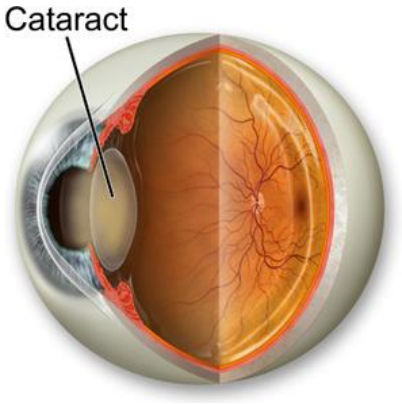
COASTAL EYE CARE

Patient Information Sheet
Cataract Surgery and/or Implantation of an Intraocular Lens

This information is given to you so that you can prepare for the discussion with your eye surgeon. This document will help you understand the risks of cataract surgery. It will also help you decide the type of replacement lens you want. Eyeglasses or contact lenses are usually required for best vision after cataract surgery.

WHAT IS A CATARACT?

The lens in the eye can become cloudy and hard, a condition known as a cataract. Cataracts can develop from normal aging, from an eye injury, or if you have taken medications known as steroids. **Cataracts may cause blurred vision, dulled vision, sensitivity to light and glare, and/or ghost images.** If the cataract changes vision so much that it interferes with your daily life, the cataract may need to be removed. **Surgery is the only way to remove a cataract.** You can decide not to have the cataract removed. If you don't have the surgery, your vision loss from the cataract will continue to get worse.



HOW WILL REMOVING THE CATARACT AFFECT MY VISION?

The goal of cataract surgery is to correct the decreased vision that was caused by the cataract. During the surgery, the ophthalmologist *(eye surgeon)* removes the cataract and puts in a new artificial lens called an intraocular lens or IOL. The IOL will be left in the eye permanently. **Coastal Eye Care offers many IOLs to customize your cataract surgery as a way to decrease dependency on glasses,** the addition of refractive services *can* lead to out of pocket expenses not covered by insurance. Your physician will let you know if you are a candidate for this type of surgery. **Cataract surgery will not correct other causes of decreased vision, such as glaucoma, diabetes, or age-related macular degeneration.** Most people still need to wear glasses or contact lens after cataract surgery for either near and/or distance vision and astigmatism.

EXAMINATIONS PRIOR TO SURGERY

You will undergo a complete eye examination by your surgeon. This may include an examination to determine your eyeglass prescription *(refraction),* measurement of your vision with and without glasses *(visual acuity),* measurement of the pressures inside your eye *(tonometry),* microscopic examination of the front part of your eye *(slit-lamp examination),* and examination of the retina of your eye with your pupils dilated. If you decide to proceed with surgery, there are further tests that will be needed including measurement of the curvature of your cornea (keratometry), ultrasonic measurement of the length of your eye (axial length), intraocular lens calculation (biometry) to determine the best estimate of the proper power of the implanted IOL.

NEED TO STOP WEARING CONTACT LENSES PRIOR TO SURGERY

If you wear contact lenses, you must **stop wearing both soft and rigid (including gas permeable and standard hard) contacts prior to your appointment with the Doctor. Stop wearing RIGID contacts 3 weeks prior and stop wearing SOFT 1 week prior to your appointment.** This is done because the contact lens rests on the cornea and distorts its shape, which can affect the accuracy of the doctor's measurements of the IOL power. When you stop wearing your contact lenses, the corneas can return to their natural shape**.** If you wear rigid contacts, your vision will usually vary for a while as your corneas change shape. Although the cornea usually returns to its natural state within three weeks, this process may take longer, and you will need to remain contact lens free until your vision and cornea stabilize.

MORE INFORMATION ABOUT MEASURING YOUR IOL

While the method used to calculate the power of the IOL is very accurate in most patients, the final result may be different from what you and your surgeon planned. As the eye heals, the IOL can shift very slightly toward the front or the back of the eye. The amount of this shift is not the same in everyone, and it may cause different vision than predicted. If the eye's visual power after surgery is considerably different than what was planned, surgical replacement of the IOL might be considered. It is usually possible to replace the IOL and improve the situation. **Patients who are highly nearsighted or highly farsighted have the greatest risk of differences between planned and actual outcomes. Patients who have had LASIK or other refractive surgeries are especially difficult to measure precisely.** To increase the accuracy of our desired outcome, we will recommend the use of ORA. **ORA utilizes intraoperative wavefront aberrometry, which helps us choose the best possible IOL for your eye.** ORA also helps determine the best selection and alignment for Astigmatism correcting Toric IOLs and Multifolcal IOLs.

PRESBYOPIA AND ALTERNATIVES FOR NEAR VISION AFTER SURGERY

Patients who have cataracts have, or will eventually develop presbyopia, which is a condition caused by aging that develops when your eye loses its ability to shift from distance to near vision. Presbyopia is the reason that reading glasses become necessary, typically after age 40, even for people who have always had excellent distance and near vision without glasses. Presbyopic individuals require bifocals or separate (different prescription) reading glasses in order to see clearly at close range. **There are several options available to you to achieve distance and near vision after cataract surgery.** This is probably the most important decision you need to make about your cataract surgery, so please take the time to review your options and ask questions.

- **GLASSES:** You can choose to have a monofocal (single focus) IOL implanted for distance vision and wear separate reading glasses, or have the IOL implanted for near vision and wear separate glasses for distance.
- **MONOVISION:** The ophthalmologist could implant IOLs with two different powers, one for near vision in one eye, and one for distance vision in the other eye. This combination of a distance eye and a reading eye is called monovision. It can allow you to read without glasses. Many patients who wear contacts or who have had refractive surgery have monovision and are happy with it. Your surgeon will discuss and demonstrate this option to see if it might work for you. *However, unless you have previous experience with monovision contact lenses, your surgeon will probably not recommend this option.*
- **MULTIFOCAL IOL:** The ophthalmologist could implant a "multifocal" IOL. This is a newer, "premium" type of IOL that provides distance vision AND restores some or all of your eye's ability to focus at other ranges,

such as near or intermediate. **Choosing this option will usually lead to higher out-of-pocket expenses since most insurance companies only pay for a monofocal (single focus) lens. However, if this option is of interest to you and you are determined to be an optimal candidate by the Doctor, there are payment plans available to overcome the financial barriers in making this choice.**

INFORMATION ABOUT TREATING ASTIGMATISM

Patients with nearsightedness and farsightedness often also have astigmatism**. An astigmatism is caused by an irregularly shaped cornea; instead of being round like a basketball, the cornea is shaped like a football. This change in shape can make your vision blurry.** There are several treatment options for astigmatism: **1)** you can have an IOL for near or distance vision and continue to wear glasses or contact lens for the astigmatism; **2)** you can have a Toric IOL placed in your eye, **3)** you can have refractive surgery called LASIK or PRK, or **4)** your surgeon can perform a procedure before, during, or after cataract surgery called a limbal relaxing incision. A limbal relaxing incision *(LRI)* is a pair of small, precise incisions the ophthalmologist makes into your cornea to make its shape rounder. Enhancement incisions may be required in order to achieve optimal results.

ANESTHESIA

The ophthalmologist and the nurse anesthetist will anesthetize your eye with topical anesthesia. You may also undergo light sedation administered by a nurse anesthetist, or elect to have the surgery with topical anesthesia only. The risks associated with anesthesia and sedation are addressed under the Risks of Cataract Surgery section of this packet and will be discussed with you individually by your ophthalmologist and nurse anesthetist.

PROCEDURE

An incision, or opening, is made in the eye. This is at times self-sealing but it may require closure with very fine stitches which will gradually dissolve over time. **The natural lens in your eye will then be removed.** There are several ways to remove the lens; the most common technique is called phacoemulsification, which uses a vibrating probe to break the lens up into small pieces. These pieces are gently suctioned out of your eye through a small, hollow tube inserted through a small incision into your eye. **After your natural lens is removed, the IOL is placed inside your eye**. *In rare cases, it may not be possible to implant the IOL you have chosen or any IOL at all.*

POSTOPERATIVE CARE

Your eye will need to be examined after surgery by your surgeon or an eye doctor chosen by your surgeon, and then at intervals determined by your surgeon. During the immediate recovery period, you will place drops in your eyes for 2 to 4 weeks. If you have chosen monovision or a multifocal IOL to reduce your dependency on glasses or contacts, they may still be required either for further improvement in your distance vision, reading vision, or both. **You should be able to resume your normal activities within 2 or 3 days, and your eye will usually be stable within 1 to 3 weeks,** at which time glasses or contact lenses could be prescribed.

RISKS OF CATARACT SURGERY / OTHER FACTORS THAT AFFECT VISUAL OUTCOMES

All operations and procedures are risky and can result in unsuccessful results, complications, injury, or even death, from both known and unknown causes. The major risks of cataract surgery with implantation of an IOL include, but are not limited to:

1. Mild discomfort. Cataract surgery is usually quite comfortable. Mild discomfort for the first 24 hours is typical, but severe pain is extremely unusual and should be reported immediately to the surgeon.

2. Complications of removing the natural lens may include bleeding; rupture of the capsule that supports the IOL; perforation of the eye; clouding of the normally clear outer layer of the eye called the cornea, which can be corrected with a corneal transplant; swelling in the central area of the retina, which usually improves with time; retained pieces of lens in the eye, which may need to be removed surgically; infection; detachment of the retina after cataract surgery, which is an increased risk for highly nearsighted patients, but which can usually be repaired; uncomfortable or painful eye; droopy eyelid; increased astigmatism; glaucoma; double vision; and exacerbation of Dry Eye Syndrome. These and other complications may occur whether or not an IOL is implanted and may result in poor vision, total loss of vision, or even loss of the eye in rare situations. **Additional surgery may be required to treat these complications. The cost for this additional surgery is not included in the price you pay for the cataract surgery.**

3. Complications associated with the IOL may include increased halos, double or ghost images, and dislocation of the IOL. Multifocal have a slightly higher rate of halos or ghost images, so you should think carefully about how these problems might affect your job, your hobbies, and your daily life. In rare instances, corrective lenses or surgical replacement of the IOL may be necessary for adequate visual function following cataract surgery.

4. Complications associated with limbal relaxing incisions include damage to the cornea, infection, and fluctuating vision while the incision heals. They can also lead to under- and over-correction; if this occurs, another procedure and/or glasses or contact lenses may be required.

5. Risks associated with anesthesia. The type of anesthesia used in our surgery center is very safe, but it does involve a small element of risk. Complications, while extremely rare, include aspiration, dental injury, heart rhythm changes, heart attack, stroke and death. More common complications, while still rare, include headache, nausea, adverse drug reactions, injections site trauma or infection.

6. If a monofocal (single focus) IOL is implanted, either distance or reading glasses or contacts will be needed after cataract surgery for adequate vision.

7. Monovision may result in problems with impaired depth perception. Choosing the wrong eye for distance correction may result in feeling that things are the "wrong way around." Once surgery is performed, it is not always possible to undo what has done, or to reverse the distance and near eye without some loss of visual quality.

8. Multifocal (multiple focus) IOLs may reduce dependency on glasses but might also result in a decrease in contrast sensitivity, which may be more noticeable in dim light or fog. Some patients may notice some visual side effects such as rings or circles around lights at night. It may be difficult to distinguish an object from a dark background, which will be more noticeable in areas with less light. The symptoms may be noticed most when driving at night. If you drive a lot at night, or perform delicate, detailed, "up-close" work requiring closer focus than just reading, a monofocal lens in conjunction with eyeglasses may be a better choice for you. If complications occur at the time of surgery, a monofocal IOL may need to be implanted instead of a multifocal IOL. If you chose a multifocal IOL, it is possible that not all of the near (and intermediate) focusing ability of your eye will be restored, which may require mild reading glasses in certain circumstances. If an unexpected refractive outcome occurs, additional treatment and/or surgery may be necessary to correct this.

9. If complications occur at the time of surgery, the doctor may decide not to implant an IOL in your eye even though you may have given prior permission to do so.

10. Other factors may affect the visual outcome of cataract surgery, including other eye diseases such as glaucoma, diabetic retinopathy, age-related macular degeneration; Dry Eye Syndrome; the power of the IOL; your individual healing ability; and, if certain IOLs are implanted, the function of the ciliary (focusing) muscles in your eyes.

11. Your doctor will use special equipment and computer formulas to select the best IOL for you, but the result may be different than what was planned. You may need to wear glasses or contact lenses after surgery to obtain your best vision. Additional

surgeries such as IOL exchange, placement of an additional IOL, or refractive laser surgery may be needed if you are not satisfied with your vision after cataract surgery.

12. Rarely, the IOL implanted in your eye may have to be repositioned, removed surgically, or exchanged for another IOL.

13. If your ophthalmologist has informed you that you have a high degree of farsightedness (hyperopia) and/or that the axial length of your eye is short, your risk for a complication known as nanophthalmic choroidal effusion is increased. This complication could result in difficulties completing the surgery and implanting a lens, or even loss of the eye.

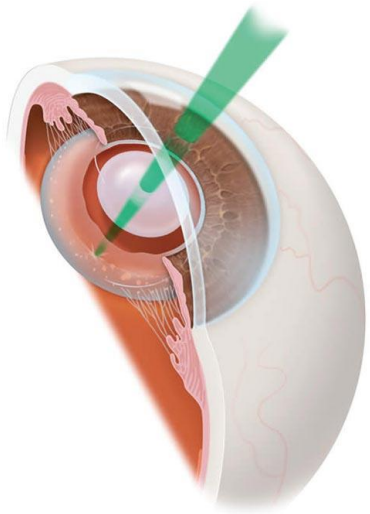
14. If your ophthalmologist has informed you that you have a high degree of nearsightedness (myopia) and/or that the axial length of your eye is long, your risk for a complication called a retinal detachment is increased after cataract surgery. Retinal detachments can usually be repaired but may lead to vision loss or blindness depending on their degree, extent and time of diagnosis.

15. Since only one eye will undergo surgery at a time, you may experience a period of imbalance between the two eyes *(anisometropia).* This usually cannot be corrected with eyeglasses because of the marked difference in the prescriptions, so you will either temporarily have to wear a contact lens in the non-operated eye or will function with only one clear eye for distance vision. In the absence of complications, surgery in the second eye can usually be accomplished within 1 week.

16. There is no guarantee that cataract surgery will improve your vision. As a result of rare complications of the surgery and/or anesthesia, it is possible that your vision could be made worse. In some cases, complications may occur weeks, months or even years later. These and other complications may result in poor vision, total loss of vision, or even loss of the eye in rare situations. You may need additional treatment or surgery to treat these complications. This additional treatment is not included in the fee for this procedure.

AFTER CATARACT SURGERY

Regardless of the type of IOL chosen, you may need laser surgery (a YAG capsulotomy) to correct clouding of the capsule that holds the intraocular lens in place. This occurs in up to 1 in 5 patients after cataract surgery and is easily correctable with the laser.



After your cataract surgery the back membrane of the cataract which is left in place to support the lens implant may become cloudy and cause blurred vision. Sometimes patients will see streaks or halos around lights.

In the past, a trip back to the operating room was necessary. Fortunately, a modern YAG laser treatment can be performed without a need for an anesthetic injection or a small cut. **The laser utilizes a narrow wavelength of light to disrupt the opacification on the lens capsule. There is no pain, no interruption in physical activities and no patch is required after the laser treatment.**