

UNDERSTANDING THE RESTOR PRESBYOPIA CORRECTION

Surgical Information Package



CHRISTENBURY EYE CENTER

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What is Presbyopia and what is the cause?

Everyone's near vision decreases after age 40. By their early to mid-forties, most people notice their reading becomes more difficult, even when books or newspapers are held at arm's length, and have to wear reading glasses or bifocals to see clearly up close. This age-related near vision loss is known as Presbyopia.

In the past, it was believed that Presbyopia occurred due to a loss of flexibility in the eye's lens that occurred naturally with age. Lens flexibility is important because the lens must change shape to properly focus on objects at different distances. When the lens becomes less supple, it is more difficult for the eye to focus on near objects. Newer research indicates that, as the lens of the eye continues to grow over the years, it does lose flexibility, and a loosening of the bond between the lens and the muscles that control its shape may be an additional cause of Presbyopia. In any case, the loss of accommodation occurs.

What are the symptoms of Presbyopia?

When people develop Presbyopia, they find they need to hold books, magazines, newspapers, menus and other reading materials further away in order to focus and read. When they perform near work, such as embroidery or handwriting, they may have headaches or eyestrain, or feel fatigued. As Presbyopia worsens, it becomes nearly impossible to read without magnification. By the early 50's even the intermediate vision, such as computer distance, become blurred and a trifocal or progressive bifocal may be required. If a patient also has farsightedness (Hyperopia), then the symptoms of Presbyopia may appear worse than expected for their age. If a person is nearsighted (Myopia) sometimes they can remove their glasses or contacts and read better, but may have to hold things very close.

How is Presbyopia diagnosed?

To diagnose Presbyopia, a thorough comprehensive eye examination is performed by your eye care professional. Visual acuity is measured with and without best correction (spectacle). Pupil dilation allows the lens and retina to be fully evaluated to determine the health of the eye. Tonometry is performed to test the eye pressure. During the comprehensive exam your doctor will be looking for other eye diseases that often occur in the same age group of patients who develop Presbyopia- cataracts, glaucoma, macular degeneration, diabetic retinopathy, and circulatory problems of the optic nerve and retina. The diagnosis, extent, and treatment of these eye diseases may influence the outcome or potential vision after even successful Presbyopia surgery.

Special testing includes Keratometry and Axial Length measurements. Keratometry measures the curvature or power of your cornea surface. Axial length measures the focusing length of the eye from the cornea surface to the retina surface. Both of these measurements are used to estimate the power the IOL (intra-ocular lens) which may be placed at the time of the lens replacement procedure. (There is a 3-5% inaccuracy rate in

even the most precise measurements and calculations) Retinal photographs, optic nerve photo analysis, or visual field testing may be performed to rule out or diagnose the extent of other eye diseases.

How is Presbyopia Treated?

Eyeglasses like bifocals (whether segmented or progressive) are the most common correction for Presbyopia. Bifocal means two points of focus: the upper part of the spectacle lens contains a prescription for distance vision, while the lower portion of the lens holds the “reading add” for close or near vision.

Progressive addition lenses are similar to bifocal lenses, but they offer a more gradual visual transition between the two prescriptions, with no visible lines between them. One benefit of the progressive lens is that it can provide an intermediate power between the distance and near add for computer work.

Reading glasses are another common choice. Unlike bifocal, which most people wear all day, reading glasses are typically worn just during close work or for reading. If you wear contact lenses, your eye doctor can prescribe reading glasses that you wear while your contacts are in. You may purchase readers over-the-counter at a retail store, or you can get higher-quality versions prescribed by your doctor.

There are contact lenses for Presbyopes, called multifocal contact lenses. You can obtain multifocal contact lenses in gas permeable or soft lens materials. Another type of contact lens correction for Presbyopia is Monovision, in which one eye wears a distance prescription, and the other wears a prescription for near vision. The brain learns to favor one eye or the other for different tasks. But while some people are delighted with this solution, others complain of dizziness or nausea, or miss the depth perception they once had.

Because the human lens continues to change as you grow older, your Presbyopia prescription will increase over time as well. You can expect your eye care practitioner to prescribe a stronger correction for near work as you need it.

Until recently, these were the only options available to correct Presbyopia. Now, there are several FDA approved surgical treatment options available, including Conductive Keratoplasty (CK), an Accommodative IOL called the Crystalens, Multi-focal IOL’s like the Array and Rezoom lens, and Apodized IOL’s like the ReSTOR IOL from Alcon.

The ReSTOR IOL Presbyopia Correction

Since the crystalline lens is the structure of the eye that loses its flexibility and its ability to focus or accommodate, it is logical that this where a surgical correction must be employed to correct Presbyopia. In reality, the clinical correction of Presbyopia is more successful when the aging lens is replaced with a multi-focal intra-ocular lens implant (IOL). This procedure is called “lensectomy”, and in our experience and from the FDA clinical trials of various lens implants, the Alcon ReSTOR IOL provides the best result for most patients. Best, meaning more patients are free of glasses for reading, and are satisfied with their results. ReSTOR not only corrects reading vision, but also distance vision, so most patients do not require LASIK for distance vision after ReSTOR. Once the near vision is surgically corrected with ReSTOR, Presbyopia symptoms do not recur. Some patients notice they may have to sit little closer to the computer or use a lap top for best computer-distance vision. Intermediate vision continues to improve over several months after your procedure.

After the ReSTOR procedure, patients reported the following results without glasses or contacts:

- 99% can drive a car
- 97% read a newspaper
- 90% shave or put on makeup
- 90% read a business card phone number
- 80% never wear glasses for any activity
- 74% can read a stock quote in the Wall Street Journal

Dr. Christenbury has been implanting the ReSTOR IOL since May of 2005 and has since performed more than any other surgeon in the U.S. In Dr. Christenbury’s experience, almost no one wears reading glasses after the ReSTOR procedure, and he has noticed both the distance vision and near vision to be excellent, and the intermediate vision to be very good. As compared to Presbyopia, which requires one to push reading material away from the eye, the ReSTOR procedure allows one to hold things closer and read. This youthful vision correction is often noticed by the next day – patients are usually able to read the newspaper within a day or two after the procedure. Many patients can read the fine print of a drug insert within a week of the ReSTOR procedure. The vision result gives simultaneous distance and near vision, with no need to tilt one’s head to bring things into focus. Some patients notice they prefer to use a laptop computer compared to a desktop computer due to the improved near vision, or may just move the desktop computer closer or sit closer to the computer. Patients who cannot change the working distance at their computer, or use a similar distance for painting, piano, or organ may use a low power reading glass for these individual activities. Some patients will notice glare or halos around lights at night or the first month or two, but generally this subsides by 3-6 months. A few percent of patients may notice persistent glare or halos, but in our experience, not severely enough to prevent driving. Currently we perform the ReSTOR procedure one eye at a time, a day or so apart. Most patients will notice a temporary visual disturbance or feeling of visual imbalance between the eyes until the second eye is corrected. Wearing a distance contact lens in the second eye or a blank spectacle lens over the first eye may help with this temporary imbalance. The results are the best when *both eyes are corrected* with ReSTOR. ReSTOR can correct Presbyopia for near vision, as well as myopia

(nearsightedness), hyperopia (farsightedness) for distance vision. Currently ReSTOR does not correct significant astigmatism. If significant corneal astigmatism is present (1 Diopter or more), or if there is a mild under or over correction, one can have a follow-up IntraLASIK™ procedure at 3-6 months to fine tune vision. At the time of evaluation we can generally tell each patient their potential need for a touch up IntraLASIK™ procedure.

Acrysof ReSTOR Apodized Diffractive IOL

What is it? The Acrysof® ReSTOR® apodized diffractive IOL is an artificial lens designed to be implanted in the eye to restore vision after either a lensectomy or cataract surgery. The ReSTOR has two optics, one for distance (refractive) and one for near (diffractive). The IOL is convex on both sides, like the natural crystalline lens it replaces. It is made of a soft acrylic plastic polymer that is folded prior to insertion, which gently unfolds in the eye after insertion to center in position inside the eye. The supporting haptics (loops or arms) hold the optic in place when placed within or in front of the capsular bag. Intra-ocular lenses are not new, they have been used in eye surgery for more than 30 years, and Dr. Christenbury has used lens implants for more than 20 years. The Acrysof lens implant material is the most inert and advanced material for IOLs, and Dr. Christenbury has used the Acrysof IOL for many years prior to it being available with the ReSTOR design.

How does it work? The Acrysof ReSTOR IOL is intended to be positioned behind the pupil in the posterior chamber of the eye, replacing the natural crystalline lens, either within the capsular bag, or in front of the capsular bag. The ReSTOR IOL has a patented optic design that uses a combination of three complimentary optics technologies: *apodization*, *diffraction*, and *refraction*, which provides the ability to focus light correctly on the retina for images at various distances.

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- *Apodization* – the gradual reduction or blending of the diffractive step heights of the near optic. This helps eliminate interference between distance and near images.
 - *Diffractive* optic – placed on the front surface of the IOL, 3.5 mm in diameter, provide 3 Diopters of near reading vision.
 - *Refractive* optic – The entire 6.0 mm optic provides distance vision focus, and the power of the optic is tailored to the dimensions of each patient's eye.
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Modern Lensectomy (Lens Replacement) Surgery

More than 1.5 million lens replacement surgeries are performed in the U.S. every year. More than 98% of patients have improved vision following modern lens replacement surgery at Christenbury Eye Center. Lens replacement surgery is among the safest and most effective of all surgeries performed today. Since the advent of modern lens replacement surgery in the 1970s utilizing IOL (intra-ocular lens), continual innovations allow surgeons to offer the most advanced treatment on an outpatient basis with rapid vision recovery, quick return to normal activities, and improved quality of life.

In your parents' or grandparents' day, lens replacement surgery was considered risky, required a lengthy hospital stay and was usually postponed for as long as possible. Today, lens replacement surgery is performed on an out-patient basis and takes only a few minutes. Patients can then go home and rest in comfort without the expense or inconvenience of a hospital stay.

Small Incision, Clear Cornea Lensectomy Surgery

Modern microscopic Lensectomy surgery involves use of topical anesthetic drops and a clear cornea incision that is self-sealing and in most cases requires no stitches. The crystalline lens is removed with an advanced technique called phacoemulsification, in which the lens is broken up into small pieces by an ultrasound tip and then aspirated (removed). (Laser is never used to remove a crystalline lens). Phacoemulsification allows the lens to be removed through a very small incision, typically 2-3 mm wide. A foldable intra-ocular lens is then implanted through the same small incision. The surgery usually takes less than 10 minutes and is performed on an outpatient basis with mild intravenous sedation. The surgery is generally painless and patients go home with a clear plastic shield over the eye and use drops for a few weeks.

Intra-Ocular Lens Implant (IOL)

In most cases an IOL will be inserted once the crystalline lens is removed. The material of the IOL used by Christenbury Eye Center is the most advanced available- an acrylic plastic that is inert, the most bio-compatible available (Acrysof by Alcon). If the correct power is chosen for the lensectomy surgery, the patient post-operatively will be less dependent on distance spectacles if there is no corneal astigmatism. We do our utmost to obtain this for every patient with careful biometry - measurement of the cornea curvature (K reading) and axial length (Ascan or IOL Master reading).

If a patient is more dependent on distance spectacle correction than desired after lens replacement or cataract surgery (due to residual nearsightedness, farsightedness, or astigmatism), IntraLasik™ laser vision correction can be considered 3 - 6 months following surgery at a modest additional fee.

Complications and side effects of Lens Replacement Surgery

Lens replacement surgery is one of the most frequently performed surgeries and one of the most successful. Although complications are rare, they can occur. The following is not a complete list, but are the complications that are most reported. There may be complications not yet known or so rare they are not listed. The most serious complication of any surgery, loss of life, is related to anesthesia, drug reactions, and general health risk. Fortunately, cataract surgery is performed in most cases either with topical or local anesthesia and the least amount of intravenous sedation necessary. The next rarest ocular complications are blindness/loss of eye/infection/hemorrhage, the incidence of which may be 1:50,000 to 1:100,000 patients. Other complications related to eye health, difficulty in removing the cataract, and response to healing include but are not limited to: loss of corneal clarity, inflammation, iris damage or change in pupil size/shape, fragment of the lens retained, glaucoma, mal-position of the lens implant, vitreous loss, retinal detachment, cystoid macular edema (type of swelling of the retina, 1-3% which generally resolves with time), ocular irritation, dryness. The ability to see normally, or 20/20, may not be obtained if degeneration of the retina (age related macular degeneration) or circulatory problems of the retina or optic nerve are present. These problems may exist prior to lens replacement surgery and may be difficult to diagnose pre-operatively. The more common side effects of lens replacement are refractive error (nearsightedness, farsightedness, astigmatism) which are correctable with contact lens or spectacle correction. An imbalance or double vision can occur if there is a large difference between the spectacle correction between the eyes post-operatively, or if a pre-existing or acquired ocular muscle disorder is present. Occasionally, the IOL power is not optimal (3-5%), an undesirable amount of refractive error occurs, and an actual intra-ocular lens removal and replacement (IOL exchange) is necessary. This IOL exchange surgery is generally less complicated than the initial surgery, since no cataract/crystalline lens is being removed, only an IOL is replaced, but it has similar risks, and would require an additional surgery and return to the operating room some weeks or months after the initial cataract surgery. Rarely an eyelid appears more droopy after lens replacement - it will either spontaneously improve or need eyelid repair surgery. Most patients require a spectacle lens change 1-4 weeks after surgery, and some may again 3-6 months later. Any complication related to lens replacement surgery may require further or multiple additional surgeries.

If you have had previous corneal or refractive surgery such as PRK or LASIK, there may be some inaccuracy in measuring the cornea power (K Reading), which is necessary to accurately calculate the lens implant power for IOL surgery. This means there is a slightly higher risk of under / over-correction (residual nearsightedness or farsightedness) from your IOL surgery and a possible need for future LASIK or PRK enhancement. If you provide the appropriate pre-operative RK or LASIK measurements, we can usually be about as accurate calculating the IOL power as for those patients who have not had prior cornea surgery.

Finally, in 15 to 20% of patients, a haziness or opacification can occur of a clear membrane left that acts as a platform for positioning the lens implant. This opacification can occur immediately after IOL surgery, or more likely, weeks, months or even years later, and is treated with a simple in-office laser treatment called a YAG laser capsulotomy, which restores vision.

Lens Replacement Surgery and Lensectomy

The two structures that focus light in the eye are the cornea and the lens. Either of these tissues can be treated to alter the focus of the eye. The cornea is altered with refractive surgery (LASIK). When a patient has an early lens change (not quite a visually incapacitating cataract, but disqualifies the patient for refractive surgery) or has no lens change but not a candidate for LASIK, due to the high correction needed or for other reasons, a Lensectomy is performed with intra-ocular lens implant for refractive reasons. The procedure, risks, and side effects are essentially the same as cataract or other IOL surgery. In general, the surgery with lensectomy is simpler since a clear soft lens is being removed rather than a cloudy hard cataractous lens. With standard IOL or cataract surgery, patients would need reading glasses for near work. If, however, you are receiving a ReSTOR IOL, the goal for these implants will be to provide most patients with adequate reading vision and good distance vision, as well as everything in between. In patients having longer or shorter eyes than normal, the risk of IOL replacement/exchange is slightly higher than the normal 3-5%. Occasionally, especially with a highly myopic patient, a lensectomy is performed without an IOL because the post-operative refractive state can then be more accurately measured, and an IOL is inserted in a separate surgery. In general, the increased risks associated with lensectomy compared to standard LASIK would be all the risks associated with intra-ocular surgery, and the risk of inaccuracy of the IOL calculation.

Preparing for Surgery, the Day of Surgery, and Postoperative Care

How to Prepare

For females, remove all makeup the night before surgery, and wear no make-up or moisturizer the day of surgery. All patients should bathe the night before and wash the face the morning of surgery. Generally, patients should not eat or drink anything after midnight the night before surgery. Depending on your age and health you may require blood tests, or we may require a copy of your last history and physical from your medical doctor or require you see your medical doctor before surgery. The surgery scheduler will discuss these items with you and clarify all pre-operative instructions for your procedure. You will receive pre-operative drops to use for several days prior to surgery and the morning of surgery to assist in preventing infection and inflammation. You will be given instructions to use a commercially available lid scrub pad twice a day for several days before surgery. Finally, you will be instructed to use a pupil dilation drop (red cap) the morning of surgery.

Day of Surgery

On the day of surgery, prior to arriving at the surgery center, remember to use your dilating drops (red cap) which are/were given to you by the surgery scheduler on the day you scheduled your procedure. You will be instructed on the time to arrive at the Surgery Center / Clinic Surgery Suite, and it is important that you be on time. If you are unsure how long it will take you to travel, leave earlier than you expect to take. Bring all the Medications you normally take with you in a plastic bag (Ziploc etc). If you take high blood pressure medications or medication for heart disease in the morning, you may take

them at the usual time with only a sip of water, enough to swallow the pills. You should plan on will spending 3 to 4 hours at the Surgery Center, or Clinic Surgery Suite, while the actual surgery itself may only take 10 minutes or so. You may be given an I.V. with mild sedation medication in the Surgery Center, or an intra-muscular injection in the Clinic Surgery Suite to make you relaxed and comfortable. After the surgery, you will be observed for a short period of time to ensure that you have tolerated the procedure well and then discharged with a clear plastic shield over the eye and post-operative instructions on activity, medications, and how to care for your eyes. You will be discharged to the family member/friend with you. We ask you wear the clear plastic shield continuously for the first 24 hours, then at night or while sleeping for one week. You may lift the shield to instill medication drops. You can generally resume normal activity 24-48 hours later.

What to Report

Please call the main number 704-332-9365, if you have pain that is not relieved with the drops or with 2 Extra Strength Tylenol, or if after the first day visit you notice decreasing vision, increasing pain, discharge, increasing redness or marked vision change.

Your Follow-Up Visits

We require a one-day and one week follow up visit at the Christenbury Eye Center. Please be sure that you can attend these important post-operative visits when you schedule your surgery. We generally also plan a visit 1-3 months after the surgery as well. It is very important you schedule a yearly, dilated eye exam if you have had IOL surgery.

VISION PATTERN POSTOPERATIVELY

With ReSTOR, the near vision is very good often in the first day or two. The distance vision improves those first few days and weeks, and the intermediate vision continues to improve for a number of months after the procedure. The best vision improvement generally occurs soon after the second eye ReSTOR is performed.

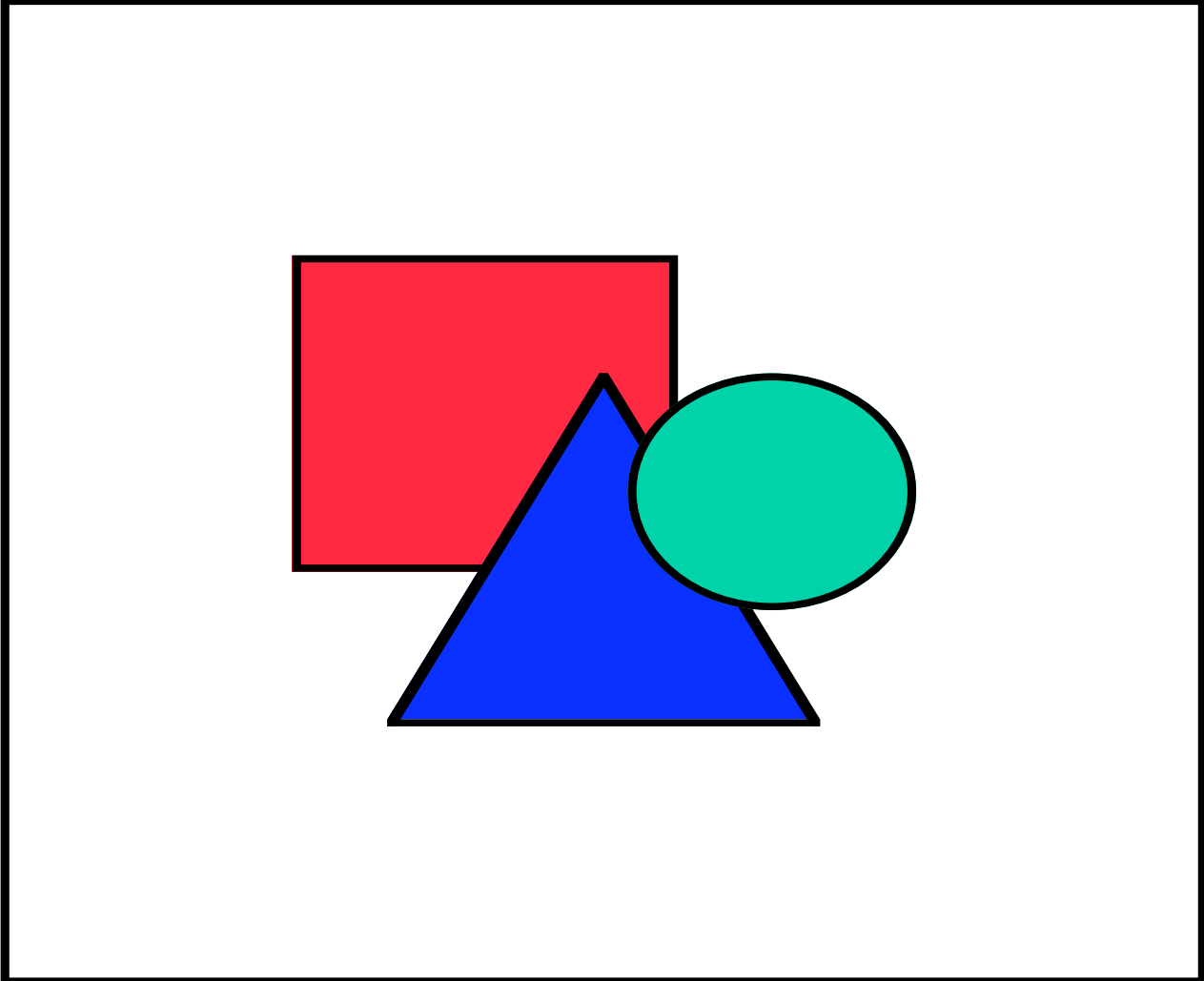
The replacement lens, or IOL, is usually placed in or in front of the capsular “bag”, and this clear membrane “shrink wraps” itself around the IOL and holds it in place. This action takes 4-6 weeks to happen in most cases. The membrane or bag can become hazy or opacify in 15-20% of cases. This is called posterior capsule opacification (PCO). The PCO can occur many months or years after IOL surgery. Occasionally, the posterior capsule is hazy at the time of IOL surgery, or develops haze early post-operatively, and an early treatment is necessary. Treatment for an after PCO involves a simple laser treatment called a YAG laser posterior capsulotomy. A YAG laser is generally an office-based, outpatient procedure that is painless, requires dilation of the pupil, a topical numbing drop, and takes literally just a few minutes. The vision is generally blurred the day of the procedure, but most patients notice improved vision even the next day. Your doctor can easily diagnose and treat this condition.

Is Presbyopia Correction Right for You?

If you have been diagnosed with Presbyopia and complain of near-vision problems, you can feel confident that with the most advanced techniques available today, IOL surgery is more successful than it has ever been.

Based on results from the FDA clinical trials for the Acrysof ReSTOR IOL, Alcon (the lens manufacturer) does not recommend this lens if you are dependent on night driving for occupation (i.e. commercial pilots, commercial drivers at night, etc...). You may also not be an ideal candidate if you have a hyper-critical personality.

DIAGRAM OF THE EYE:



Glossary of Terms

ANESTHESIA FOR CATARACT SURGERY

The standard cataract surgery anesthetic is a local anesthetic that blocks the optic nerve. The anesthesia may be administered by injection and is painless. The patient is awake during surgery but may be sedated. The eye is immobilized. A new topical anesthetic is now being used by a number of highly skilled ophthalmologists.

APHAKIA

The absence of the eye's natural crystalline lens, usually after cataract removal.

APHAKIC SPECTACLES

Thick, plus-powered eyeglasses that were once the standard correction for optical distorted peripheral vision. Today, an intraocular lens (IOL) is implanted in the eye after the cataract is removed.

ASTIGMATISM

Astigmatism is blurry vision produced by football-shaped corneas which are too steep in one place and too flat in another. Astigmatic corneas focus light in two different places in the eye, making both near and distance vision a problem.

ASTIGMATIC KERATOTOMY (AK)

Astigmatic Keratotomy (AK) is similar to Radial Keratotomy (RK) in that it is incisional surgery, but the calculated surgical incisions are made traverse to the cornea. AK may be performed in conjunction with RK.

CATARACT

An opacity or clouding of the crystalline lens that may prevent a clear image from forming on the retina. The cataractous lens may require surgical removal if visual loss becomes significant, with lost optical power replaced with an intraocular lens.

CORNEA

The transparent front segment of the eye that covers the iris, pupil and anterior chamber, providing most of the eye's optical power. The most modern cataract surgery uses a self-sealing incision at the edge of the cornea.

CRYSTALLINE LENS

The natural lens of the eye, located behind the pupil, which helps bring rays of light to focus on the retina. The original state of the lens is transparent, but the lens becomes cloudy with age.

DIOPTER (dy-ahp-tur)

A measurement of the degree to which light converges or diverges; also of lens refractive power. Equal to the reciprocal of the focal length of a lens (in meters), e.g., a 2-diopter lens brings parallel rays of light to a focus at half a meter.

EMMETROPIA (em-uh-TRO-pee-uh)

Refractive condition in which no refractive error is present and distant images are focused sharply on the retina with no need for corrective lenses.

EXCIMER LASER

The excimer laser produces an ultraviolet beam of light which is emitted in pulses. Each pulse removes 1/4000 millimeter of tissue from the surface of the cornea. It would take about 200 pulses from an excimer laser just to cut a human hair in half. The excimer laser has been used in industry since 1971 and has been used in ophthalmic surgery since 1983.

EXTRACAPSULAR CATARACT EXTRACTION

A cataract surgical procedure which removes the cataractous lens but leaves the rear lens capsule intact.

FUNCTIONAL VISUAL DISABILITY

The degree to which a visual error interferes with a person's ability to perform normal daily activities, such as reading, driving at night, or performing hobbies.

HYPEROPIA

Also known as farsightedness, hyperopia is a refractive error caused by an eyeball that is too short to focus light on the retina. Light strikes the retina before it can come to a sharp focus.

INTRAOCULAR LENS (IOL)

A plastic lens that may be surgically implanted to replace the natural lens of the eye. There are numerous styles of IOLs, including foldable IOLs and multifocal IOLs.

IRIS

Pigmented tissue that lies behind the cornea that gives color to the eye (e.g., blue eyes) and controls the amount of light entering the eye by varying the size of the black pupillary opening.

LASER ASSISTED IN-SITU KERATOMILEUSIS (LASIK)

Laser Assisted In Situ Keratomileusis, or LASIK, combines PRK with elements of ALK. LASIK is considered effective for all levels of myopia, including high myopia up to -20 diopters. The ophthalmologist uses the automated microkeratome to shave off a thin, hinged layer of the cornea. The surgeon then uses the excimer laser to vaporize a thin layer of the underlying cornea, and the top flap is restored to its place. LASIK is the newest refractive procedure and therefore there is little hard data on its outcomes. However, many refractive surgeons believe LASIK holds the most promise for patients with moderate to high myopia.

MICRON (MY-kron)

A unit of length equal to one-millionth of a meter.

MYOPIA

Also known as nearsightedness, myopia is a refractive error caused by an eyeball that is too long to focus light on the retina or a cornea which is too steeply curved. In these cases light focuses instead in front of the retina

OPHTHALMOLOGIST

A physician specializing in refractive, medical, and surgical treatment of eye diseases and disorders.

OPTOMETRIST

Health care provider trained to prescribe eyeglasses or contact lenses, examine eyes, and detect eye disease.

PHACOEMULSIFICATION (fay-koh-ee-mul-sih-fih-KAY-shun)

A cataract surgical procedure which uses an ultrasonic vibration to shatter and break up a cataract, making it easier to remove. The vibration is delivered by an irrigation-aspiration instrument. In a survey of ASCRS members in 1994, 86% preferred the phacoemulsification cataract removal technique over the extracapsular cataract extraction technique. The technique was invented by Charles D. Kelman, M.D., and was first published in 1967.

POSTERIOR CAPSULAR OPACIFICATION (PCO)

Opacification of the posterior lens capsule, sometimes called "secondary cataract," is often a consequence of modern cataract surgery. It occurs when a thin membrane of tissue grows over the remaining capsule following cataract surgery, and can develop in as many as half of all cases between several months and several years after surgery. PCO is treated using the YAG laser on an outpatient basis.

PHOTOREFRACTIVE KERATECTOMY (PRK)

A surgical technique employing an excimer laser to reshape the surface of the cornea and thereby reducing nearsightedness. The laser is controlled by a computer which determines for each patient treated the location, number of pulses, and surface area to be impacted by the laser light beam, based on that individual patient's vision and correction needs.

PRESBYOPIA

Also called "old age vision," presbyopia occurs as the lens of the eye ages and becomes less elastic and able to accommodate. Usually becomes significant after age 45 and is often signaled by the need for bifocals.

PUPIL

The variable-sized, black circular opening in the center of the iris that controls the amount of light that enters the eye.

RETINA

The thin lining at the back of the eye that converts images from the eye's optical system into electronic impulses sent along the optic nerve for transmission to the brain.

SCLERAL INCISION

The external white of the eye through which an incision is made during a cataract operation that uses a scleral incision.

YAG LASER

The YAG laser is a surgical instrument that emits a short pulsed, high energy light beam that can be precisely focused by computer to cut, vaporize, or fragment tissue. The YAG laser is used to treat posterior capsular opacification, a clouding of the remaining capsular tissue that develops postoperatively in as many as half of cataract removal operations. The tissue is vaporized with carefully controlled pulses of the YAG laser, and the surgery is performed on an outpatient basis.

For more information about the ReSTOR procedure, you may wish to contact:

**American Academy of Ophthalmology
655 Beach Street
San Francisco, CA 94109-7424
(415) 561-8500
<http://www.aao.org>**

**National Eye Institute
2020 Vision Place
Bethesda, MD 20892-3655
(301) 496-5248
<http://www.nei.nih.gov>**

**Alcon Laboratories, Inc
2501 Discovery Drive
Orlando, FL 32826
1-877-523-2784
www.acrysofrestor.com/acrysof-intraocular-lens/cataract-lens.asp**

**For more information about IOLs, contact:
U.S. Food and Drug Administration
Office of Consumer Affairs
Parklawn Building (HFE-88)
5600 Fishers Lane
Rockville, MD 20857
1-888-463-6332
<http://www.fda.gov>**