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## **CATARACT SURGERY**

### **PATIENT INFORMATION LEAFLET**

**Please read this information leaflet carefully. If you have any questions or concerns, please feel free to discuss them with me and do not hesitate to contact myself or my team using the above email address or telephone number.**

#### **What is a Cataract?**

A Cataract is a clouding of the Lens in your eye which leads to a decrease in vision. It is common and can happen at any age, but is more common the older you get. The Lens is a transparent structure in your eye which lies just behind the Pupil. The Pupil is the black hole in the centre of the coloured part of the eye, which is known as the Iris. The Lens is responsible for focussing light.

#### **What causes a Cataract?**

The most common cause of a Cataract is ageing. However, there can be other causes such as Diabetes, Trauma, previous eye surgery, Genetics, or some Medicines (e.g. Steroids).

#### **What problems does a Cataract cause?**

The Cataract may be worse in one eye at first, but usually both eyes are affected, depending on the cause. The most common problem you may experience is a gradual blurring of your vision. With some Cataracts, your reading vision can improve temporarily, so that reading glasses are no longer required. Some patients experience other problems such as glare or double vision.

#### **Do I have to have treatment?**

No. But if you decide not to have surgery, your vision is likely to slowly worsen. Generally speaking, surgery can be performed at any time without affecting the final outcome. However, sometimes when the Cataract is left for a long time, the operation can become a more difficult procedure with an increased potential for complications.

Depending on the severity of your Cataract, if you decide to leave things as they are, this will usually be fine. If the Cataract is mild, it is sometimes possible to improve the vision by changing your glasses. However, these may require changing more frequently as your Cataract progresses. If glare is a problem, tinted glasses might help.

When you decide that you would like to proceed with surgery, please contact us and we will be happy to advise you on how this can be arranged.

### **What treatment is possible?**

If the visual problems caused by a Cataract are affecting your life and cannot be improved with glasses, then the only effective treatment is an operation, where the Cataract is removed and replaced with an artificial lens implant, known as an intra-ocular lens. The decision to proceed with an operation rests solely with you, once the risks and benefits of the operation have been explained to you by Mr. Neffendorf.

### **What happens before the day of surgery?**

An appointment will be arranged for you to have measurements of your eye taken (biometry) which are used to determine which intra-ocular lens you will need. This is a simple process and can sometimes be done at the same time as your initial appointment. If you wear contact lenses, these must be removed and not worn for 1 week (soft-contact lenses) or 2 weeks (hard-contact lenses) before the Biometry measurements are taken.

Mr. Neffendorf will ask you about all of the regular medications that you take. Occasionally, some may need to be stopped before surgery and this will be explained to you by Mr. Neffendorf.

### **Intra-Ocular Lens Choice**

The choice of intra-ocular lens will have been discussed with you by Mr. Neffendorf. There are a range of different types and strengths of lens available.

A standard Monofocal intra-ocular lens will give you the choice of better focus for either distance vision or near vision, but not both. The majority of people choose to aim for good distance vision in order to reduce or eliminate their dependence on glasses for distance vision, whilst accepting that they will require reading glasses for near vision. In this situation, most people find they still need a pair of 'distance' glasses to fine-tune and give them the best possible distance vision (e.g. for driving). However, some people prefer to aim for good near vision (e.g. reading) without glasses (only needing reading glasses for specific near tasks) and accept that they will require glasses for their distance vision.

For patients with significant astigmatism, Mr. Neffendorf will discuss a Toric intra-ocular lens. Astigmatism causes light to be focussed unevenly by the eye and pre-operatively is usually corrected with glasses. Toric intra-ocular lenses are designed to decrease astigmatism in the eye and reduce the dependence on glasses after surgery. However, in some cases, glasses are still required after surgery when a Toric intra-ocular lens is used. Toric intra-ocular lenses can be used in a standard way (providing good distance vision for both eyes) or for monovision (see below). There are also Toric multifocal lenses (see below). Not all people are good candidates for Toric intra-ocular lenses, and when this is the case there are other options available which Mr. Neffendorf will discuss with you (e.g. glasses or contact lenses following surgery, laser refractive surgery) to correct astigmatism.

Following surgery to insert a Toric intra-ocular lens, approximately 5% of patients might require further surgery (which carries small additional risk) to reposition the intra-ocular lens implant and achieve the best refractive outcome, if desired by the patient. It is also important to note that it is not always possible to implant a Toric intra-ocular lens, for example if complications occur during Cataract surgery requiring a non-toric standard intra-ocular lens to be inserted.

Monovision is when the need for glasses is minimised by aiming for near vision in one eye and distance vision in the other eye. Mr. Neffendorf will have discussed whether he considers this is a good option for you, and it is often a good idea to have tried contact lenses before surgery to simulate what this type of vision might be like for you. Often, though, glasses may still be required to fine tune distance and/or near vision. Not all patients are happy with Monovision and in some cases the intra-ocular lens implant needs to be exchanged, which carries the risk of additional surgery.

Multifocal intra-ocular lenses are designed to correct your distance, intermediate and near vision so that you are less likely to need glasses after surgery overall. However, they are associated with an increased risk of glare or other optical issues such as haloes around light, especially at night. In addition, in very dim conditions, some people find it can be challenging to read. Some people also feel the quality of vision with a Multifocal intra-ocular lens is worse than a Monofocal intra-ocular lens (see above). Not all patients are happy with multifocal intra-ocular lenses and some still need glasses after surgery. Occasionally, the intra-ocular lens implant needs to be exchanged, which carries the risk of additional surgery. Mr. Neffendorf will have discussed these lens types with you, and for some patients (e.g. those with certain other eye conditions) they are not recommended. It is also important to understand that it is not always possible to implant a Multifocal intra-ocular lens, for example if complications occur during Cataract surgery requiring a standard Monofocal intra-ocular lens to be inserted.

Extended depth of focus (EDOF) intra-ocular lenses are designed to correct your distance vision and improve intermediate vision as well. They work by having a modified lens implant surface to provide depth of focus. Glasses are still required for near reading, and sometimes to fine tune distance and intermediate vision. They have a lower risk of causing side effects such as glare and haloes around lights than Multifocal intra-ocular lens implants (see above). In very dim conditions, some people find it can be challenging to read. Not all patients are happy with these lens implants and in some cases the intra-ocular lens implant needs to be exchanged, which carries the risk of additional surgery. Mr. Neffendorf will have discussed these lens types with you, and for some patients (e.g. those with certain other eye conditions) they are not recommended. It is also important to understand that it is not always possible to implant an EDOF intra-ocular lens, for example if complications occur during Cataract surgery requiring a standard Monofocal intra-ocular lens to be inserted.

### **Which anaesthetic technique?**

Most patients decide to have their operation performed under a local anaesthetic. This means you will be awake throughout the procedure. Your eye will either be numbed with

eye drops, or with an injection of anaesthetic around your eye. This injection can sting a little at first (as you might experience at your dentist), but it should not be painful. When you choose to have your surgery performed under local anaesthetic you will be required to lie flat and still during the operation.

If you are nervous, or you feel unable to lie still, or there are any specific medical reasons, you can have the operation performed with sedation (to reduce anxiety) or under a general anaesthetic. General anaesthetic means you will be asleep and will know nothing about the operation. However, unlike a local anaesthetic, General anaesthesia is slightly more risky for your general health. Also, you will have to make sure you have nothing to eat or drink for at least 6 hours before your operation. You might also have to remain in hospital longer after the surgery is completed.

### **Will I see what's happening?**

If you have a local anaesthetic, you may see some bright light from the operating microscope. You might also be aware of some unusual colours and patterns. However, you will not see the actual operation through the eye being operated on, nor from your other eye which will be lightly covered by a drape.

### **Intended benefits of the operation**

The aim is to improve the quality of your vision – seeing better, with less glare, and brighter colour vision. Approximately 95% of patients see significantly better following Cataract surgery. It is also intended to reduce your dependence on glasses, although you may still require distance glasses to achieve best vision and you will probably need glasses for reading depending on the type of intraocular lens that you have chosen. Sometimes surgery is primarily performed to improve the view to examine the back of your eye, and if this is the case, you will have been told about this.

Your chance of improving vision with Cataract surgery may be lower if you have other eye diseases, for example Glaucoma, Epiretinal Membrane or Age-related Macular Degeneration. This will have been discussed with you in advance.

Generally, Cataract surgery is safe. Minor problems may occur during the operation. However, these should not affect the final outcome of the operation.

### **Serious or frequently occurring risks of having the operation**

If you decide not to have surgery for your Cataract, your vision is likely to slowly worsen. It is however important to be aware that in a very few cases the Cataract operation might leave your vision worse than it was prior to the operation.

**One in 100 people (1%) will have worse vision as a direct result of the operation (note, this figure can be higher in some patients with pre-existing conditions).**

**One in 1000 people (0.1%) will go blind in the eye as a direct result of the operation.**

**One in 10000 people (0.01%) will lose the eye as a direct result of the operation.**

All types of eye surgery carry risk, and complications have the potential to cause damage to your sight or require the need for further surgery to address unexpected problems. The following list details the most common or significant complications which might occur as a result of having the operation;

**Pain:** mild discomfort following surgery is common, and this can usually be relieved with Paracetamol. Significant pain is uncommon.

**Drooping of the Eyelid:** common and usually temporary. It would be unusual for this to require further surgery.

**Bruising of the Eye or Eyelids:** common and usually not concerning.

**Dry Eye:** common and usually not concerning. Occasionally requires long term lubricating eye drops.

**Posterior Capsular Opacification:** a common issue where the lens capsule bag behind the lens implant becomes clouded after surgery resulting in blurred vision (affecting 20-30% of patients). This is sometimes referred to as an 'after-cataract'. A simple outpatient laser procedure (called a YAG capsulotomy) can be performed which usually improves the vision.

**Posterior Capsule Rupture and/or Vitreous loss:** occurs in 1-2% of cases. This is a split in the back part of the lens capsule (which holds the Cataract). This usually requires further surgery either at the same time or at a later date. In this scenario, recovery from surgery takes longer, but in most cases the final visual outcome is similar to uncomplicated surgery.

**Dropped Nucleus:** occurs in less than 1% of cases. This is when all or part of the Cataract falls to the back of the eye during surgery. This requires another operation, known as a Pars Plana Vitrectomy. Although most Cataract surgeons are unable to perform a Pars Plana Vitrectomy, Mr. Neffendorf is specifically trained as a Retinal Surgeon and able to perform this surgery should it be required.

**Endophthalmitis:** severe infection in the eye. 1 in 1000 risk of severe loss of sight.

**Suprachoroidal Haemorrhage:** bleeding in the wall of the eye. 1 in 1000 risk of severe loss of sight.

**Retinal Detachment:** detachment of the retina of the eye. This requires further surgery and is not always possible to be repaired, resulting in loss of vision. Mr. Neffendorf is specifically trained as a Retinal Surgeon and able to perform this surgery should it be required.

**Raised Intra-Ocular Pressure:** raised pressure inside the eye which is usually treatable with additional eye drops. Surgery is only rarely required but loss of vision can occur.

**Inflammation inside the Eye:** all patients heal differently after Cataract surgery. In some cases, more intense inflammation inside the eye can occur which requires eye drops to be taken for a longer period of time after surgery. Occasionally, loss of vision can occur.

**Cystoid Macular Oedema:** fluid build-up at the macula (centre of the Retina) due to inflammation. There is an 8% risk of this and it can usually be treated with further eye drops but can sometimes affect the final vision.

**Corneal Decompensation:** clouding of the cornea (the clear 'window' at the front of the eye). On very rare occasions, less than 1%, this may require Corneal transplant surgery.

**Damage to other Parts of the Eye:** with any intra-ocular surgery, there is a small chance of damage to other parts of the eye both internally or externally.

**Allergy to Post-Operative Eye Drops:** occasionally, there can be an allergy to the standard post-operative eye drops (usually the preservative component) resulting in a red, swollen and itchy eye. In this scenario, drops are switched to an alternative preparation.

**Lens Edge Effect:** a small number of patients see the edge of their lens implant in their peripheral vision following surgery. With time, this tends to become less noticeable, but occasionally it can persist. Usually, however, no further surgery would be required.

**Refractive Surprise:** despite the use of accurate measurement formulas, sometimes the final result in terms of the glasses prescription can be different to the predicted outcome. In rare situations, glasses cannot correct the problem and further surgery may be required.

**Lens Implant Dislocation:** movement of the lens implant. Occasionally, more surgery is required to re-position it.

**Lens Exchange or Removal:** very occasionally, problems with the lens implant position, the lens implant itself or vision problems might require further surgery to remove or exchange the lens implant.

Rarely, it is not safe to implant a lens implant during the surgery. In this case, a secondary procedure to implant a lens implant will be discussed with you after surgery.

### **On the day of Surgery**

You should not wear any makeup.

When you arrive, the staff will confirm your details and place eye drops just inside your lower eyelid to dilate the pupil.

You will then be taken to the operating theatre, where you will be given your anaesthetic.

Mr. Neffendorf (and the anaesthetist if required) will see you before the surgery when you will have an opportunity to ask any further questions you might have.

### **During the operation**

The skin around your eye will be thoroughly cleaned.

A sterile drape will be placed over the eye to be operated on and this will also cover up your other eye.

Mr. Neffendorf will perform the operation. You may see movement or lights during the operation, but you will not be able to see the surgery or the instruments.

The surgery is expected to take approximately 20 minutes.

You should try to keep your head still during the operation, but you do not need to worry about blinking. There should not be significant pain during the operation, although it is normal to feel some water running around your eye or a cool sensation.

The surgery itself requires very small incisions to be made in the front 'window' of the eye (the Cornea). The Cataract is removed using an ultrasound probe and the new intra-ocular lens implant is inserted into the eye. In most cases no sutures are required, but occasionally Mr. Neffendorf may decide to insert a suture to close an incision. You will not be able to feel the intra-ocular lens implant, and it requires no special after care on your part since it becomes a permanent part of your eye.

You will be advised to relax for a short period of time after the surgery then allowed to leave the hospital once you are happy to do so, and after your escort has arrived to pick you up. For patients receiving general anaesthetic or sedation, after leaving the hospital you must have someone remain with you for at least 24 hours.

### **After the operation**

At the end of your operation, a shield (with or without a soft pad) will be placed over the operated eye to protect it, and stop you accidentally touching or rubbing your eye especially whilst the anaesthetic is wearing off. This shield can be removed on the following day, but should be used overnight for 7 nights after surgery to protect the eye. Some patients also choose to use the shield during the day for a few days for reassurance.

If a soft pad has been used, this can be discarded the day after surgery. You might notice that the eye is red, the eyelid is droopy or even closed, and that there may be some double vision – these are all normal, and usually recover quickly. After removing the shield (and pad if present), on Day 1 after the operation, you should gently clean the eyelashes and skin around your eye with clean gauze soaked in sterile water bought from a chemist (Cool, previously boiled tap water works fine also).

You will be given eye drops to be started on the morning after surgery.

The type/frequency/duration of these drops will be explained to you. If you run out of these drops, please ask Mr. Neffendorf for a repeat prescription.

If you are taking any other eye drops (e.g. for glaucoma), you should not stop these, unless you have been advised to do so by Mr. Neffendorf. However, you should start a new bottle of any eye drops that you have been taking long-term.

Wash your hands before instilling the drops and avoid touching the bottle tip to your eye or lashes.

On the days following your operation your vision might be blurry whilst your eye heals and adjusts. It is normal for your eye to feel a little uncomfortable, with grittiness and some watering for example. Paracetamol or ibuprofen is usually adequate to treat the discomfort.

You should be particularly careful not to rub or press on your eye.

You should avoid showers for the first week, although baths are safe as long as you do not put your head and eyes under the water. It is advisable to not wash your hair for the first few days and then when you do, it is best to have a 'back-wash' to make sure you do not get any water or shampoo in your eye. Avoid unhygienic environments and swimming for at least two weeks. If you want to swim thereafter, wear goggles or keep your eye out of the water for a month after surgery.

Do not clean the eye itself with tissues or towels etc. You may however remove any debris from the eyelid with a clean piece of gauze/cotton wool with sterile or cold, previously boiled water as described earlier.

Always wipe the closed eyelids from the nose side outwards towards the side of your face.

Make-up near the eyes should be avoided for the first two weeks after your operation.

You can bend down to pick things up after surgery, but you should avoid lifting heavy weights or strenuous activity for at least two weeks. You should also avoid dusty environments, contact sports, and swimming during this period. Mr. Neffendorf does however encourage you to undertake gentle activity such as walking as soon after the operation as you wish.

You should not drive home from the hospital after your operation and always leave with your escort. However, after a few days following surgery, you can drive when you feel ready to, but only if you are able to read a car number plate at 20 metres with or without glasses.

In most cases, patients wait one week before recommencing driving. In some cases, Mr. Neffendorf will explain that you must not drive until your vision has been reassessed formally to ensure it meets the DVLA standards.

Most people tend to return to their normal daily activities a few days after surgery. For those who work, Mr. Neffendorf recommends approximately one week off work, and will have discussed this with you. You may read or watch television as comfort allows.

There are no restrictions with regards to flying in an airplane after Cataract surgery. Mr. Neffendorf does however recommend all patients to stay in the UK for at least one week following their operation, just in case there are any post-operative problems which need attending to.

### **Follow-up appointment**

A follow-up, post-operation appointment will be arranged for you to be seen approximately 1 to 4 weeks after surgery.

Once you have finished your eye drops, you will need to see your optician for new glasses. Mr. Neffendorf will explain what would be the best timing for this.

### **What if I have a problem?**

**If you experience any of the following;**

- **significant or worsening eye pain**
- **nausea and vomiting**
- **a painful red eye**
- **sudden loss of vision**

**Please contact Mr. Neffendorf (on his mobile which has been provided to you) or his team without delay on 0204 600 8699.**

**If for any reason you are concerned and you are unable to contact Mr. Neffendorf or his team, you should attend a walk-in Emergency Eye Clinic as a matter of urgency.**



**Most major UK cities have an Eye Casualty department in one of their hospitals.**

**In London, these are available at Moorfields Eye Hospital and the Western Eye Hospital. There is also a 24 hour NHS ophthalmology emergency service (via the main A&E department) available at King's College Hospital or St. Thomas' Hospital.**

**Questions regarding any of this leaflet**

If you have any questions regarding the contents of this leaflet, or indeed any other issue regarding your eyes, please do not hesitate to contact Mr. Neffendorf or his team.