comments** about your visit, please either speak to a member of staff or contact the patient advice and liaison service (**PALS**) on **020 3313 0088** (Charing Cross, Hammersmith and Queen Charlotte's & Chelsea hospitals), or **020 3312 7777** (St Mary's and Western Eye hospitals). You can also email PALS at [imperial.pals@nhs.net](mailto:imperial.pals@nhs.net) The PALS team will listen to your concerns, suggestions or queries and is often able to help solve problems on your behalf.

Alternatively, you may wish to complain by contacting our complaints department:

Complaints department, fourth floor, Salton House, St Mary's Hospital, Praed Street  
London W2 1NY

Email: [ICHC-tr.Complaints@nhs.net](mailto:ICHC-tr.Complaints@nhs.net)

Telephone: **020 3312 1337 / 1349**

## Alternative formats

This leaflet can be provided on request in large print or easy read, as a sound recording, in Braille or in alternative languages. Please email the communications team:  
[imperial.communications@nhs.net](mailto:imperial.communications@nhs.net)

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