BoydVision

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Welcome to BoydVision! We understand that laser vision correction is a very personal and important decision to you and your family. Any surgical procedure that improves a person's vision will have potential side effects. In addition to our no-cost full consultation, we would also like to provide you this important information to ensure that you are well informed before making any decision. Please understand the following information and have all your questions clarified before proceeding. Our surgeon and BoydVision staff will be always happy and prepared to assist you with your questions.

GENERAL INFORMATION:

Candidacy

These are guidelines only and should not take the place of a discussion with your eye care provider and/or Boyd Vision Centre. Everybody has individual goals, questions and expectations and these should be discussed before deciding if laser eye surgery is right for you. Previous history of eye surgery does not necessarily disqualify you as a candidate for laser eye surgery, but must be considered on an individual basis. Dr. Boyd will discuss your unique situation with respect to eye surgery treatment with you.

Eligibility

We will consider people between the ages of 19 and 65 with no significant change in their glasses or contact lens prescriptions in the past year. A consultation (eye exam) must be completed before eligibility can be confirmed. There are various conditions that may interfere with the healing or cause complications from the surgery. These include, but are not limited to: Uncontrolled diabetes; certain drugs/medications (especially those used for autoimmune diseases); degenerative conditions of the eye; severe dry eye; active eye infection or inflammation; previous viral infections of the eye; rheumatoid conditions; pacemakers. Pregnant or nursing mothers need to be aware of potential problems with medications used before, during and after the surgery.

Age

Individuals should be over the age of 19 for laser vision correction. While there is no upper age restriction, a thorough eye examination will be conducted to ensure there are no contraindications to surgery.

Stability

Ideally, one's refractive error will be stable for two years before considering laser eye Surgery. Small changes in prescription are acceptable. For those having laser eye surgery for vocational purposes (planning to begin a career in law enforcement, firefighting. etc.), surgery may be done before stability is attained.

Health

Many auto-immune diseases can affect the outcome of any surgery, including laser eye surgery. If you have an active auto-immune disorder, you may be advised to avoid any elective surgery. Any other health conditions that affect healing may also exclude you from having laser eye surgery. If you are seeing a doctor for any disease or illness, contact our office to determine your candidacy.

Expectations

It is possible that people are disappointed with the result of their laser eye surgery. In most cases, this is related to having expectations that were too high before the surgery. While laser technology is very precise, the one aspect nobody has control over is how an eye will respond to the treatment. The vast majority of people's eyes will react in a very similar manner and will achieve good results. Ultimately, one should decide to proceed with surgery with the expectation that they will be functional without glasses or contact lenses, but that perfection may not be achieved (although that is the intended result). Laser eye surgery is not expected to improve

vision beyond what glasses and contact lenses are capable of. If you suffer from an eye disease that inhibits your vision, having refractive surgery will likely not improve how you see beyond what glasses can do for you.

REFRACTIVE ERRORS:

When the eye does not focus images properly on the retina, a refractive error is present. The most common refractive errors are myopia (known as nearsightedness), hyperopia (farsightedness), and astigmatism.

Myopia (nearsightedness)

An eye that is able to see nearby objects clearly (e.g., reading) is myopic, or nearsighted. The eye's focusing power is too strong for its size. Minus-powered glasses or contact lenses can be used to defocus light entering the eye to adjust for the eye's extra power. Laser eye surgery will alter the shape of the cornea to decrease the eye's focusing power.

Hyperopia (farsightedness)

Hyperopia results from an eye that does not have enough focusing power for its size. Farsighted eyes may see clearly in a person's younger years, but will eventually require glasses for both distance AND near. This is not to be confused with presbyopia that results in blurred near vision when the distance vision is clear. Plus powered glasses or contact lenses are used to augment the eye's focusing power. Laser eye surgery can be done to increase the eye's own focusing power to reduce or eliminate the need for glasses.

Astigmatism

When light coming into the eye forms more than one focus point, astigmatism is present. Most eyes have some element of astigmatism, with or without nearsightedness or farsightedness. It is only when it reaches a visually significant amount that people become aware of it. Glasses with cylindrical lenses, or toric contact lenses, can be used to bring the focus points to a single point. Laser eye surgery can be used to reshape the cornea to a spherical shape, possibly in addition to treatment for myopia or hyperopia.

Presbyopia

Around the age of 45, most eyes begin to have difficulties in changing focus from the distance to up close. Those that have never worn glasses before will begin to wear reading glasses. People who already wear glasses will typically wear bifocals or ‘progressive’ lenses (no-line bifocals). Individuals who are mild or moderately nearsighted may choose to remove their glasses to see up close. It is important to understand that as long as the distance vision is clear (whether this is achieved with glasses / contact lenses, or by having laser eye surgery), near vision will eventually become blurry around the age of 45 years. People who have been able to remove their glasses to see detail up close will no longer have glasses to remove if the distance vision in both eyes is clear, and thus will need to wear reading glasses.

LASER EYE SURGERY

Laser refractive surgery can be divided into two main categories: LASIK (laser insitu keratomileusis) and PRK (photorefractive keratectomy). Both use the laser in the same manner, but the initial aspects of the procedure are different between the two surgeries. Either procedure can be used to correct refractive errors such as nearsightedness, farsightedness, or astigmatism.

Also, a wavefront-guided treatment can be done utilizing either PRK or LASIK. This adds a customized element to the procedure. Doing a wavefront-guided surgery allows the laser to apply a treatment that eliminates mild distortion in the vision that glasses or a normal treatment is able to achieve. This is similar to buying a tailor made garment compared to off-the-rack clothing.

Laser eye surgery to reduce or eliminate refractive errors is considered an elective procedure. Nobody requires LASIK or PRK. Results cannot be guaranteed to provide the same or better vision than one's present glasses or contact lenses, even though the vast majority of patients are very happy with the results. As with any surgery, there are some risks and side-effects to be considered (see below).

PRK (photorefractive keratectomy)

PRK is often referred to as a "surface treatment" because there is no flap (as in LASIK) to expose inner layers of the cornea. In PRK, the outermost layer of the cornea (called epithelium) is painlessly removed. The laser is then applied to thecornea to create a new shape and alter the eye's focus. The epithelium will regenerate itself in a few days. During the initial recovery period, it is not unusual to be sensitive to light and have discomfort in the eye (mild to intense). Until the epithelium has regenerated, a soft bandage contact lens is left on the eye to aid in the comfort and recovery.

LASIK (laser in-situ keratomileusis)

This form of laser eye surgery begins with the creation of a thin corneal flap, made with sophisticated instruments such as a microkeratome. The flap is gently lifted and the laser is used to reshape the exposed cornea. The amount of reshaping is determined by the degree of refractive error measured prior to surgery. After the laser treatment has been completed, the flap is replaced to its original position. Natural forces of the eye will keep the flap in position. Within a few hours, the outer layer of the cornea will seal the flap into position and improve vision considerably. Some mild swelling is normal, and may cause a slight haze to vision for the first couple of days after surgery.

RISKS AND SIDE EFFECTS:

As with any surgical procedure, there are risks and side-effects that may occur during or after the surgery.

Halos / Starbursts

Most people see a starburst around lights at night, even before surgery. However, this may become more prominent after surgery, especially during the first couple of months. While

technology has improved over the years, it is still possible to have optical effects such as halos and starbursts permanently. This is more likely to occur in eyes that have a large amount of nearsightedness or farsightedness, and/or large pupils in dim light.

Dry Eyes

Dryness of the eyes is a common side-effect after laser eye surgery. Many people who choose to undergo laser eye surgery already have dry eyes that prevent them from comfortably wearing contact lenses. This can be more noticeable for a period of time after surgery, lasting a few months, or longer in some cases. Possible solutions include lubricating eye drops and/or 'punctal plugs' (tiny silicone plugs that are inserted into the drainage canal in the eyelid).

Under-correction or Over-correction

The laser is a very precise instrument. However, some variability in the amount of correction obtained can occur for a couple of reasons. (1) The tissue in any given eye may not react the same to the laser compared to the average eye. (2) Healing of the eye may be different than the average eye. Regardless of the cause, it is possible to do additional treatment(s) to modify the initial result. The surgeon will make the final decision whether additional treatments are recommended.

Increased Light Sensitivity

Sensitivity to light varies. During the initial healing (first day for LASIK, or first few days for PRK), it is not unusual to experience extreme sensitivity to light. Afterwards, some people experience a mild to moderate increased sensitivity to light for the first few months. In some cases, the sensitivity to light never returns to the level it was before surgery.

Equipment Failure

The sophisticated equipment, such as the microkeratome (for creating the corneal flap during LASIK) and the excimer laser, are maintained and cared for in accordance to the manufacturer's recommendations. As with any mechanical device, it is still possible for a malfunction to occur. This may result in an incomplete procedure being performed. At the surgeon's discretion, the procedure may be completed at a later date.

Corneal Ectasia

There is a minimum amount of tissue required to maintain the structural integrity of the cornea. This amount seems to vary from person to person. If too much corneal tissue is removed during laser eye surgery, especially LASIK, it is possible that the cornea can begin to bulge forward. If this occurs, the cornea usually develops an irregular shape and some loss of vision may occur. In severe cases, a corneal transplant may be required to restore vision.

Inflammation or Infection

Whenever the protective surface of the body is impaired, there is a potential for infection or an inflammatory response. Antibiotic and anti-inflammatory drops are used for a period of time following the surgery in an effort to prevent infection and inflammation. Despite this, some eyes may still become infected or inflamed. In the case of infection, different eye drops may be prescribed. In rare cases, a scar may develop and remain permanently. Depending on how close the scar is to the centre of the cornea, vision may or may not be affected. In LASIK, inflammation can develop underneath the flap. If drops do not resolve this, the surgeon may

elect to relift the flap and remove the inflammatory cells if they do not respond to topical or oral steroid medications.

Epithelial In-growth

The epithelium is the outermost layer of the cornea. Following LASIK, it is possible for some of these cells to migrate underneath the edge of the flap. In some cases, the surgeon may need to lift the flap and remove the cells.

Vascular Occlusion

During the surgery, a small suction ring is applied to the eye creating an increased pressure inside the eye. In rare cases (approximately 1:1,000,000) there may be permanent blockage of a blood vessel inside the eye and may cause loss of vision.

Excessive Corneal Haze

In the very early days of laser vision correction (more than 15 years ago), corneal scarring sometimes occurred after PRK. This rarely happens anymore with the use of MMC (MitomycinC), which is a medication to prevent fibrosis/scarring.

INFORMED CONSENT:

Please be sure that all your questions have been answered before signing the consent form. If you have questions, you may ask your optometrist, a member of our professional staff, or Dr. Boyd. The consent form will be given to you prior to the day of the procedure to give you ample time to read it.

We also have the Patient Consent Form posted on our website for you to review if you prefer to read the information before your visit.

POST-OPERATIVE ASSESSMENTS:

You will be required to have eye exams at predetermined intervals following the surgery.
The regular schedules for follow-up visits are:

PRK – Day 4, Day 10-14, 1 month, 3 month, 6 month, 12 month.
LASIK – Day 1, 1 week, 1 month, 3 month, 6 month, 12month.

When these examinations are done at BoydVision, there is no additional charge. If you live too far from BoydVision to return, you may see an optometrist close to home (they will charge you a fee for this service). These examinations are essential to confirm the eye has recovered well from surgery.

Click here to Book a Free Consultation Today!