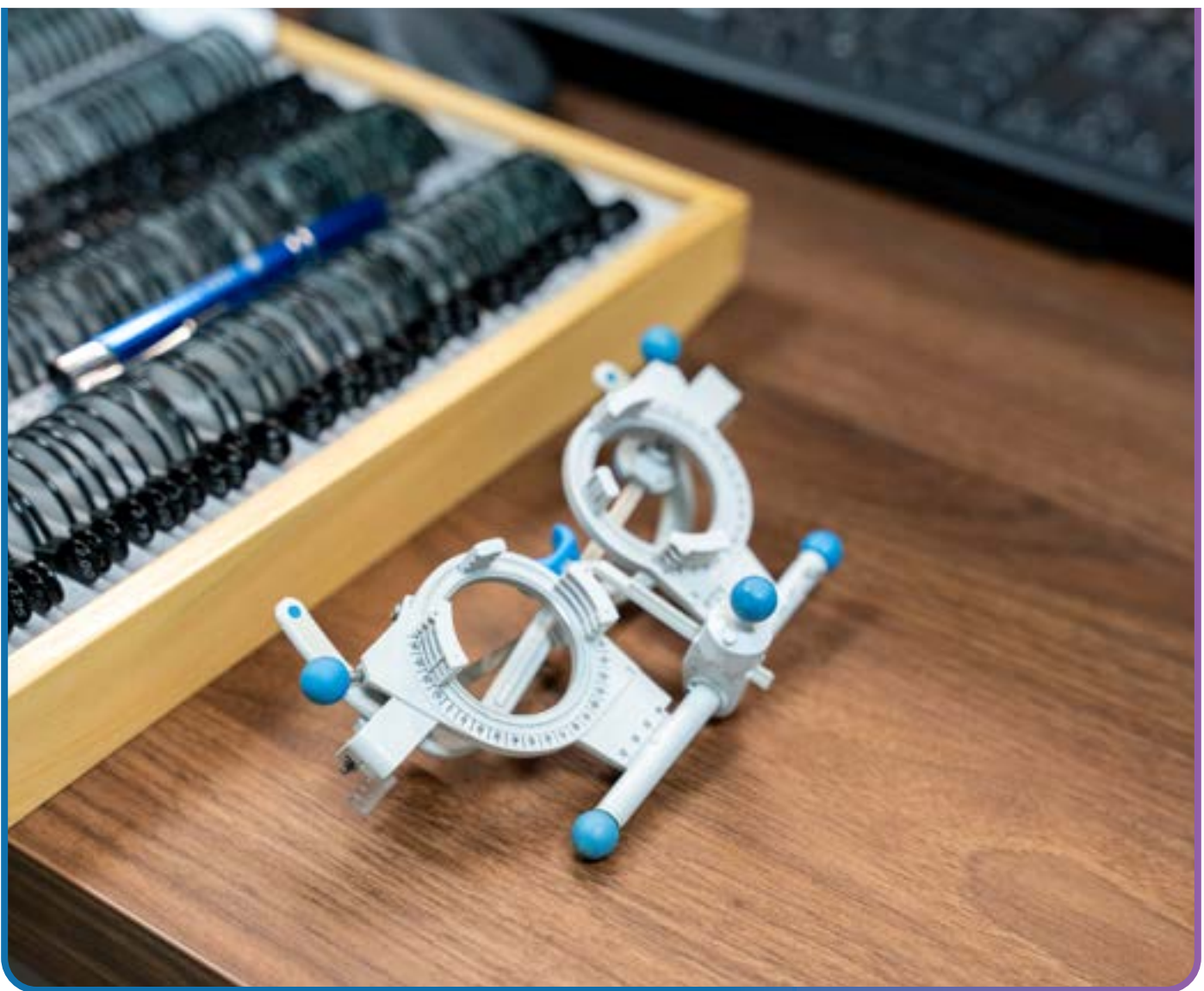




# **Clear Vision, Endless Possibilities.**

[lasereyecentre.co.nz](http://lasereyecentre.co.nz)

0800 733 2020



## Our History

If you are considering laser eye surgery, it is likely you will be having LASIK – the most popular form of refractive surgery. LASIK has improved the sight of over 30 million people globally since it was first approved in the 1990's and due to its success, it continues to be one of the most frequently performed elective surgeries in the world.

Dr Jose Barraquer, as far back as the late 1940's, proposed that refractive errors could be corrected by modifying the shape of the cornea. He is known as the Father of Refractive Surgery because of his work and innovation in the field. Back in the late 1990's our Hamilton clinic started when

Dr Doug Cox introduced the treatment & technology to the central North Island after appreciating at an early stage how effective, safe, and reliable laser vision correction with PRK and LASIK would be.

From these small beginnings, our state-of-the-art technology, and theatres in Hamilton & Tauranga have been performing laser eye surgeries and bringing peoples vision into focus.





# Why Laser Eye Surgery?

When our patients are asked about their motivation for laser correction, the most common response is that they find glasses and contact lenses inconvenient in their daily lives and are looking for a more lasting solution for vision correction.

Using the latest technologies, our extensive experience, and our utmost care, we can work with you to help restore your vision and provide freedom from these inconveniences.

**“The biggest difference I notice is when you wake up in the morning, you can actually see.”**

*– Kelly, Whakatāne*

# Our Technology

We work closely with Carl Zeiss Meditec, a global market leader in laser vision correction technology. They offer decades of experience within the refractive surgery field and produce state-of-the-art equipment to help examine and improve your vision. Their femtosecond and excimer lasers are some of the most sophisticated, safe, and technologically advanced laser refractive systems available and we are proud to offer this technology to our patients.

In our laser surgery theatres, we have the powerful combination of VisuMax femtosecond and MEL90 excimer lasers, which allows us to choose the best possible laser vision correction option to restore your vision.



# What procedure is right for me?

The goal of laser eye surgery is to reduce or eliminate refractive errors; near-sightedness (myopia), long-sightedness (hyperopia), and astigmatism, so you can rely less on glasses and contact lenses.

There are several types of laser eye surgery techniques to help with your unique vision needs – **LASIK, LASIK Blended Vision, SMILE® and PRK.**

Each technique has its own unique characteristics and considerations, but they all share the same purpose of improving vision through reshaping of the cornea.

We understand that choosing between these options can be confusing. Through a series of investigations and eye examinations, we will help guide you towards the best vision correction treatment for your individual needs and lifestyle.





# LASIK

**LASIK (laser in-situ keratomileusis)**, since its conception in the 1990s, is the most common laser eye surgery procedure undertaken both here in New Zealand and worldwide. **It is used to correct near-sightedness, long-sightedness, and astigmatism.**

We utilise two state-of-the-art lasers for this procedure: the Zeiss VisuMax femtosecond laser and the Zeiss Mel90 excimer laser, both renowned worldwide for

their precision, safety, and gentle treatment techniques.

During the LASIK process, the eye is first anaesthetised with special drops before the VisuMax laser creates a thin, circular corneal flap. The surgeon then gently folds back the created flap allowing the Mel90 to re-shape the corneal tissue underneath, correcting the refractive error. Finally, the flap is smoothed down in the correct position offering a quick recovery.



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must watch video!



# LASIK BLENDED VISION

**LASIK Blended Vision is used to treat Presbyopia, a natural aging process in the eye that results in a gradual blurring of the near vision.**

The onset of presbyopia often begins around the age of 45yrs. This is due to a stiffening of the normally elastic and flexible lens in the eye as a person ages, making it harder to adjust and focus the vision when switching between distant and near vision.

The surgical process is similar to LASIK, however with LASIK Blended Vision the dominant eye is corrected for distance and the non-dominant eye corrected for near range tasks.



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# SMILE®

**SMILE® (Small Incision Lenticule Extraction)**, is the latest advancement in corrective laser eye surgery. It is a minimally invasive, flapless procedure that can be **used to correct near-sightedness and moderate amounts of astigmatism**.

SMILE utilises the accuracy and precision of the VisuMax femtosecond laser to create a lens shaped piece of tissue in the middle of the cornea, specific to the patients' vision correction needs, which is then removed by the surgeon via a keyhole technique.



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# PRK

**PRK (Photorefractive Keratectomy)**, was the first laser eye surgery method, invented in the late 1980s, and continues to be **an option for people with thinner corneas, mild near-sightedness, long-sightedness and astigmatism.**

In this procedure a thin surface layer of the cornea (epithelium) is removed, followed by a short treatment with the excimer laser to correct the refractive error. A protective bandage lens is placed over the eye until the epithelium grows back, usually within a few days.



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# How do I prepare for my procedure?

So, you have decided to go ahead with laser eye surgery, you have asked all the questions, and have your date booked in for your procedure – what's next?

**On the day of surgery, you will need to keep the entire day free.** Please make sure you have cancelled any other appointments you have for the day.

**This is important for the following reasons:**

- Being as relaxed and focused as possible to give you the best chance to heal and minimise any possible complications.
- To help you to reduce the strain on your eyes from screen time – phones & computers.
- **You will be allocated a time\*** for your pre-surgery consent and then on the day, after seeing the surgeon, you will be allocated time for your actual surgery based around the requirements of the specific procedure you will be having.

**\*Please Note:** that due to the nature of surgery and individual patient needs, these times may be subject to change. Our friendly staff will keep you updated if this is the case.

It is important, that in advance, **you arrange for a friend or family member to be your driver** on the day of your surgery. If you are having LASIK, LASIK Presbyond or SMILE®, you will also need a driver for your first post-operative appointment the following morning between 8.00am & 8.30am, as you are legally required to have your eyes tested before driving.



To assist with a fast recovery and minimise any complications, please ensure that you have someone to stay with you for the first night. If you have children, please have someone organised to pick them up from school and to take care of them for the first night as you will need to rest with your eyes closed as much as possible.

If you wear soft contact lenses, remove these 48hrs prior to the day of your procedure. If you wear hard contact lenses, **you must remove your lenses for 4–6 weeks prior to consultation and surgery.** Every case is different – if you are unsure, please confirm with our staff.

We recommend that you stop wearing eye makeup 1-2 days beforehand to ensure that your eyelashes are free from debris.

It is important to drink more water in the days leading up to your eye surgery to promote sufficient healing after the procedure and hydrate the eyes from the inside.

**Ensure you have seen the video and are mentally prepared for the day.**

**Remember:** it is normal and common to feel nervous and anxious. The most important thing is to make sure you share how you are feeling with us so we can help you through the process and put your mind at ease.







# The Morning of Surgery

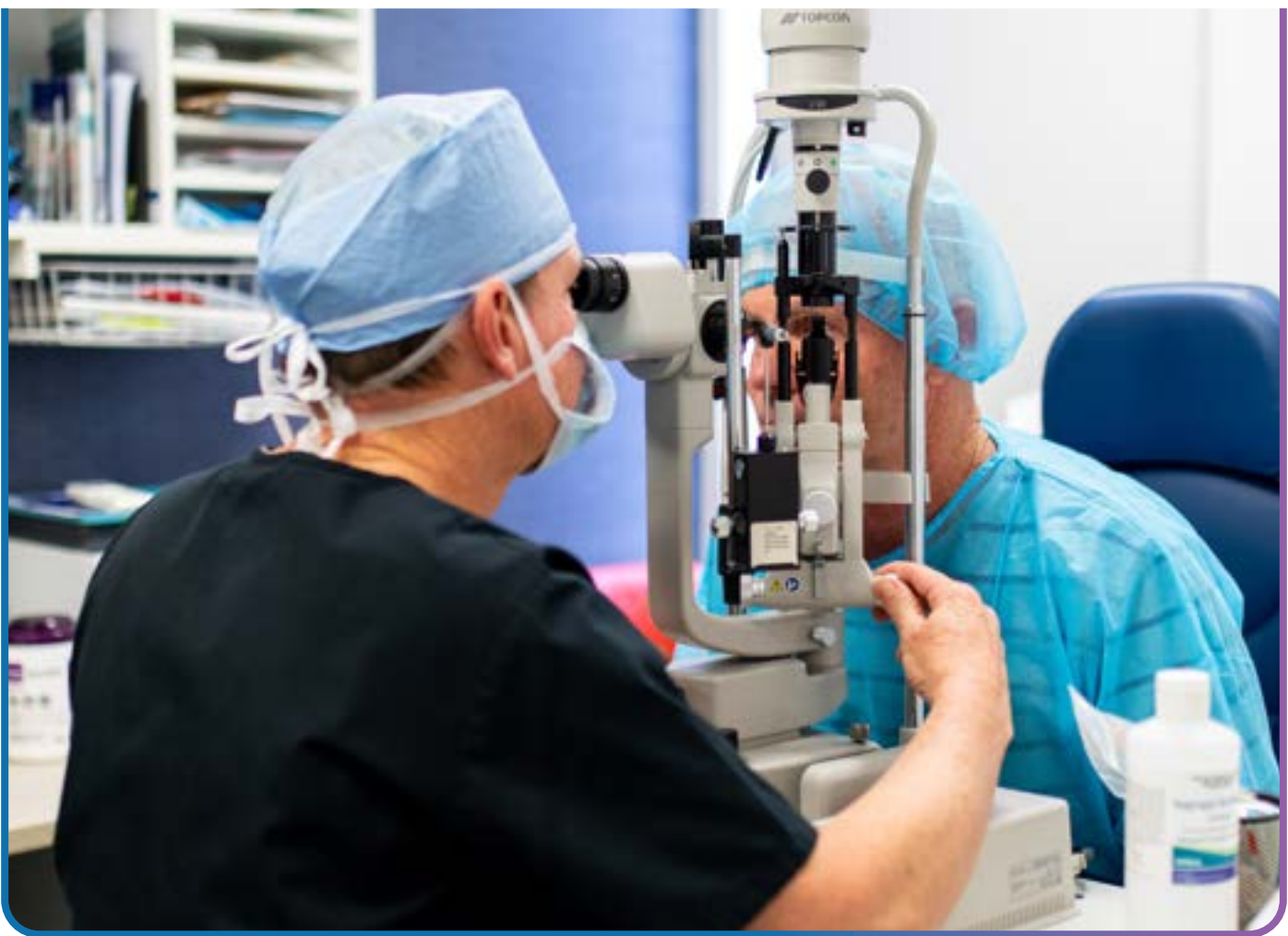
## Checklist:

This is your day to be focused on your surgery and immediately after surgery you will be required to rest.

We do highly recommend that you organise someone to stay with you after your surgery.

You will also need to arrange transport for surgery day and your first post-op appointment.

- ☐ Check you have cancelled everything off your to-do list.
- ☐ Ensure work is aware you are unavailable for the next 24 to 48 hours, longer for PRK procedures. Medical certificates are available if required.
- ☐ If applicable, organise someone to help with your children's schedule for the day (pick-ups, drop-offs, evening meals etc).
- ☐ Make sure you have had breakfast.
- ☐ Wear comfortable clothing and bring a warm jersey, cardigan, or jacket.
- ☐ To help prevent infection after your laser eye surgery, remove all traces of makeup on your entire face.
- ☐ Do not wear perfume, cologne, aftershave, hairspray, or hair gel as fragrances can interfere with the laser.



## Meeting The Surgeon:

Your morning appointment time will be to see the surgeon, who will do a final pre-op eye check.

The surgeon will discuss the risks and benefits of laser surgery, what to expect before/after surgery, and answer any questions you may have or want clarified. They will talk you through everything you need to know about your surgery.

If you have any allergies, please advise your surgeon.

## Taking a break between meeting the surgeon & surgery:

After your morning appointment with the surgeon, you will most likely have time to go for a light lunch break (which we strongly recommend that you do) and return in the afternoon for the next step.

At this point, you will need to have someone to accompany you and take you home after your procedure, as your vision will not be safe for driving.

30 minutes before your procedure, you will arrive back at the clinic.

Expect to be in the clinic for up to 2 hours.

# Surgery Pre-Op

Prior to your surgical procedure, a friendly staff member will take you into our Pre-Op room. If you have any allergies, please confirm them again. If you are feeling nervous or anxious, this is time to discuss possible sedation.

You will be offered paracetamol to assist with any discomfort that may occur after surgery. Your individual aftercare plan will be discussed including your medications and their instructions.

The final step involves preparing your eyes. The outer eye will be wiped with an iodine swab to disinfect and remove any possible contaminants. Eye drops will be added – anti-inflammatory, antibiotic and anaesthetic. The anaesthetic may sting a little but works rapidly to numb the entire surface of the eye.



## Theatre

Our theatre technician will greet you before assisting you into theatre.

On entering the theatre, you will see two state-of-the-art laser machines with a rotating bed between them. The technician will help get you settled and comfortable on the bed before moving you under the laser machine.

The surgeon will add more anaesthetic drops ensuring your eye is numb, before applying a very gentle spring-loaded device to your eyelids to hold them open; you may feel some pressure, which is normal. You will not feel the need to blink, as the eye is numb. The eye not being operated on will be taped shut.

The type of laser treatment used will depend on your individual procedure:



## For LASIK or LASIK Blended Vision

LASIK or LASIK Blended Vision involves the use of both the ZEISS VisuMax femtosecond laser and the ZEISS Mel 90 excimer laser. Both steps are painless and highly effective, so there is no need to feel worried. Our friendly and experienced team are there with you to help you through the procedure.

The first half of the process involves creating the flap using the femtosecond laser. The overall process takes only minutes and at this point, we ask you to keep as relaxed and still as you can – you are in safe hands.

The surgeon will guide you to look steadily into the centre of the ring of light and when in the correct position, the laser machine will create a gentle suction to hold the eye still. The actual laser takes only 10–18 seconds to create the flap before removing its suction. It does not hurt, and your surgeon will guide you through every step of the way.

The second half of the process involves the bed being rotated to the excimer laser. Again, the surgeon will guide you through the process. On initiation of the laser there will be a small puff of air, followed with flashing lights and a 'buzzing' sound as the reshaping to correct the refractive error occurs. You may also notice a strange smell like burning hair, please stay relaxed and continue to look steadily ahead. You will not feel anything, and it will be done in a matter of seconds.

Your surgeon will then smooth the flap back to its original position before applying eye drops. **The process is complete!**

## For SMILE®

The SMILE® procedure is fully completed under the one laser machine – the femtosecond laser. It is a precise, painless procedure so there is no need to feel nervous, and our experienced team are right there to help you through the process.

As with LASIK, the surgeon will guide you to look steadily into the centre of the ring of light and when in the correct position, the laser machine will create a gentle suction to hold the eye still. The laser process takes approximately 25 seconds to create a disc-shaped piece of corneal tissue and a small incision. This process will not be painful so try and relax through it, holding your eye steady.

Over the next few minutes, the surgeon will then use keyhole techniques to remove the excess tissue before applying eye drops to complete the procedure.

## For PRK

PRK is a fast, painless procedure. Once you are settled and your eye is numb, the surgeon will place an alcohol-soaked sponge on your eye to soften the top microscopic layer (epithelium) before gently polishing the surface.

The cornea is then precisely reshaped using the excimer laser. On initiation of the laser, there will be a small puff of air followed with flashing lights and a 'zapping' sound. You will not feel anything, and it will only last a few seconds. You may notice a strange smell similar to burning hair, please stay relaxed and continue to look steadily ahead. This is all a normal part of the process, and the surgeon is there to guide you.

Once the laser is completed, medicated drops are added, and a protective lens placed over the eye to help it heal.

# Recovery

## Immediately after surgery:

After the procedure is finished, you will be taken to the aftercare room, where the surgeon will check your eyes and you can rest before heading home.

## Recovery at home:

One of the most important aspects of recovery is to go straight home or to your accommodation to minimise any complications. Do not go to the supermarket, pick up the kids or grab a takeaway coffee – please get yourself into bed for a good sleep and start the natural healing process.

Please be totally free of all work requirements for the next 24hrs and do not use your smartphone/computer/laptop/tablet, as electronic devices strain and dry out your eyes.

Once the anesthetic wears off, your eyes may feel gritty and irritated for a few hours – this is why it is important to rest and sleep.

Immediately after the surgery, you will be able to see, but your vision is likely to be blurry. This is normal due to the procedure itself and the protective shields or bandages that are placed over the eyes.

In the hours following the surgery, many patients report a gradual improvement in vision, but it is common for vision to fluctuate.

The healing process begins immediately after the surgery. The corneal tissue starts to heal, and the eye begins to adjust to its new shape.

As with all surgeries, the body's immediate response is inflammatory swelling. Your cornea could swell slightly, which may cause your eyesight to seem a little foggy or blurry in the few hours after surgery. This fades over time. In most cases, the swelling will subside, and any blurriness will disappear after 24 hours. However, this does mean that you cannot legally drive in the 24 hours after your surgery. Make sure you have organised private transport (avoid public transport) or have a family member or friend to help you get home.



# The First Post-Op

For LASIK, LASIK Blended Vision, or SMILE procedures, you will be required to be back at the clinic at 8.00am the day after your surgery. You will need to be driven as you are legally required to have your eyes tested before driving yourself.

During this appointment, your vision will be tested, and your eyes checked to ensure everything is on track.

For PRK procedures, your first post-op appointment will be 3 days after your surgery. You will need to be driven as you are legally required to have your eyes tested before driving yourself.



## When Can I Return to Work?

If you have had LASIK, LASIK Blended Vision, or SMILE, you are generally able to return to work 2 to 3 days after your surgery. However, please keep in mind that everyone's recovery is different, therefore it can take longer.

If you have had PRK, it is likely you will need a longer period off work, with most people returning after 5 to 7 days. Generally, you may feel able to go back to work before this time, but there are special precautions that need to be taken to ensure a smooth and steady recovery after your surgery.





## Follow-Up Care

Depending on the specific procedure and your body's own healing process, you may see immediate improvement to your vision or vision will become clearer over the coming days and weeks.

For the first 3 days, please rest, avoid stress, drink plenty of water to assist in avoiding dry eye, and limit your screen time (computers and smartphones). Give your eyes the best chance to heal.

The less visual pressure placed on your eyes, the faster your healing will be, and the chances of complications are reduced. Wearing sunglasses during this initial recovery period will be helpful, as they can shield the eyes from injury and harmful UV

rays. Your eyes are also likely to be sensitive to bright lights during the first few weeks.

The final results will depend on your initial refractive error and other factors. People with a low degree of near-sightedness tend to have immediate success with refractive surgery. People with a high degree of near-sightedness, long-sightedness or astigmatism can have slightly less

predictable results. In rare cases, the surgery might result in under or overcorrection. In these instances, a laser top up may be required once healing is complete.

**It is important to attend all your follow-up appointments as scheduled.** These appointments will allow us to monitor your progress and make any necessary adjustments to your treatment plan.





# FAQ

You may have a few questions at this point.

We are in the privileged position of being able to bring your world into focus. But while we do this every day, we never forget that it is your first time – we know you may have questions!

**Here are some we commonly get asked:**

## Is there an age limit for laser eye treatment?

- Most people, with healthy eyes, over the age of 20yrs can receive elective eye treatment.
- There are exceptions. For example, as a necessary step in a chosen career path such as first responders (police, paramedics, and firefighters). In these instances, surgery may be possible from age 18.

## Am I too old to have LASIK?

- Although there is no real 'maximum age' for laser eye surgery, we will need to determine that the overall health of your eyes is good and that your vision difficulties are not being caused by cataracts or another eye disease.

## What tests are done before LASIK?

- Several precise tests will be done to determine if you are a suitable candidate for laser eye surgery. We will look at your corneal shape, the thickness of your cornea and the health of your cornea. We will also accurately measure your refraction.

## Will surgery hurt?

- This is a common and understandable fear however, this quick and safe surgical treatment is carried out only when anaesthetic drops have been applied and your eyes are numb. The laser is not like the laser you see in sci-fi movies! Our lasers work by breaking carbon bonds in the cornea to remove tiny amounts of tissue from the eye. That is not to say that you will not feel anything during the procedure. You may at times feel some pressure and movement on the eye, but it won't be painful. The surgery process is very quick – around 20 to 30 minutes for both eyes

– and most patients leave telling us that it was much easier than expected!

- Some people experience some mild irritation in the days following their surgery, but this can be easily managed and passes quickly.

## Can both eyes be done at the same time?

- Yes, both eyes can be treated on the same day.

## Am I awake during surgery?

- Many patients are anxious about being awake and aware during laser eye surgery however, your eyes will be numbed, and the majority of our patients do well in theatre without the use of sedation.
- Being awake during your surgery does not put you at any additional risk. In fact, it removes the risks and side effects that commonly accompany general anaesthetics such as nausea, vomiting and dizziness. General anaesthetics can also have more serious side effects and are not used for low-risk procedures such as refractive surgery.

## How long does it take?

- The surgery will take about 20 to 30min for both eyes. In fact, most patients are surprised at how fast laser vision correction can be.
- In most cases, the time it takes to treat one eye is around the same time it takes to make a cup of tea! Your surgeon will keep you informed throughout the entire process.



## Will it make me blind?

- This is not an uncommon fear but while there is technically an exceedingly small risk of blindness, the real chance of it happening is almost non-existent. This outcome would require a series of exceedingly rare complications to occur all at once.

## What happens if I want to sneeze, cough, or have an itch during surgery?

- This is one of the benefits of being awake through the procedure – just let the surgeon know.

## What happens if I blink?

- In order to keep the eyelids open, a small device is used to hold your eyelids, so you will not have to worry about blinking. The anaesthetic drops used will suppress this urge.

## How long will the treatment last?

- Laser eye surgery corrects the vision misfocus that you have at the time of surgery. It is theoretically permanent and is designed to provide long-lasting results.
- Some individuals, however, may experience changes in their vision due to factors such as age, prescription stability, health of the cornea and individual variability. Changes in vision over time can usually be further corrected with laser top ups or other vision correction methods.
- What we do expect, is for you to have many years of good-quality vision following your laser procedure.

## When can I go back to work?

- LASIK, LASIK Presbyond & SMILE: 2 to 3 days after surgery, however everyone's recovery is different and, in some cases, may be a little longer.
- PRK: 5 to 7 days after surgery, depending on your healing rate.

## What limitations are there straight after surgery?

- Avoid eye makeup, gardening, and dusty, dirty environments for one week.

## When can I return to the gym, sports, go running or swimming?

- Running and the gym: 1 week after surgery.
- Swimming: 2 weeks after surgery.
- Hot tubs and saunas: 2 weeks after surgery.
- Contact sports such as rugby, rugby league, netball, and football: 4 weeks after surgery.
- Remember to keep taking your prescribed eye drops throughout this time.

## Do you offer financing?

- We have a range of affordable finance options to suit all requirements. From Gem Visa to Q Mastercard, we have options of interest-free packages and long-term financing available.

## Do I still need a regular eye examination once I have had laser surgery?

- Yes! The eye test is a vital health check for your eyes and can detect signs of sight-threatening eye disease before you notice any problems.
- Even if your vision is great and your eyes feel good, you should still have an eye examination every two years, or more often if advised.
- Regular eye examinations are a requirement for laser top up procedures.

## What happens if my vision is not quite right?

- If your vision is not quite up to standard it is safe to do so, we offer a laser top up procedure as part of our personalised treatment.
- A laser touch-up procedure is performed to fine-tune any remaining refractive error after healing is complete from the original vision correction surgery. A laser top up procedure is performed after the cornea is healed – generally 1-6 months after the original surgery. While any laser top up procedures may further improve your vision, it also involves potential risks and complications, and you may not be eligible if you do not meet the safety requirements.

## Can't find your question above?

Always remember: no matter what the question is, we encourage you to ask. It is important to us that you have peace of mind that laser vision correction is right for you. Our specialised team is here to work with you every step of the way along this amazing journey to bringing your world into focus.

# Risks & Possible Complications:

Data shows that laser eye surgery is an incredibly safe procedure however, just like any surgical procedure, it does come with some risk of complications.

The vast majority of people who have laser eye surgery performed, obtain an excellent result that lives up to their expectations for the procedure. However, we cannot ignore that for some people, the outcome of their surgery may be less than expected.

In order to have realistic expectations as to what you can reasonably expect from laser eye surgery, you must be aware of the risks.

## Complications of LASIK surgery include:

- **Dry eyes:** LASIK surgery causes a temporary decrease in tear production. For the first six months or so after your surgery, your eyes may feel unusually dry as they heal. Dry eyes can reduce the quality of your vision. Some people are more prone to dry eyes, and this will be discussed in your assessments leading up to surgery.
- **Glare and halos:** Following surgery, you might notice increased light sensitivity, glare, halos around bright lights or double vision. You may have difficulty seeing at night after surgery. This can last a few days to a few weeks.
- **Under-correction and Overcorrection:** Every eye is different and in some cases the eye may over or under respond to a particular amount of laser treatment resulting in vision that may not be what you were hoping for. This is more likely with bigger corrections and long-sighted patients. In a lot of cases, laser top up procedures can be performed to get the required vision correction.
- **Flap problems:** LASIK and LASIK Blended Vision both involve the creation of a flap which is then smoothed back into place after treatment. While the surface of the eye heals quickly, care must be taken to avoid displacement after surgery. You will be informed on how best to manage this. If displacement of the flap occurs, prompt repositioning by the surgeon is required.
- Occasionally, epithelial ingrowth can occur where skin cells from the surface of the eye grow underneath the flap. While not common, this is more likely to occur after subsequent treatments. In many cases, these cells can be left alone without causing issues, however if intervention is required, the LASIK flap may need to be lifted to allow removal of the cells.
- **Double vision:** This may occur if there is a pre-existing squint or difficulty

in balancing the eyes. Occasionally "double vision or a ghost image" may be perceived.

- **Astigmatism:** In rare cases, astigmatism can develop after surgery. It may require a laser touch-up procedure, glasses or contact lenses.
- **Regression:** Regression is when your vision slowly changes back toward your original prescription and may be corrected with a laser touch-up procedure.
- **Infection:** Whilst the most serious complication following laser eye surgery, it is very uncommon. Every effort is made to reduce the risk of an infection following refractive surgery. All instruments are thoroughly sterilised before use. Antibiotic eye drops are used both during and after the laser surgery.
- **Vision changes or loss:** In exceedingly rare situations, some people may experience a loss in quality of vision due to surgical complications. If this occurs, it may be possible to improve vision with further laser surgery, or it may be necessary to wear glasses or contacts to achieve satisfactory vision.
- **Ectasia:** This is a rare but serious complication which can occur after having laser eye surgery and involves a weakening of the cornea. Precise and thorough suitability testing with our modern technologies enables a much higher chance of detecting unsuitable corneas for laser eye surgery.

We understand that the list of complications can be unnerving however, the vast majority of our laser eye surgery patients attain excellent postoperative vision without significant complications. We are here to talk you through any concerns you may have.

### To reduce the risk of complications we recommend:

- Undertaking a thorough examination to ensure your eyes are suited to surgery.
- Follow all post-operative instructions.
- Ensuring all eye drops are used as directed.

Our surgeons are highly experienced in the refractive surgery field and have seen many many lives improved through laser eye surgery. You can be assured that you are in safe hands.







LASER EYE CENTRE

# Minimum Down-Time, Maximum Results.

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