

**Manchester
Centre for Vision**

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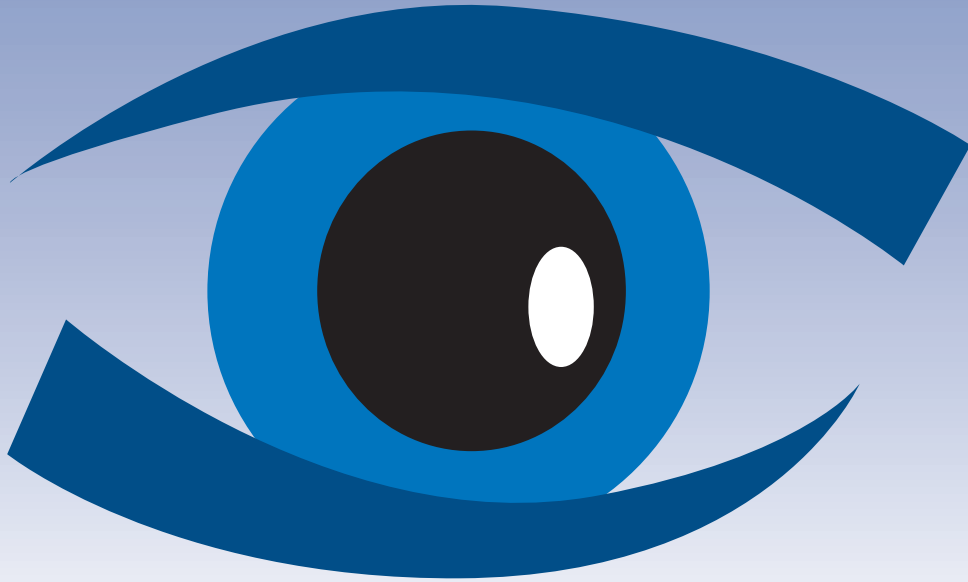
MANCHESTER ROYAL EYE HOSPITAL

The Private Patient Unit

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Manchester
Centre for Vision

Who We Are

The Manchester Royal Eye Hospital is one of the largest eye teaching hospitals in Europe and was founded on its present site in 1884.

Manchester Royal Eye Hospital is acknowledged as a centre of excellence for all aspects of ophthalmology, including out patient care, surgery, education and research, and is renowned both globally and nationally for its pioneering work.

The hospital provides an extensive range of eye services for both adults and children. All types of eye surgery are carried out by the Manchester Royal Eye Hospital consultants, many having practiced at the hospital for many years. All the consultants are ably assisted by the superb after-care team that prides itself on the delivery of the very best in patient care.

Manchester Centre for Vision (MCV) is the private patient / fee paying unit of the Royal Eye Hospital and is based within the hospital. The Vision Correction service is part of MCV and was set-up by Mr Arun Brahma MD FRCOphth to provide a comprehensive service for people who want to correct their refractive errors. It is one of the few places in the United Kingdom where all aspects of laser and surgical vision correction are provided on one site.

All the surgeons are on the specialist register of the General Medical Council and are Consultant Ophthalmic Surgeons at NHS hospitals and have undergone rigorous training in all aspects of Ophthalmology.



Results, Risks

AFTERCARE

We provide a comprehensive and personal aftercare programme for twelve months following your surgery. You will be seen for follow-ups as appropriate, which usually means 3 to 4 visits to the Centre. The Manchester Royal Eye Hospital has been in existence for over 100 years, providing care for both emergency and routine patients during this time and thus, as a patient of this Hospital, you will have access to this service 24 hours a day and 365 days of the year.

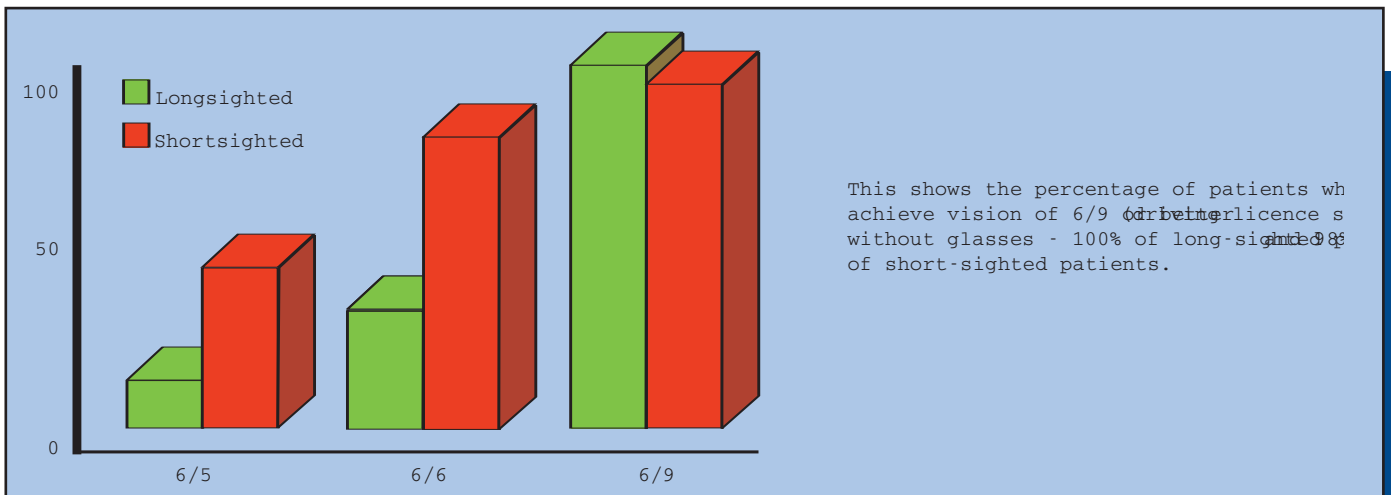


Last year 3 million people worldwide underwent laser vision correction. Due to its safety and effectiveness, laser eye surgery is now one of the most common eye operations in the world. As with any surgical procedure however, there are risks involved with this kind of treatment and we will discuss these with you during your consultation.

At present these risks are less than 1% at the Manchester Royal Eye Hospital. Implant surgery has a similar risk factor to cataract surgery and the complication rate is around 1%. These risks will be reviewed by your consultant surgeon and/or Corneal Nurse Practitioner.

All types of Vision Correction Surgery are performed at the Manchester Royal Eye Hospital. It is a team effort of doctors, nurses, optometrists, technical and administrative staff and the use of the latest technologies and treatments to give you, the patient, the best and most appropriate treatment in the safest environment.

RESULTS - Outcomes of Surgery



This shows the percentage of patients who achieve vision of 6/9 or better - 100% of long-sighted patients and 95% of short-sighted patients.



Questions & Answers

Q How successful is laser vision correction?

Laser eye surgery is a safe and highly effective method of correcting short-sight, long-sight and astigmatism. 90% of patients with low to moderate myopia will not require spectacles or contact lenses for everyday activities and unaided vision is good enough to drive a car without spectacles. Overall, the complication rate leading to poor vision in one eye is less than 1% at the Eye Hospital.

Q How successful is implant surgery?

The success rate is the same as cataract surgery, which is the most common and successful surgical procedure performed in the world with a low complication rate.

Q How soon will I see after treatment?

Most patients who undergo LASIK treatment notice dramatic improvement in their vision within the first 24 hours. LASEK treated eyes take about 72 hours to achieve reasonable vision. People with more severe amounts of refractive error, may find their visual recovery is a little slower. After implant surgery, the eye will see within a few hours and vision takes about 2 days to settle down.

Q Will I be restricted from any activities after my surgery?

After LASIK eye surgery, most patients can return to work the following day. Others may choose to wait a few days. You will need to follow certain restrictions as instructed by your surgeon; otherwise you are free to resume your normal daily activities. After LASEK, we recommend that you take 3-4 days off. Other activities (e.g. swimming, exercise, travel) may be affected depending upon the timing, and type, of your surgery. We will discuss these restrictions with you.

Q What about pain?

Pain and discomfort is minimal after LASIK and the ocular surface is usually healed in 48 hours time. However, if you do have any discomfort, painkillers will be provided for you. LASEK can be uncomfortable one hour after the treatment and this may continue for the next 2-3 days.



“ I would definitely recommend the Manchester Royal Eye Hospital as you really feel in safe, experienced hands.”

Peter, **Derbyshire**

“I’m really happy that I decided to have laser treatment and would recommend it, and Manchester Royal Eye Hospital, to anyone.”

Stuart, **Chester**

“I can’t praise the Manchester Royal Eye Hospital enough. Everyone is extremely friendly, professional and welcoming.”

Wendy, **Bolton**

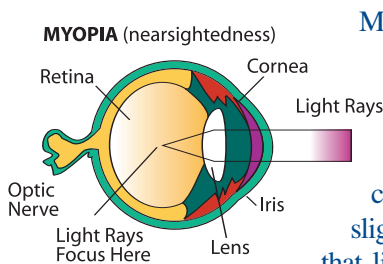
Refractive Errors

Many people have 20:20 vision but this depends on three things; the curvature of your cornea, the focusing power of your lens, and the length of your eye. Any imbalance between these three will result in a focusing / refractive error. Refractive errors are measured in Dioptres (D).

There are three main types of refractive errors - short-sightedness (myopia), long-sightedness (hyperopia) or astigmatism. In these eyes the focusing power does not form a clear image on the retina (photographic layer) of the eye. The focusing / refractive error can be corrected by glasses or contact lenses to give clear vision. The optician's prescription is written as below:

[+ / - Sphere] [+ / - cylinder] [axis]

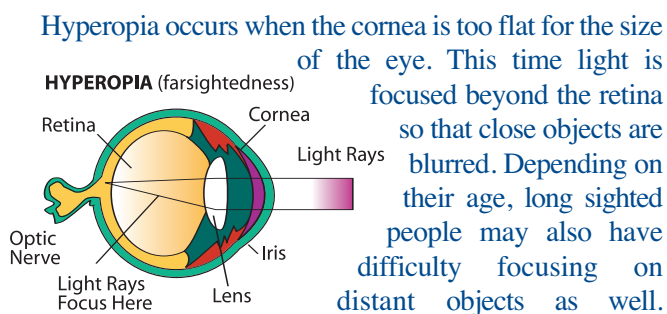
Short-sightedness (Myopia)



Myopia is when near objects are seen clearly but those in the distance are blurred. It occurs if the cornea is too steeply curved or if the eye is slightly longer than normal so that light is focused in front of

the retina. Without glasses or contact lenses, short-sighted people are able to see objects clearly if held close to their eyes, but usually those objects beyond arms length are blurred or out of focus. This is a common eye problem affecting approximately one in five adults. Myopia is indicated with a minus sign (-) on prescriptions. This refractive error can be corrected by laser and implants.

Long-sightedness (Hyperopia)

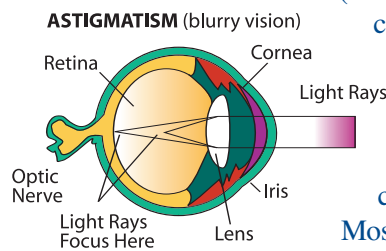


Hyperopia occurs when the cornea is too flat for the size of the eye. This time light is focused beyond the retina so that close objects are blurred. Depending on their age, long sighted people may also have difficulty focusing on distant objects as well.

Hyperopia is indicated with a plus sign (+) on prescriptions. This refractive error can be corrected by laser and implants.

Astigmatism

This is when the eye has two different degrees of long (or short) sightedness combined. For example, vertical objects may be clear but horizontal ones blurred. No amount of focusing can give a completely clear image.



Most people have a degree of astigmatism, which may co-exist with myopia or hyperopia. This is indicated as the cylinder (cyl) and will either have a + or a - sign in front of a number. This refractive error can be corrected by laser, implants and corneal microsurgery.

Presbyopia

This is the need for reading glasses that occurs when the eye becomes unable to focus on close objects. It is a natural ageing process that affects everyone between the ages of 40 and 50 years. This often co-exists with other refractive errors and can be corrected by implants.

Keratoconus

In this condition, the cornea is not a spherical surface / round but is distorted due to thinning of the cornea. This leads to unusual refractive errors with high amounts of astigmatism and may need complex glasses or hard contact lenses to improve vision. In its extreme form, the cornea becomes conical in shape. Certain types of keratoconus can be treated with specialised implants (Intacs) within the cornea to reduce the distortion allowing better vision with glasses or contact lenses.

Some keratoconic eyes develop superficial scarring which prevents good vision and this scarring can be removed with the Excimer laser.



Vision Correction Surgery

LASER VISION CORRECTION

A number of surgical techniques have been developed to correct refractive errors and the most common form of surgery is laser vision correction. Laser vision correction is now one of the most common surgical procedures in the developed world and involves the use of an Excimer laser to alter the shape of the cornea (the clear portion of the eye in front of the pupil). The Excimer laser has been in use since the 1980s but both the technology and procedures have changed significantly over the last fifteen years. Today, two different techniques, LASIK and LASEK, are used.

In myopia (short-sight), the eye is too long for the focusing mechanism (cornea and lens) to form a clear image on the retina. To correct this, the cornea is reshaped (the curvature is reduced to allow light to be focused on the retina).

In long-sightedness, the eye is too short for the focusing mechanism (cornea and lens) to form a clear image on the retina. To correct this, the cornea is reshaped (the curvature is increased) to allow light to be focused on the retina.



LASIK

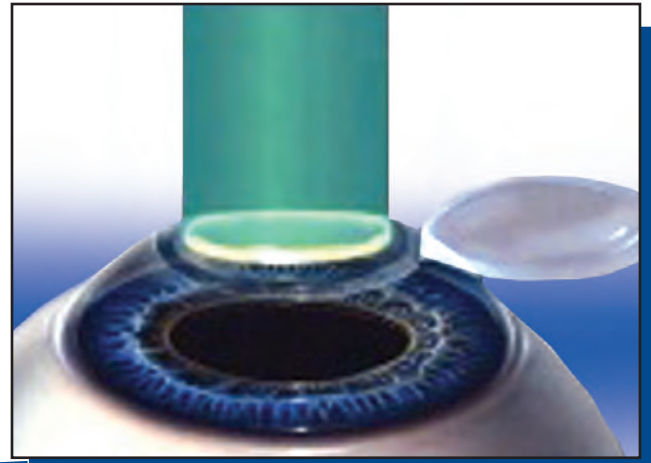
(Laser-Assisted In-situ Keratomileusis).

This is one of the most popular methods of laser eye treatment, routinely carried out throughout the world. LASIK is performed under local anaesthetic. A thin flap of corneal tissue is created with a microkeratome and then lifted to one side. This enables the laser to accurately reshape the tissue underneath and then the flap is gently eased back into place. Treatment is usually carried out in around twenty minutes and discomfort is minimal. Within a few hours you will begin to notice the benefits.

LASEK

(Laser-Assisted Epithelial Keratomileusis)

With this technique, although similar to LASIK, no corneal flap is made. This procedure involves softening the outer layer of the eye (known as the epithelium) and this is then rolled back. The cornea beneath is then exposed to the laser before repositioning the epithelium. This treatment also takes approximately twenty minutes. Visual recovery is slightly slower than LASIK, often taking three to five days. However, there is no difference between the LASIK and LASEK treated eyes after a few weeks.



Vision Correction Surgery

CUSTOMISED TREATMENTS

First developed by astrophysicists, this is the latest technology in laser eye surgery and combines advanced diagnostics and laser ablation. Your eyes are unique. By pinpointing and measuring the tiniest imperfections and natural distortions of your vision, with the exact measurements we take from the Wavefront and Topolyzer, we are able to create a tailor-made treatment plan that is as individual as you are. It is rather like having a 'made to measure' suit made just for you!

THERAPEUTIC TREATMENTS

The excimer laser can be used to treat not only longsightedness, shortsightedness, and astigmatism, but also other conditions, such as corneal scarring, recurrent corneal erosion syndrome, certain corneal dystrophies and band keratopathy.

CORNEAL MICROSURGERY

A super sharp diamond knife, which can accurately cut within a few microns (millionth of a metre) is used on the cornea to reduce astigmatism.

IMPLANTS (IOLs)

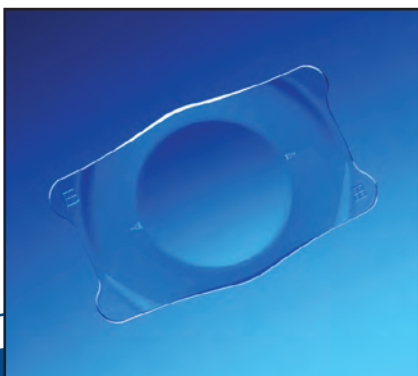
Some peoples' eyes are unsuitable for laser vision correction but their eyes focusing abnormalities can be corrected by specialised intra-ocular implants. Refractive lensectomy is very similar to cataract surgery which is the most commonly performed eye surgery in the world. There are 4 different types of implants:

- Accommodating IOLs correct presbyopia, hyperopia and low degrees of myopia.
- Single vision IOLs correct myopia and hyperopia.
- Toric IOLs correct astigmatism, myopia and hyperopia.
- Phakic IOLs correct myopia and hyperopia, without removing the lens of the eye which is too weak or strong for the eye. This is a reversible procedure.

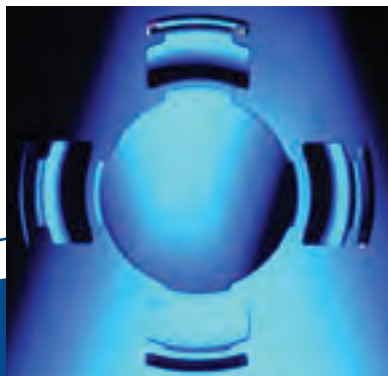
INTACS

These specialised clear plastic corneal implants, the size of a grain of rice, are inserted into the cornea in myopic and keratoconic eyes. In keratoconic eyes the distorted corneal shape is made more regular to allow a better fit of contact lenses and thus improving vision and increasing contact lens usage time. The procedure is reversible.

Phakic IOL



Accommodating IOL



INTACS

