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MARK WESTCOTT
OPHTHALMIC SURGEON

MB BS MD FRCOphth

Cataracts

What patients want to know

About Mark Westcott

Mark's area of expertise includes small incision cataract surgery, glaucoma and inflammatory eye disease (uveitis).

As a Consultant Ophthalmologist he has carried out thousands of cataract surgery cases, and was one of the first surgeons in the UK to regularly use a femtosecond laser for cataract surgery. He runs the Glaucoma Service at St Bartholomew's and the Royal London Hospital, and is a Consultant at Moorfields Eye Hospital in the Medical Retinal Service where he provides specialist expertise in uveitis and ocular inflammatory disease.

He is also a Surgical Trainer for the Royal College of Ophthalmologists where he trains surgeons in microsurgery and phacoemulsification cataract surgery. Mark has one of the largest private ophthalmic practices in Central London based at The London Clinic in Harley Street and in the private wing of Moorfields Eye Hospital. He holds 2,000 private consultations a year and carries out 200+ private procedures (a mix of cataract, complex glaucoma surgery and laser procedures) in addition to those he performs on the NHS.

With cataract surgery, his focus is on achieving the best results and he is sensitive to the to the varying needs of his patients whilst using the most up to date technologies. For example, the use of femtosecond laser to correct astigmatism or specific lens implants to reduce dependence on glasses.

Mark is an honorary Senior Lecturer at the Institute of Ophthalmology, one of the leading research centres in the world (R.A.E. 4* star rating). He continues to play an active role in research, particularly in uveitis, and lectures nationally and internationally. He has co-authored 40+ peer-reviewed scientific papers, and is also a reviewer for several leading research journals.

Mark qualified from St Thomas' Hospital in 1989, and did his ophthalmology training in London, including at Moorfields Eye Hospital. During this time Mark was awarded funding from the Friends of Moorfields to pursue research leading to a MD thesis in visual function in glaucoma.

In 2000, Mark was invited to work at the world-renowned Jules Stein Eye Institute, UCLA, Los Angeles and won a national scholarship in ophthalmology to fund his training. Here Mark gained a much deeper understanding of the diagnosis and management of glaucoma from the world's experts. It also provided an opportunity for further research into the early detection of glaucoma.

He was appointed a Consultant at Barts and The Royal London Hospitals and at Moorfields Eye Hospital in 2003. Since then, he has maintained his NHS and research interests whilst building up his private practice.

He lives in central London and is married with two sons. In his spare time, he helps coach junior rugby, and is a keen amateur astronomer.

Table of Contents

Cataracts: An introduction 03
How do I know if I am developing cataracts? 04
I've been told I have cataracts, what do I do now? 05
Should I have surgery privately or through the NHS? 06
Will it be covered by my health insurance? 07
What are the risks of surgery? 08
Reducing the need for glasses after surgery 09
Multifocal lens implants - reducing dependency on glasses 11
Femtosecond laser assisted cataract surgery 13
The operation 15
Mark explains what he does during cataract surgery 16
Frequently asked questions 17
After surgery 19
How do I put eye drops in? 20
What precautions should I take following surgery? 21
What to do in case you have a problem 22

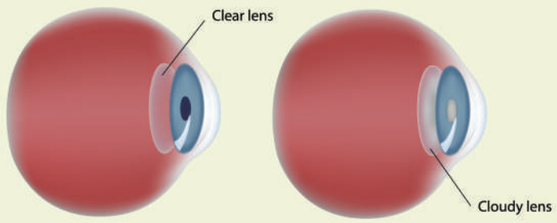
Cataracts
an Introduction

There are many websites which will give you a detailed medical understanding of cataracts and their treatment. However, we don't want to simply duplicate their (extensive) information.
What this brochure aims to do is give you an understanding of how cataracts and their treatment will affect you - the patient - and your family.

So we don't have many medical diagrams, but will aim to answer questions like how cataracts might affect your ability to drive, for example, or what to expect during a cataract operation.

What is a cataract?

A cataract is basically clouding of the lens in the eye. As everything you see has to go through the lens, this clouding seriously affects your vision. Left untreated, it will result in blindness when the lens clouds over completely.



Who gets them?

We will all develop some clouding of the lens as we age – specialists would expect to see some lens cloudiness in almost all patients in their 60s onwards. Exactly when it becomes significant enough to be called a cataract is very variable – different people get them at different ages and it depends on your visual needs (some people will notice a deterioration in vision earlier than others). The normal ageing process is the most likely cause of your cataract.

There are many other causes of cataract. For example it may develop as a result of inherited conditions, significant eye injury, inflammation, other significant eye disease or as the result of certain medications (e.g. steroids). Cataract formation is accelerated in diabetics, and can also arise earlier as a result of some childhood infections and other illnesses. Smokers also develop cataracts at an earlier age.

How do I know if I am developing cataracts?

Surprisingly, a lot of people don't realise. The clouding of your vision happens so gradually that you may not notice. In addition, although cataracts commonly develop in both eyes, the patient may not notice severe blurring of vision in one eye if the other eye still sees well. Most cataracts are identified when people go for a check-up with their optometrist (optician).

Common symptoms

- Gradual decline in vision, which can be for near vision, distance vision, or both.
- An increase in the strength of glasses, and a need to change glasses frequently.
- Glare and difficulties with bright light (this can be a problem with driving and oncoming headlights, particularly at night).

Less common symptoms

- "Ghosting" (seeing a shadow around objects, or double vision).
- Perception of colours becoming "dull".

Cataracts are generally removed when they start interfering with your daily life, e.g. driving or reading. These days, it is no longer necessary to wait until the cataract is very cloudy before surgery can take place.

I've been told I have cataracts, what do I do now?

Firstly, don't worry – they are, as we explained, very common. However, cataracts cannot be treated with drops or medicines.

The only treatment is to remove the lens through a tiny opening in the eye and replace it with an artificial lens - this is what is done during cataract surgery. Cataract removal is the most commonly performed operation in the UK.

Finding a surgeon

Your optometrist (optician) or GP can recommend an ophthalmologist (eye surgeon) or you can ask to see a specific surgeon who has been recommended to you. Your surgeon should be appropriately qualified (e.g. Fellow of the Royal College of Ophthalmologists, abbreviated to FRCOphth) and ideally should hold a substantive NHS consultant post. Note that it is not usually possible to request a specific surgeon within the NHS.

Can I still drive if cataracts have been diagnosed?

Generally patients with early cataract and mild symptoms can continue as normal with their day to day activities. However, if the cataract is severely cloudy, then patients will be aware of difficulties with reading, distance and driving vision.Your optometrist, GP, or ophthalmologist will advise you as to whether it is safe to drive, as you must satisfy certain criteria.

Should I have surgery privately or through the NHS?

Cataract surgery can usually be arranged at your convenience in the private sector (depending on when the surgeon's operating sessions are). Wait times will vary depending on the time of year and patient volumes. Our practice can usually arrange surgery within 2-4 weeks, although this has been done faster where patients have requested it (if they live overseas, for example). Obviously this comes with the usual benefits of private medicine, which can sometimes include your own room and facilities, although cataract operations do not usually require an overnight stay.

The NHS will give you less choice in terms of time and a longer wait, although these vary depending on which region you're in. Your GP can arrange for you to be referred to your regional NHS cataract service. You can, via your GP, choose the unit you wish to be referred to, ("Patient Choice") but you may not meet the surgeon before surgery, nor can you specify which surgeon operates upon you.

Costs of private surgery

There are 3 sets of fees involved: hospital fees (room, operating theatre, lens implant cost and medical supplies, etc.), anaesthetist fees and surgeon's fees:

- Surgeon's fees in London are usually of the order of £600-£900.
- Anaesthetist fees vary at around £300-£400.
- Hospital fees in Central London are between £1,500 and £2,000 (which usually includes a standard lens). There will be an additional fee of £600 or thereabouts if femtosecond laser is used.
- The lens implant cost can also vary significantly depending on the type of lens implant used (see next section).

  Insurance companies will usually cover the cost of standard implants to allow set for distance or monovision. However insurers usually won't cover high cost implants such as toric implants or multifocal implants.

Note: that all these costs are for one operation only – normally each eye is operated on separately, so two operations will be needed if there are cataracts in both eyes.

Will it be covered by my health insurance?

This will vary enormously depending on your policy. Insurers have been trying to contain the costs of cataract operations for some time, as it's such a commonly performed operation. Hospital fees are usually fully covered. Many insurers have "capped" the amount they're willing to pay for the surgeon's and anaesthetist's fees, so you may need to pay any extra (known as the shortfall). Some insurance companies will cover the whole cost of the operation, including these fees – others put forward only a nominal sum, to the point where there is really only minimal cover for this procedure.

Note: some insurers/policies limit your choice of surgeon and you will only be allowed to see one of a small number of surgeons who have agreed to keep their fees very low. This practice by the insurance company effectively limits your choice of surgeon on purely financial grounds, rather than quality, and we would always encourage you to discuss your choice of surgeon with your optometrist or GP.

What are the risks of surgery?

It is important for all patients to be aware of the benefits and potential risks of cataract surgery. The modern phacoemulsification cataract operation is the commonest operation performed in the UK and one of the most successful operations of all.

In terms of success, the operation offers a 95% chance of improving your vision, assuming that there is no other disease within the eye. However, glasses may be required for reading and/or distance for best vision.

In terms of problems and complications, in approximately 5% of cases patients have minor complications. These may be, for instance, a technically longer operation or an operation that requires a longer length of recovery. These minor complications still result in a satisfactory visual outcome.

Another minor complication - although troubling to the patient - is an unexpected glasses prescription after surgery. Measurements are taken of the eye before the operation (biometry) and standard formulae are used to calculate the desired postoperative prescription. Occasionally a patient's eye will not conform to the formulae, resulting in an unexpected glasses prescription. This occurs in about 5% of cases.

In terms of serious complications, all surgery offers a very small but finite risk of serious complications. The major risks we worry about include:

- Infection (1 to 2 per 1000 patients).
- Bleeding (less than 1 in 1000 patients).
- Retinal detachment (1 in 250 patients).
- Occasionally, the cataract can fall into the back of the eye during surgery and this requires an emergency second operation to remove it (1 in 500 patients).
- Damage to or clouding of the cornea (less than 1 in 100 patients).
- Extremely rare but serious circulatory problems in the retina (less than 1 in 3000).
- All of these potential complications, although rare, can lead to significant loss of vision and even blindness. The risk overall of this happening is probably in the order of 1 to 3 per 1000 but clearly all patients must be aware of this.

A less serious but troubling complication of cataract surgery is dry eye. This occurs in up to 10% of patients. Most, but not all, have a history of dry eye and also blepharitis (inflammation of the eyelid) prior to surgery. Symptoms of dry eye are usually worse in the first few weeks after surgery. Usually they settle by 2 – 3 months and can be helped with lubrication drops. A small minority of patients are troubled with persistent dry eye symptoms. These patients will require ongoing and more extensive treatment for their post surgery dry eye.

Reducing the need for glasses after surgery

What are the options?

Removing the cloudy lens and replacing it with a new one allows us to correct certain aspects of a patient's vision. In many cases it's possible to significantly reduce a patient's dependence on glasses. We've outlined a number of options below.

However, please don't worry if it all seems complex – Mark will guide you through the options before the operation, based on his extensive experience and your specific visual needs. For example, an avid golfer would want excellent distance vision, whilst an academic would need good reading vision – although we do find that many people just want to minimise their use of glasses!

"Set for distance"

As the name would suggest, this sets the operated eye for distance vision. This means that you should achieve very good unaided vision, although you may require a weak prescription to get the sharpest vision for driving and long-distance work (e.g. at the cinema). You will, however, need to have reading glasses to be able to read small print and for computer work.

Many patients use varifocals or bifocals before surgery. You can continue to use these types of glasses after surgery, but the prescription will need to be changed.

"Set for Reading"

This option is occasionally used. It particularly suits patients who have always been short-sighted (myopic) who habitually take their glasses off in order to read. It really only applies if cataract surgery is planned in both eyes. The idea is to use a lens implant set for reading in both eyes. In this sense it differs from monovision. It is appealing to patients who spend a lot of their working lives reading, for example academics or historians. It might also appeal to those who do a lot of detailed close work, for example jewellers and engravers. The downside is that if both eyes are set for reading after cataract surgery, then without glasses correction the distance will be blurred - for example walking around, crossing roads and driving. Of course the distance vision can be corrected by a pair of distance glasses or varifocals.

Monovision

When patients have cataracts in both eyes, we can set one eye (usually the dominant eye) for distance vision as described above, and the other eye for reading. Whilst this sounds daunting, the brain automatically switches to the eye with the clearest image. This means that you may not require glasses for reading menus in restaurants, or prices in shops. It does not guarantee that you will be independent of glasses, but it will markedly reduce your dependence on reading glasses. You would still require glasses to get the best reading vision, particularly in poor light.

This "Monovision" is usually well tolerated and can work very well. You may already have tried it before surgery, as many opticians do this with contact lenses. If not, it is sometimes worth using contact lenses to simulate monovision for a day as a trial before surgery.

Following cataract surgery using monovision, most patients (92-98% in recent studies) adapt quickly to this spread of focus. Very rarely, a patient may feel that the eyes are imbalanced, but this can be corrected with contact lenses, glasses, or a corrective surgical procedure (LASIK – "laser" surgery). If you choose "monovision" the insurance company will cover this lens implant, as a standard one is used, and there is no need to get both eyes done within a short period of time (unlike multifocals).

Multifocal lens implants - reducing dependency on glasses

The options describe above are fixed focal length implants. Whilst excellent results are obtained with these implants, the patient will be dependent on additional glasses for some tasks. The glasses will usually be reading glasses with separate glasses for computing, or varifocal glasses.

Multifocal lens implants are designed to reduce dependency on glasses after cataract surgery. These lenses are designed to send light to the retina in 3 defined focal lengths - distance, intermediate, and near. Distance tasks are driving, watching TV, recognising people's faces, and walking around. Intermediate tasks are those at middle distance - usually a visual task with the object held at arms' length and a typical distance would be 60 cm. Good examples of intermediate visual tasks would be computing, using a smart phone or tablet, reading prices in shops, and looking at briefings in meetings. Near tasks include close up reading - for example reading a book. We now recognise that modern life places great demands on intermediate visual tasks - just think how many times a day you might use your smart phone or use a computer. Many patients justifiably do not want to be dependent on glasses to perform these visual tasks after cataract surgery. Multifocal lens implants with a trifocal lens are a way to address these demands. Example lenses include the PanOptix trifocal (Alcon) and the Zeiss trifocal.

Am I suitable for a multifocal (trifocal) lens implant?

A Multifocal lens implant can really only be considered if you fulfill all of the following criteria:

1. You have confirmed cataracts in both eyes and you are willing to have cataract surgery in both eyes within a short time interval - usually a few weeks apart.
2. You are aged over 60 years.
3. There is no history of other eye disease.
4. You do not have very high glasses prescription or astigmatism.

Conversely multifocal lenses do not work well and usually would not be considered in the following cases:

1. You only have cataract in one eye.
2. Younger patients - e.g. 40s and 50s.
3. You have other diseases - for example glaucoma, a lazy eye, eye injury, previous eye surgery, diabetic retinal disease, or a history of retinal detachment.
4. You have have had previous laser refractive surgery to correct myopia.
5. You have a high glasses prescription.

What to expect if we use a multifocal lens?

The benefits
Patient who have had a PanOptix lens implants generally report high levels of satisfaction.

The majority of patients don't need additional glasses for distance or intermediate tasks. However, studies show that about 33% of patients need glasses for some near tasks, and of these about half (17%) used their glasses some of the time.

Side effects
Even if suitable, there are some important side effects of multifocal lenses that you must be aware of.

Firstly, most patients (about 70%) notice haloes or coloured rings around point sources of light and these are evident immediately after surgery. These effects are more prominent at night and most patients would notice haloes around headlights whilst driving at night. Although they can be a nuisance, these visual effects usually do not affect the ability to perform the visual task.

In addition, most patients learn to tolerate these side effects once they understand that they are an inevitable side effect of this style of lens. However, you would not want to use this lens if you were an astronomer and needed to see the night time sky, or you enjoyed night time photography. Patients also report some glare around bright sources of light.

What if I am one of the patients who notices significant glare and haloes and am very troubled by this?

About one in 100 patients are very troubled by the side effects of multifocal lenses and report constant glare and haloes under most lighting conditions. If it is in the early post operative period, it can be worth waiting to see if these side effects settle. In many cases the effects can improve significantly over about 6 months. However if the side effects don't settle then the only solution is to exchange the lens implant for a fixed focal lens implant and accept reading glasses. In my experience about 1 in 100 patients would require this. This necessitates a return to theatre and the surgery can be performed successfully under local anaesthesia. However there are rare risks involved. In addition, there is a cost implication, as you would have to pay for the surgery and theatre costs involved. Be advised that the insurance companies would generally not cover this.

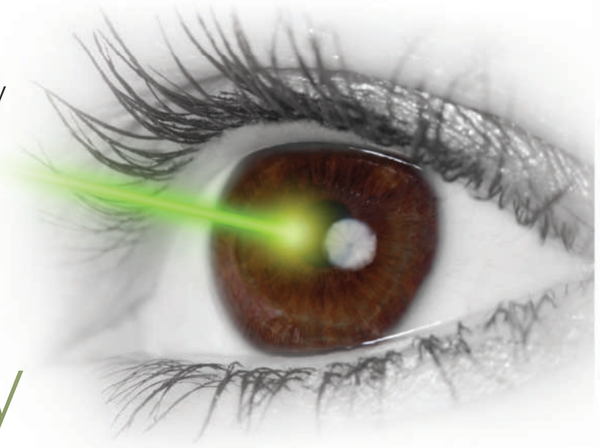
Toric lenses for astigmatism

Astigmatism occurs primarily when the front of the eye (cornea) is shaped like a rugby ball, rather than a football. It's very common, and your optometrist can correct this with special glasses or contact lenses. For mild astigmatism, the degree of astigmatism can be reduced during cataract surgery, in order to reduce the strength of glasses needed after surgery. The femtosecond laser is an ideal way of correcting low astigmatism.

Moderate and severe astigmatism can be corrected by using a special astigmatic lens implant during cataract surgery, called a toric lens. This works very well and Mark strongly recommends it in all cases of moderate to severe astigmatism (greater than 1.25 dioptres). However, insurance companies generally won't pay for the cost of toric lens implants (the cost of the Acrysof Toric IOL is about £500). You may also need to have an additional measurement of the cornea prior to surgery (topography). Multifocal lenses can also be ordered as a toric lens.

Latest advances in cataract surgery

Femtosecond laser assisted cataract surgery



There has been a recent development in cataract surgery - the use of the femtosecond laser.

What is femtosecond laser

Until recently, a surgeon would create incisions in the eye through the cornea using fine instruments under a microscope. Through these incisions, the surgeon would then manually open a small 5 mm window in the front part of the membrane (called the anterior capsule) that surrounds the cataract. Whilst surgeons are very skilled in doing this, we now have the technology to use a laser (femtosecond laser) to cut a perfectly circular window. The laser can create an opening that is perfectly round and centred within the eye, to a degree of accuracy that cannot be replicated by any surgeon anywhere in the world.

Using a laser to create a perfectly circular window in the capsule allows the surgeon to implant the lens in a more precise location so that it is perfectly centred within the eye. The laser also splits and softens the cataract, making extraction more straightforward. Having said that, large studies have not shown a significant benefit of femtosecond cataract surgery over conventional surgery, and this is because most patients already achieve excellent results with conventional surgery.

Some possible benefits of femtosecond laser surgery

There are good reasons for proposing several probable benefits of using femtosecond laser in phacoemulsification cataract surgery, however we do not currently have enough evidence to support all of the below. This may change in the future as new studies are reported.

Treating astigmatism

If you have astigmatism and you are keen to minimise the need for glasses after your cataract surgery then femtosecond laser is more likely to improve your odds of achieving this. The laser can create precise cuts in the cornea – this is an excellent way to treat low astigmatism. For medium to high astigmatism, a TORIC lens implant is a better option.

Reducing the complexity of the surgery

Mark feels that the laser can be particularly useful in certain challenging cases of complicated cataract.

Reducing the amount of energy needed dissolve the cataract

During cataract surgery, we use ultrasound energy to liquidise the cataract within the eye (phacoemulsification or phaco). With femtosecond laser, we use the laser to soften the cataract prior to the phaco. This allows us to use less energy within the eye. This is beneficial, as excess energy is associated with potential damage to the cornea, and inflammation in the retina.

Risks

As with conventional phacoemulsification cataract surgery, the usual risks of surgery apply, for example, the risk of infection. Reassuringly, there is no evidence of an increased risk of infection following femtosecond laser surgery. These risks are detailed above.

The question is whether there are additional risks over and above the standard operation? Large studies from the US show that femotsecond laser is safe and that the risk of complications is very low. However complications can occur.

In terms of serious complications, very rarely the laser can weaken or break the capsule supporting the cataract to the extent that the cataract nucleus falls into the vitreous jelly. This complication is also a rare occurrence with conventional surgery. This complication can be remedied, but there is an increased risk of visual loss as it requires an additional operation to remove the cataract, usually with the assistance of a vitreoretinal surgeon.

Availability and cost

Moorfields Eye Hospital was one of the earliest hospitals in the UK to have a femtosecond laser machine. Mark has been performing femtosecond laser assisted surgery on our private patients, for those who want it, since 2013. He was one of the first UK surgeons to adopt this technology alongside a small number of Moorfields colleagues, and has helped to train other surgeons in the technique.

At present, femtosecond laser machines are still relatively uncommon in the UK. Currently femtosecond laser assisted cataract surgery is generally not available under the NHS outside the research environment. The laser is a very high cost machine. As a result, there is an additional hospital fee for the use of the laser, and the hospital will levy this fee to the patient for use of the laser. However, Mark does not charge any more in terms of his surgical fee in order to use the laser. Insurers recognise and accept the technology, but generally do not cover the additional charge for laser at present. However the level of cover varies enormously between different companies and policies, and we would generally advise patients that there is little to be lost by asking. In the interim, we can advise on the extra cost.

“I have recently had cataract surgery on both eyes, performed by Mark Westcott. The surgery to the first eye was carried out solely by him and I am very happy with the result. The second involved the use of femtosecond laser to make the incision, followed by implantation of the lens by Mr. Westcott.

There were, therefore, two procedures which went very smoothly. The laser procedure was straightforward, bit of bright light but nothing more dramatic. MW examined the eye afterwards and was pleased to see the lens centred impeccably within the eye, which augurs well for my vision. I have now discarded the spectacles I have been wearing all my life.”

Testimonial from a recent femtosecond laser assisted patient

The operation

From here onwards the information comes from our patients and deals with their experience in our practice. This information will be useful for anyone undergoing cataract surgery, but details may vary in different practices and hospitals.

Initial consultation with the surgeon

You will be booked in for an initial consultation, where your vision will be measured and a check will be carried out to confirm the presence of the cataract. In many cases, your optometrist will have referred you, and will send a report. This information is extremely helpful for the surgeon, and can assist his decision making in terms of the best option available for you, for example reducing the need for glasses after surgery. It is also important to rule out any other eye diseases.

Your GP can also detail other medical conditions, and it is useful to have a full list of all medications that you are currently taking. You will have the cataract operation explained to you and have a chance to ask any questions you may have.

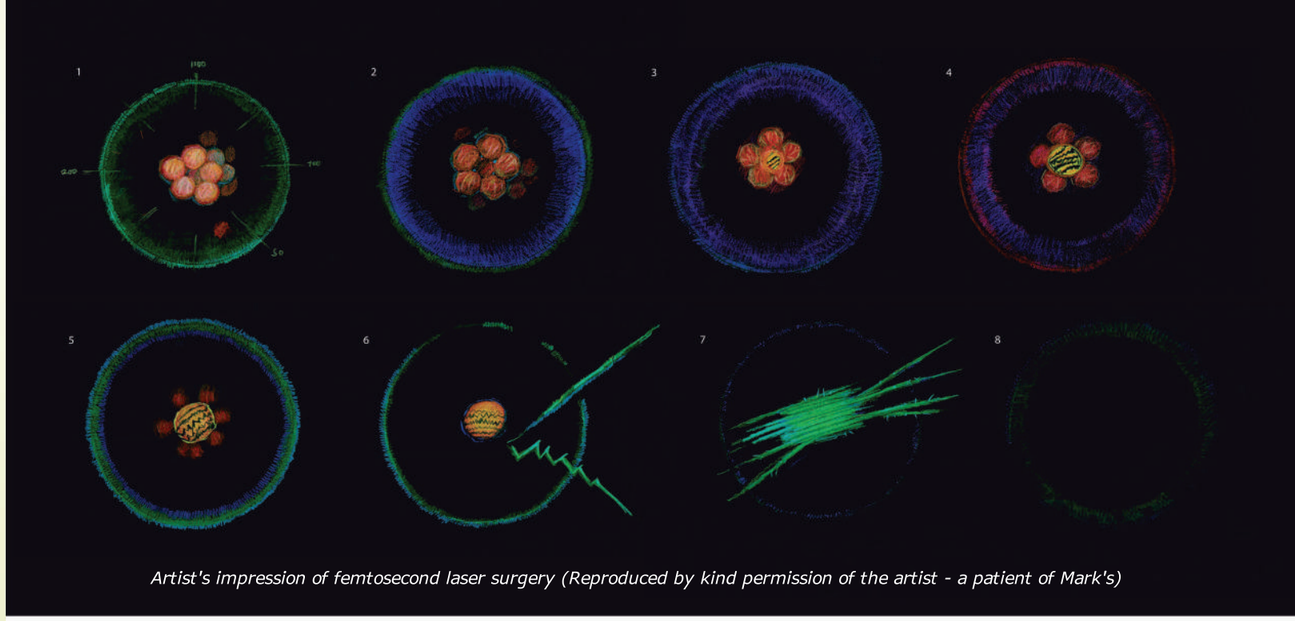
Biometry measurement test

Before surgery, a non-invasive test is carried out of both eyes. It is painless and lasts about 20 minutes. The test measures the dimensions of the eyes. Formulae are used to calculate the strength of the lens implant.

Patients should not wear contact lenses, of any type, for 2 weeks before the test

By doing this test we aim to reduce your glasses prescription after surgery. Depending on the desired glasses prescription, many patients, but not all, are able to see well for distance without glasses after surgery.

Your current glasses will not work well with your operated eye after surgery as the prescription will be wrong, but you will still need them for your unoperated eye. **So it's a good idea to see your optometrist to get your glasses lens for the operated eye changed before surgery to a zero prescription ("plain glass") so that you can continue to use your glasses immediately after surgery for your unoperated eye.**



Artist's impression of femtosecond laser surgery (Reproduced by kind permission of the artist - a patient of Mark's)

Mark explains what he does during cataract surgery

"You will receive drops or a pellet to dilate the pupil. If you are having femtosecond laser assisted cataract surgery, you will then be asked to lie flat on a couch. I will position the head carefully and some anaesthetic drops are instilled. I carefully place a small suction cup which engages the eye. You will feel some pressure on your eye because of the vacuum but it is not painful. I then perform some scans of the eye (this takes less than one minute), and following this apply the laser for about 20 – 30 seconds. You will see a kaleidoscope of red and green lights, which some patients have likened to the "Aurora Borealis"! After the laser has finished, I will release the cup on the eye (you will feel a little water running down the side of your face).

You will notice that the vision is very blurry in the treated eye after the laser and this is quite normal. Then the nurse will take you down to the operating room where the operation will continue.

Patients who are not having femtosecond laser assisted cataract surgery will go straight into the operating theatre, where I will insert a small instrument (speculum) in the operated eye to keep the eyelids open once the anaesthetic has been administered.

You do not need to worry about blinking or moving the eye, as the eye will be anaesthetised. I then use a microscopic surgical instrument to make an incision into the cornea. The cataract is removed using a phakoemulsification probe. This probe uses ultrasound energy to liquidise the lens, which is then safely removed. Once the cataract has been removed, I will then insert the lens implant.

This is a clear replacement lens which may be made out of an acrylic polymer or a silicone material. The implant sits within the capsular bag. This is a very thin membrane which surrounds the original lens. Once the implant has been placed, the instruments are removed. We do not usually need to place any stitches, although occasionally, this may be necessary. Antibiotic is injected around or inside the eye."

Frequently asked questions

Will both eyes be done at once?

No, you will have two separate operations. The second one will be scheduled when recovery from the first is complete (at the surgeon's discretion but usually at least a few weeks apart). It is very rare in the USA or the UK to operate on both eyes at the same time (as there are concerns about the risk of introducing infection to both eyes).

What happens on the day of surgery?

You will need to report to the hospital 2-3 hours before surgery. You will report to the nursing staff who will take a medical history, record any medications you take, and enquire about any allergies. Your blood pressure will be measured. The eye will be dilated with drops, or with a "pellet" which is inserted on the inside of the lower lid. This will dilate the pupil to allow the surgeon to access the cataract. Mark will visit you, and answer any additional questions you may have. You will also be asked to sign a consent form, and Mark will mark the forehead above the eye to be operated on. A gown is placed over your clothes.

What kind of anaesthetic will I have?

Cataract operations are generally carried out under local anaesthetic. This is very safe and the recovery time from local anaesthetics is very fast. There are two types of local anaesthesia:

1) For suitable patients, local anaesthetic drops can used, along with local anaesthetic agent introduced within the eye during surgery (so called "topical" anaesthesia). This type of anaesthetic allows for a fast recovery time.

2) Alternatively, a deeper local anaesthetic can be applied. For this, the anaesthetist will place some local anaesthetic underneath the conjunctiva around the eye. The anaesthetic injection is generally felt as a small sting – a recent survey of patients at Moorfields Eye Hospital found that two-thirds of patients reported little or no discomfort. The local anaesthetic also paralyses the eye, so that you can't see anything out of it while you're being operated on. The eye will remain numb for about 6 to 12 hours, so there is no need to be concerned if the operation is delayed slightly.

For both of the above, very anxious patients can be given some sedation as an intravenous injection: this makes you feel relaxed and sleepy during the operation, although you will still be awake. Please ask if you would like this option.

What will I experience during surgery?

You will be helped to lie flat on the operating table, made comfortable and your head will be supported. Sterile cloths will be draped around your face, covering the eye not being operated on. You may feel your eye being cleaned with cold fluid. Air will be gently blown towards your face through a pipe – this is to ensure you can breathe easily.

As the eye is anaesthetised, you do not have to worry about keeping the eye still, or blinking, as the eye is paralysed in any case. You will see very little out of the eye being operated on due to the local anaesthetic, although some patients report sparkling lights or psychedelic colour patterns! It helps if you can keep still during the operation and try not to speak. If you need anything you will be told to raise your hand. You may feel water running down the side of your face – this is just a salt water solution that the surgeon uses to keep the eye moist. You will hear the doctors and nurses moving around and the sounds of the equipment working. Music is often played in the operating theatre to help relax the patients. One famous eye surgeon of our acquaintance refused to operate unless Meatloaf's "Bat out of Hell" was playing!

Will I be able to see the instruments coming towards my eye?

People worry about this – but you will not be able to see the instruments coming towards your eye. You will see very little out of the operated eye due to the anaesthetic which has been administered. In addition, your other eye will be covered with a sterile transparent drape which is slightly frosted (see picture) – so you won't see instruments out of your other eye, either.

Does it matter if I blink or move my eyes during surgery?

Patients worry about this, but it does not matter as the eyeball being operated on is paralysed temporarily by the anaesthetic. It's kept moist by the salt water solution. You can blink your other eye as normal.

How will I feel immediately after surgery?

Depending on the type of anaesthetic used, you will either have a clear shield placed over the eye, or a patch over the eye after surgery. Patients are asked to remove this shortly after waking up on the following morning. Most patients are given a tablet of Diamox (acetozolamide) once they return to the ward to keep the pressure down in the eye.

When can I go home?

You can go home after one to two hours after surgery. Most patients, sensibly, like to have a cup of tea and a light snack or sandwich. You should allow some time for your post-operative drops to be prepared in pharmacy, and for the nurse to go through these drops with you.

Is it advisable to bring someone with me after surgery, and can I use public transport?

It's a good idea to have a friend or relative with you to help you home. You will have a patch over one eye, which you will be adjusting to, and you may have been given some sedation for surgery. Public transport can be used, but for the reasons given above most patients prefer to leave hospital via car, minicab or taxi. Long journeys are best avoided.

Do I need to be seen the next day?

Occasionally patients are seen the day after surgery – this is decided once surgery has taken place. You should be prepared to be able to return to the hospital the next day if asked. Patients who live a long way out of London should make plans that allow for this (either stay overnight in hospital, or in a hotel, or with a friend or relative). Please let us know if this is likely to cause problems and we can work out how best to accommodate your situation.

After surgery

When can I remove the eye pad and what will the vision be like on the first day after surgery?

You can remove the pad over your eye when you wake up the morning after your surgery. Your eye may be a little red and it's important not to be alarmed by this. First thing in the morning it is expected that the vision will be very "blurry". This is because of the residual effects of the dilating eye drops and the local anaesthetic. The vision tends to improve gradually through the day, and the next day should be even better still.

What will I be able to do the following day?

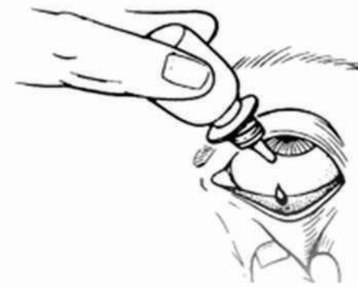
You should be able to resume your normal day-to-day activities within a day or two after surgery. Normally, we would expect the vision to be somewhat better the first day after surgery and then this would continue to improve over the next few days. You can return to driving if you feel comfortable and you have adequate vision in your fellow eye. Some patients elect to take a few days off work after surgery, but this is not essential. Patients who have sedentary jobs can be expected to return to work very rapidly.

What medicines do I need to take?

Mark will prescribe some antibiotic drops and some anti-inflammatory drops for your eye, which usually need to be put in four times a day initially. You continue these drops for approximately one month. Please make sure that you will be able to do this following surgery, or ensure that someone will be able to put them in for you.

How do I put eye drops in?

1. Wash your hands.
2. Read the instructions on the bottle.
3. Start by making sure you're standing, sitting or lying comfortably. Have some tissues to hand. You may find that putting your drops in in front of a mirror is helpful, but many people find it's not necessary.
4. Tilt your head backwards.
5. Place your index (first) finger on the soft skin underneath your eye. Gently pull this down so that you form a pocket (see the picture).
6. Bring the bottle tip up above the pocket - but make sure it doesn't touch the surface of the eye.
7. Squeeze gently so that a drop falls into the pocket (or onto the surface of the eye if that's easier). Don't worry if several drops fall in – the eye can only hold one drop and the rest will run out. Use the tissues to catch the excess on your cheeks.
8. Gently shut your eye – don't squeeze it tightly shut – and gently press on the inside corner of your eye near your nose with your index finger. That stops the drops from leaving the eye and makes them more effective. Do this for 2-3 minutes.
9. If you are putting in more than one drop or another different type of drop, wait another 2 minutes before putting in the next one. This stops the first from being washed away before it's had time to work.



Problems putting in eye drops

Drop won't go in the eye!

There is a different method which is a highly effective alternative – the "lying down" method:

1. Lie on your back with your head turned slightly towards the side that you want the drops to go in. Make sure you have some tissues to hand.
2. Close your eyes and put a drop in the corner of the eye nearest the nose. Then, at the same time, gently open your eyes and turn your head so that your cheek is against the surface you're lying on.
3. The drop should run into your opened eye.
4. Use the tissues to catch the excess on your cheeks, and gently shut your eye. Don't squeeze it tightly shut.
5. Turn your head back so that you're facing upwards. This is a more effective position for the drops to work.
6. If you are putting in more than one drop or another different type of drop, wait another 2 minutes before putting in the next one (you can sit up or stay lying down). This stops the first from being washed away before it's had time to work.

My hands are shaking

Rest your hand on part of your face – the cheeks if using the method above, or some people like to approach from the side and rest their hands on their temples. See what works for you. Another tip is to weigh your hands down with light weights – gym wrist weights are ideal but you may be able to improvise.

I can't feel if the drop went in the eye!

Ask if it's possible to keep your drops in the fridge – cold drops are easier to feel when they go in.

What precautions should I take following surgery?

Many of the precautions are common sense.

For 2 weeks after surgery you should avoid:

1. Dirty and dusty environments.
2. Swimming.
3. Heavy lifting (suitcases, etc.). Normal housework is acceptable!
4. Activities that could result in a knock or blow to the eye, e.g. contact sports. Non-contact activities are fine (e.g. brisk walk, golf). Runners should wait 4-5 days before their first run.
5. Please avoid getting dirty water into the eye, for instance, during hair washing.

You will be asked to put a clear shield over your eye before you go to bed, to be worn during the night. This should be done for 1 week after surgery.

Flying and other engagements

It is perfectly safe to fly immediately after surgery. However, Mark insists that patients curtail any travel plans and stay in the UK, able to travel to London, for at least one week after surgery. This allows him to see patients if they encounter any post-operative problems.

Please remember that you have had an operation on the eye. You will be using drops and it is expected that the eye will be red and a little sore for a few days after surgery. It is sensible NOT to schedule major life events for 1 - 2 weeks after surgery (e.g. "trip of a lifetime", distant business trips, weddings, major anniversaries, etc).

When can I use makeup?

You can apply eye makeup 1 week after surgery.

My eye feels "gritty" after surgery. Is this normal?

It is very common for the operated eye to feel slightly gritty for anything up to six months after surgery. This is due to surface dryness and can be alleviated with lubricating eye drops. It occurs because the surface of the eye has been disturbed during surgery, and some of the corneal nerves have been cut.

The symptom of grittiness can easily be treated with lubricating drops, which can be bought at a chemist/pharmacist without a prescription. Mark recommends Celluvisc 0.5%, Hycosan or Hylotears, to be applied 4-6 times a day as needed.

Post-operative visit

You will need to return one to two weeks after surgery so that Mark can examine the eye. In the meantime, continue with your post-operative drops as directed.

When should I see my optometrist (optician)?

Mark will advise when you should see your optometrist after surgery. Generally it's sensible to see your optometrist about 3 weeks after surgery, once the eye has fully settled down. Thereafter, all patients should continue to see their optometrist for a yearly check-up. This is primarily to detect other problems which may develop in the eye, especially with ageing (for instance glaucoma, or macular degeneration).

Will the implant last the rest of my life? Can the cataract grow back?

Your cataract cannot grow back after cataract surgery and the implant will last the rest of your life. In approximately 10% of patients, a membrane behind the implant thickens over gradually after the first two to three years after surgery. This is called posterior capsular opacification and results in a gradual deterioration in your vision. Your optometrist can detect capsular opacification and can refer you either privately or via the NHS for straightforward office-based laser treatment.

What to do in case you have a problem

For the first two weeks after surgery, the principal worry is infection getting in the eye. This is extremely rare but potentially very serious.

If you notice one or other of the following symptoms then you must be seen urgently!

→ Rapidly deteriorating vision

→ Severe pain and redness which is getting worse

For patients who have had private surgery **by Mark Westcott only**:

During office hours please contact the practice on:

Tel: **020 7402 0724**
Mobile: **07963 452 901**

Alternatively, you can ring **Moorfields Eye Hospital** on the following number: **020 7253 3411 (24 hours, including weekends) and ask for the Accident & Emergency Department.**

Explain to them that you are a recent cataract surgery patient of Mr Westcott's and they will advise. Moorfields Eye Casualty is staffed 24 hours a day by experienced ophthalmologists who can see you in the first instance and who will be able to contact Mark.