

# **INFORMED CONSENT FOR** **CATARACT SURGERY WITH** **INTRAOCULAR LENS** **IMPLANTATION**

This booklet contains informed consent information about cataract surgery and a copy of the Patient Consent.

Please review these thoroughly at home and be sure you understand the contents well enough to make an informed decision about whether to have cataract surgery.

Do not sign the Patient Consent found in this booklet. Leave it there for your reference. We will have another copy of the consent for you to sign in the office after we are sure all your questions have been answered.

Don't forget to call us if you do have questions.



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You have been given this booklet to help you make a decision about your cataracts. Cataract surgery is almost always elective surgery and, with rare exceptions, no one is ever required to have it. In order to make an informed decision you need to know a little bit about cataracts, how cataracts affect people's lives, and how cataract surgery helps them. You also need to be able to weigh the benefit from surgery against the risks of surgery before coming to your decision.

## Introduction

You may wonder why are you given such a lengthy document for such a routine operation? The reason we need to go into such detail is precisely because the operation has become so routine and common. Patients have friends, maybe dozens of friends who have had successful cataract surgery and so perhaps assume that the operation is always routine and that it is always successful.

Our success has in some ways created a little monster; an operation that some people incorrectly assume is risk free and uneventful.

This booklet is meant to put things back into perspective. We feel a healthy discussion of both the benefits and the risks of surgery is ultimately helpful for you to make an informed decision as to whether to have cataract surgery.

No one wants to have a problem or a complication, but if you have one I don't want you to say, "You never told me that could happen," but rather, "I was aware this could happen. What do we do now?"

## What is a cataract?

Your cataract is the lens of your eye. It is a living tissue, and all through your life it has been growing. Probably the first time you realized the lens was changing was when you turned 40 and noticed you couldn't focus very well any more. That condition, presbyopia and the need for reading glasses, was caused by the lens increasing in density and losing its flexibility.

When the cataract was small, you saw clearly most of the time. As time passed the vision got more strained, and blurrier. Perhaps other symptoms set in, such as glare around lights.

If your symptoms do not affect your daily activities, then you do not need a cataract operation. A cataract operation is indicated when your visual and functional status affects your quality of life. Surgery is performed when the cataract-impaired vision no longer meets your needs and the anticipated benefits of surgery exceed the risks. Put another way,

**Cataract surgery is not performed just because the cataract is there; it is performed because of how the cataract affects your life.**

# Section 1 : Benefits of cataract surgery

How does a cataract affect your life?

A cataract affects more than just how you see. If a cataract reduces your visual function you can have a reduction in general health and overall quality of life. Several studies have reported an association between improved visual functions after cataract surgery and improved quality of life. The loss of visual function in the elderly is associated with a decline in physical and mental functioning. It is also associated with loss of independence in activities of daily living including nighttime driving, daytime driving, community activities, and home activities.

Elderly patients with visual impairment only (and no other physical or mental impairments) were 2.5 times as likely to experience functional decline than elderly patients without visual problems. The unadjusted functional score of a person with reported poor vision was four times worse than the score for a person with excellent vision.

An analysis of the Medical Outcomes Study found that having blurred vision more than once or twice a month has a significant impact on functional status and well being, particularly on problems with work or other daily activities. This impact was found to be greater than the impact of several other chronic conditions, like hypertension, history of heart attack, Type 2 diabetes mellitus, indigestion, trouble urinating, and headache.

Visual impairment is an important risk factor for falls and for hip fracture. Poor vision in one or both eyes is associated with an increased risk of hip fracture.

Visual impairment, in particular a decrease of visual acuity and contrast sensitivity, has been shown to be associated with difficulties in driving. Older drivers with visually significant cataract were twice as likely as older drivers without cataract to report reduction in days driving and four times as likely to report difficulties in challenging driving situations. Drivers with visually significant cataracts were 2.5 times more likely to have had an at-fault involvement in a motor vehicle crash in the past five years compared with drivers without cataracts. A severe visual deficit in only one eye was still significantly associated with crash involvement.

What happens if the cataract is successfully removed and visual function improves?

Studies demonstrate that physical function, emotional well being, and overall quality of life can be enhanced when visual function is restored by cataract surgery. Improved visual function can prevent the progressive deterioration of quality of life seen in some elderly patients. So, by improving visual function, cataract surgery may play an important role in preserving overall functional status, reducing associated injuries and accidents, and preventing disability in at-risk elderly patients.

Improved visual function as a result of cataract surgery may include the following:

- Better optically corrected vision.
- Increased ability to read or do near work.
- Reduced glare.
- Improved ability to function in dim levels of light.
- Improved depth perception and binocular vision.
- Improved color vision.

Improved physical function as a critical outcome of cataract surgery may include the following:

- Increased ability to perform activities of daily living.
- Increased opportunity to continue or resume an occupation.
- Increased mobility (walking, driving).

Improved mental health and emotional well-being as a second critical outcome of cataract surgery may include the following benefits:

- Improved self-esteem and independence.
- Increased ability to avoid injury.
- Increased social contact and ability to participate in social activities.
- Relief from fear of blindness

## Outcomes

### Satisfactory Outcomes

Cataract surgery is a highly successful procedure. Regardless of the preoperative visual acuity in the better eye, most patients reported improvement in their ability to perform visually dependent tasks after undergoing cataract surgery.

Studies show 95% of patients reported being satisfied with the results of their surgery.

## Second-Eye Surgery

The indication for second eye cataract surgery is the same as for the first, when the cataract-impaired vision no longer meets the patient's needs and the anticipated benefits of surgery exceed the risks.

Generally, if a patient has cataracts in both eyes the results are better if both cataracts are removed. Patients who have surgery in both eyes have greater satisfaction with vision, greater improvement in functional status, and greater satisfaction with vision than patients who had surgery in only one eye.

Depth perception increases about 32% after the first eye has surgery, but about 90% after the second eye has surgery. The number of patients who meet the driving standard increased from 52% of patients after first-eye surgery to 86% of patients after second eye surgery.

For these reasons, if you have cataracts in both eyes, we almost always recommend removing both of them. If, however, the cataract in one eye is substantially larger and more symptomatic than the cataract in the other eye, we may perform surgery on only the larger cataract. In many cases that solves your functional problem and nothing more needs to be done. In other cases the cataract left behind begins to interfere with the function in the eye that had surgery. In these cases the second cataract, albeit still small, may be removed to improve your binocular (both eyes) visual function.

This concludes the section on the benefits of cataract surgery. Now it is time to balance them against the risks of cataract surgery.

## Section 2: Risks of Cataract Surgery

Cataract surgery is very successful but is not foolproof. Despite our experience, training, and best efforts complications can and do occur. They occur only a few times per hundred cases, but the incidence is not zero.

It is impossible to predict every risk, every potential problem, or every complication. No list of risks or complications is ever complete, and doctors throughout the world are discovering new ones every year.

### Unsatisfactory Outcomes

Excluding those with complications, patients who were dissatisfied with the results of their surgery were slightly older and more likely to have comorbidities, meaning other problems with their eyes.

Other patients were unhappy with their results because they thought, incorrectly, that cataract surgery was an operation designed to eliminate the need for eyeglasses. Cataract surgery is the operation to remove the cataract from the eye. Eyeglasses are usually needed after cataract surgery. Some patients are fortunate enough to have little need for eyeglasses after cataract surgery, but they are, to some extent, lucky. Standard cataract surgery allows only 30% of patients to see reasonably well, most of the time, without eyeglasses after cataract surgery.

Surgery to reduce the need for eyeglasses is called refractive surgery. That's an entirely different subject.

Cataract surgery is performed to treat the cataract.

Cataract surgery is not performed to eliminate the need to wear eyeglasses.

# Complications

No one wants to have a complication; the surgeon doesn't and the patient doesn't. The patient needs to be aware that these risks do occur in order to make an informed decision to have surgery, but beyond that there's not much more for the patient to do than to follow the surgeon's instructions for care. The surgeon is much more aware of them and takes precautions to prevent them or at least minimize their likelihood. If a complication occurs the surgeon and the patient will have to team together to deal with it, whatever it takes.

## Major Complications

Complications that may result in a permanent loss of vision are rare. Major complications that are potentially blinding include:

### Infectious endophthalmitis.

This is perhaps the most serious complication of cataract surgery. It occurs when bacteria, usually from your eyelashes, manage to crawl into your eye during surgery and incubate there, later causing an infection. The characteristics are pain, redness and a dramatic decrease in vision that occurs within the first week or two of the operation, although sometimes it takes longer to develop. This complication sometimes requires additional surgery and/or injection of antibiotics in the eye. This complication is rare, occurring about one case in 1,000, but it occurs, no matter what we do, about half the time there is permanent vision loss.

We take appropriate steps to prevent infectious endophthalmitis prior to, during, and after every operation, but it is impossible to eliminate this risk.

### Intraoperative suprachoroidal hemorrhage.

This is another major complication during which some of your blood vessels in the back of the eye spontaneously burst and hemorrhage during the operation. These vessels are not anywhere near the incision site, nor are they involved directly in the operation. It is believed this complication is associated with arteriosclerosis and the pressure changes in the eye that occur during cataract surgery. This complication used to occur about once in every thousand operations, but with modern small-incision surgery it is much less common than that now. Nevertheless, this complication is serious and can cause blindness.

## Cystoid macular edema (CME)

Sometimes an eye develops a sympathetic reaction in the macula, the central portion of the retina that causes it to swell. The likelihood of developing CME is to some extent related to the development of inflammation, but there are other known and unknown precipitating factors. The precautions we take to prevent CME have reduced the incidence of clinically significant CME from 5% to slightly more than 1%, but we have not been able to eradicate it.

## Retinal detachment

Once again the use of modern small-incision techniques has reduced the likelihood of this major complication, but a post-operative retinal detachment still occurs in about 0.7% of eyes having cataract surgery. Usually the detachment does not occur right away, but may occur years later. Many times it is not at all clear if the detachment is related to the operation at all, but it remains something that happens occasionally and should be mentioned. A retinal detachment is treated with an operation that is often successful in maintaining vision, but not always.

## Retained portion of cataract

Sometimes the membrane barrier between the cataract and the back of the eye lacks sufficient support or opens during surgery. When this happens a portion of the cataract can fall to the back of the eye. This can cause the other complications listed here to occur. You may be referred to a vitreoretinal surgeon if it is necessary to remove the residual portion of cataract. This complication occurs in less than 1,000 cases.

## Corneal edema

Your cornea has a thin layer of pump cells that keep the interior of the cornea reasonably dry. When the pump cells (endothelial cells) don't work properly, or if there is an insufficient number of pump cells, fluid can build up in the cornea and vision can deteriorate. Sometimes a patient is born with an insufficient number of pump cells in the first place; the turbulence from the cataract operation displaces some cells; or inflammation from surgery simply causes the cells not to work properly. Most cases of corneal edema are transient, but if persistent and severe, new pump cells are needed. These are obtained through a corneal transplant. Transient corneal edema occurs in many patients, but severe, persistent corneal edema is not common, occurring perhaps no more than one time in a thousand cases.

# Less Severe Complications

A number of other complications can be managed but may require further surgery. These include:

## Intraocular lens dislocation

At the conclusion of every cataract operation the intraocular lens is centered in the eye. However, inadequate tissue strength, and even normal scarring and healing can cause the lens to move. If the decentration is mild, vision remains excellent and nothing needs to be done. If, however, the decentration causes vision problems, an operation to recenter the lens, or to replace it with another one, may be necessary. The need to intervene surgically for a decentered lens occurs in less than 1% of cases.

## Bleeding in the eye

One form of bleeding has already been mentioned, acute intraoperative suprachoroidal hemorrhage, which we consider to be a major complication (see above). It is possible to bleed for other reasons, on the surface of the eye, and within the eye. Bleeding on the surface of the eye is inconsequential and goes away. Bleeding in the eye may be inconsequential and go away, but not always. Sometimes it requires another operation to wash out the blood. Sometimes the blood causes other problems, such as a temporary elevation in pressure (glaucoma).

## Severe sterile inflammation

A little inflammation in the eye after a cataract operation is completely normal, but some eyes develop severe inflammation. Increasing the dosage and the frequency of your eyedrops controls most of these reactions. Sometimes, however, another operation is performed to wash out the inflammatory cells. Other times the reaction looks just like an infectious endophthalmitis (see above) and to be on the safe side, it is treated as though it were, with another operation to remove inflammatory tissue and inject antibiotics. Severe inflammations are rare, occurring less than 1% of the time.

## Injury to the iris

On rare occasions the iris in your eye, the colored part, is damaged during cataract surgery. This usually causes little effect on the results of your operation, but you may notice a defect or a discoloration in your iris afterwards. The incidence is low, occurring perhaps once in a thousand cases.

## Posterior capsule opening

The back wall of the cataract, the posterior capsule, is usually kept intact to maintain a separation between the front of the eye and the back of the eye. In less than 1% of cases the posterior capsule opens during surgery. Usually this causes no problem, but sometimes the opening allows vitreous to come forward (see next), interferes with centration of the intraocular lens (see above), or allows access of bacteria from the front of the eye to the back. An opening in the posterior capsule is one of the risk factors for infectious endophthalmitis (see above).

## Vitreous prolapse

This occurs in about a quarter of the cases in which the posterior capsule opens, or roughly one case in 400. The vitreous gel, normally positioned behind the capsule, moves forward in the eye. The forward movement of the vitreous is associated with other potential complications, including cystoid macular edema and retinal detachment (see above).

## Uncomfortable or irritated eye

Some eyes feel the effects of the operation for an extended period of time. In these cases, the eye can feel scratchy, dry or irritated. Usually there is some relief with artificial tears, but not always.

## Unwanted visual images (Increased night glare, haloes, double or ghost images)

Usually these are caused by corneal edema, by reflections within the intraocular lens, or by dryness. Sometimes we cannot determine the cause. Most of the time we can control these symptoms using eyeglasses with special antireflective coatings or eyedrops that constrict your pupil.

Sometimes we cannot control the symptoms and your intraocular lens will have to be removed and replaced. That can solve the problem, but some patients are just very sensitive and still have glare and halos even with the different lens.

## Double vision

Usually this occurs if your eyes previously had a tendency towards ocular imbalance, but you had learned to compensate for it. Once the vision changes in one eye your compensation falters and you may notice the imbalance as double vision. Most of the time this can be corrected with eyeglasses.

# Late Complications

Some complications may not occur for months after surgery. These include

## Chronic inflammation

Some eyes are resistant to the anti-inflammatory eyedrops we use to control postoperative inflammation and require more eyedrops and for a longer period of time, sometimes months. Chronic inflammation occurs about one case in a hundred. It can increase the incidence of cystoid macular edema (see above).

## Glaucoma

Eyes that have had cataract surgery are slightly more likely to develop glaucoma, though many experts suspect that the tendency was there already and the operation simply put the eye over the edge, so to speak. Nevertheless, there are patients who never had glaucoma until after the cataract operation. The incidence is considered to be about one in a hundred.

## Posterior capsule clouding

Posterior capsule clouding is considered by many to be a normal consequence of cataract surgery and not a complication. As time passes after the operation scar tissue forms on the posterior capsule, the back lining of membrane that held the cataract, and causes it to opacify. There is a wide range of symptoms, but the most common is a gradual decrease in vision, similar to how you might see if looking through wax paper. This condition is common, occurring in about one out of four eyes having cataract surgery. It is treated with a special laser in a session that usually lasts only a few minutes.

# Comorbidities

Comorbidities are something else going on in the eye in addition to the cataract. They can have a significant effect on the outcomes of cataract surgery. For example, outcomes for patients with pre-existing macular degeneration and diabetes show a significant improvement in their functional vision, but not as great as in patients without these comorbid conditions.

Patients with comorbid conditions must understand that cataract surgery is performed to remove the cataract and resolve the problem the cataract caused. It has no effect on other problems your eye may have. If you have visual problems due to another condition in your eye, those problems will remain after cataract

surgery. If the visual problems from these other conditions are destined to deteriorate with time, they will do so whether or not you have had a cataract operation.

The cataract is independent from the other visual problems. If you have a cataract and a comorbid condition, fixing the cataract will fix only the vision lost due to the cataract. Cataract surgery will not improve any other problem you may have.

Sometimes the cataract blocks our view during the examination so that we cannot see the details in the back of the eye. It is possible, therefore, that you may have a comorbid condition that we cannot detect prior to cataract surgery. In these cases the results of the cataract operation may still be limited by the comorbid condition even though we could not know that you had it prior to surgery.

The most common comorbid conditions are these:

#### **Macular Degeneration**

This is a deterioration of the central part of the retina, the macula, and it causes disturbance in your central, focusing vision. It harms your ability to see straight ahead and to read. Many times we can detect age-related macular degeneration during your examination, but sometimes the cataract interferes with our ability to detect it in advance. Cataract removal has no effect on the macular degeneration, and central vision will remain limited to the degree that the degeneration limits it.

#### **Diabetic retinopathy**

Diabetes is a serious condition that can cause poor vision, sometimes by helping the cataract to develop, and sometimes by damaging the retina (retinopathy). Cataract surgery does not treat, nor does it arrest diabetic retinopathy. In some cases the cataract operation can actually activate the retinopathy and make it worse.

#### **Fuchs' corneal endothelial dystrophy**

This is a congenital condition that weakens the cornea's ability to pump out fluid and maintain a state of normal hydration. When the cornea's pump cells don't function normally, fluid can accumulate in the cornea and cause it to become edematous (see above). Sometimes we can detect corneal dystrophy during our examination, but not always. Therefore, we routinely take precautions to protect the corneal endothelium in every patient because we cannot be sure in advance which patients are prone to pump failure and which are not.

## Pseudoexfoliation Syndrome

This is usually detectable prior to surgery, but not always. Pseudoexfoliation eyes are usually more difficult to operate on and have a higher incidence of weakened lens support, poorly dilated pupils, and intraoperative complications.

## Uveitis

When an eye has chronic inflammation, cataract surgery can make it worse. Uveitic eyes often require more anti-inflammatory eyedrops than usual, and frequently for an extended period of time.

# High Risk Characteristics For Complications

In addition to ocular comorbidities, other characteristics of the patient or eye may be associated with a higher risk for complications. Sometimes these characteristics are so mild they are of no consequence. Other times they are significant enough to represent a real risk

The most common higher risk characteristics are these:

### Very narrow eye fissure

This makes access to the eye more difficult and limits our ability to see the eye during surgery.

### Very dense cataract

These are more difficult to remove and are associated with greater risk of thermal and mechanical injury to the eye. The increased time of surgery is associated with increased risk of corneal edema.

### Very farsighted

These eyes are typically very small, so there's not a lot of room for the surgeon to work in. There is a greater risk of trauma, injury, or corneal edema. In some cases an effusion, a collection of fluid develops in the back of the eye.

### Very nearsighted

These eyes are very large and soft, so it is more difficult to get to the cataract. There is an increased risk of a retinal detachment that exists for several years.

### Previous eye surgery

Regardless of what the previous operation was, there is increased risk of bleeding, inflammation, and weakened lens support. Additional surgery also risks failure to whatever was done to the eye previously.

### Small, poorly dilated pupil

Cataract surgery is performed through the pupil, so a small pupil, or one that does not dilate well, reduces the surgeon's ability to see the cataract and makes the operation more difficult.

### Posterior polar cataract

These unusual cataracts are associated with defects in the posterior capsule. This increases the chance for an opening in the capsule and prolapse of the vitreous gel that we prefer to keep behind the capsule.

### Adhesions in the eye

Scars in the eye, called synechiae, can prevent pupil dilation and reduce visualization. Separating the scars can lead to increased bleeding.

### White cataract

These make it hard to perform the early steps in the operation because normal colors and contours are not available to the surgeon.

### Cataract instability

This makes the operation harder because the cataract is a moving target. There is a higher risk of the cataract becoming separated from its attachments during surgery and sinking into the back of the eye. This is a complication that would require additional surgery by a vitreoretinal surgeon in order to get the rest of the cataract out.

### FLOMAX

Flomax is a medication commonly used for bladder problems. For unknown reasons it also has an affect on your iris, the colored ring in your eye. Patients on Flomax develop a floppy iris than can get in our way, making the operation more difficult. Sometimes the iris is damaged during the operation because it cannot be controlled. If you stop taking Flomax the problem does not go away. You must let us know if you are taking Flomax now, or if you have ever taken it in the past.

## Cataract in the Functionally Monocular (One-Eyed) Patient

A functionally monocular patient is someone with just one good eye, such as the case when the other eye has poor function from injury or disease. If the one good eye has a cataract, the indications for cataract surgery are the same as if the patient had two good eyes. Surgery is performed when the cataract-impaired vision no longer meets the patient's needs and the anticipated benefits of surgery exceed the risks.

*It is perhaps obvious, but must be stated anyway,* that if there is a major surgical complication as a result of surgery in the one good eye the

patient will have no good eyes left, and could be functionally blind. For that reason, we often procrastinate performing surgery in one-eyed patients.

On the other hand, delaying surgery until the cataract is very advanced may increase surgical risk and retard visual recovery. For that reason, we don't want to procrastinate too long.

The decision whether to have cataract surgery is never an easy one for a patient with only one healthy eye. Having the surgery exposes the patient to the risk of losing the sight in that eye, but delaying surgery too long also increases the risk. The patient must weigh those risks against the functional impairment caused by the cataract when making a decision whether to have a cataract operation.

You must understand that there are risks with any operation.

The only way to avoid all risks is to not have the operation in the first place.

## Section 3: Alternatives to cataract surgery

Having discussed the benefits of cataract surgery, and then the risks of cataract surgery, we now proceed to discussing your alternatives.

### Do Nothing

If the cataract is mild and you are experiencing no difficulties with what you are seeing, there is no need to do anything. Almost everyone will get a cataract if they live long enough. Therefore, if you are happy with your vision, don't worry about it. Leave the cataract alone and do nothing.

### Change Your Glasses

Sometimes just changing your glasses will help in the early stages of cataracts. Sometimes, we are able to improve your vision a little bit with a change in glasses, but not enough to meet your visual needs. Sometimes, we have reached the point where it is not advised that you change your eyeglasses any more until after the cataract is removed.

## Cataract Removal with Intraocular Lens Implantation

If you are actually having problems seeing to do the things you want to do and if changing your glasses won't give you enough sight, the other alternative is to have cataract removal with intraocular lens implantation. Presently, this operation is performed about three million times per year in the United States alone, with a very high probability of success.

# Section 4: Intraocular Lenses

## Intraocular Lens Implants (IOLs)

Should you decide to have cataract surgery, you must understand that a method of refocusing the eye is necessary after cataract removal. In the past this was achieved through thick glasses or contact lenses that required you to insert them in the eye. Because of the problems associated with these types of correction, the modern intraocular lens has replaced them. Now everyone gets an intraocular lens implant at the time of cataract surgery.

## Types of Intraocular Lens Implants

There are two major categories of intraocular lens implants.

The Basic Intraocular Lens Implant is a simple monofocal (single focus) lens that makes no attempt to correct any optical problem with your eye other than the cataract. Basic Intraocular Lens Implants are a covered benefit of all insurance plans.

The Premium Intraocular Lens Implants have more sophisticated optics and are designed to correct astigmatism or presbyopia (the inability to focus from distance to near, requiring you to use reading glasses or bifocals). There is a charge to the patient for the extra cost of a Premium Intraocular Lens Implant.

## Basic Monofocal Lens Implants

A Basic Intraocular Lens Implant is a fixed lens (it doesn't move) that is designed to deliver improved vision at just one distance, usually far. The potential drawback is that after surgery you will probably need to wear glasses, even if you didn't wear glasses before surgery. The advantage of the Basic Monofocal Lens is that it is covered by insurance plans.

## Premium Lens Implants

### Astigmatism-Correcting Lens Implant The Toric Lens

Astigmatism is a common condition that can make your vision distorted. The distorted vision is because the eye's cornea or lens has an irregular shape, usually slightly oval instead of the preferred round shape.

Astigmatism is a very common eye condition and does not always require corrective lenses. Many people have some degree of astigmatism, but a minor level of astigmatism is considered normal and requires no correction. If a person with a minor level of astigmatism needed cataract surgery a Toric Lens would probably not be necessary.

Patients with moderate or high degrees of astigmatism almost always experience blurred or distorted vision. This is treated with corrective lenses prior to cataract surgery. When you have cataract surgery you can choose to have your astigmatism permanently reduced by having a Toric Lens Implant.

A Toric IOL restores focus to the eye by correcting preexisting astigmatism using the same technology that has been successfully used in contact lenses. A Toric IOL is proven to have a clinically significant reduction in astigmatism as compared to a non-Toric IOL during cataract surgery in patients with astigmatism.

### Presbyopia-Correcting Lens Implants

Presbyopia is normal. You probably noticed in your forties that you started to lose some of your up-close vision and had to start wearing reading glasses or bifocals. That's what presbyopia is, the natural age-related loss of your capacity to focus from far to near and back again. There are two types of Presbyopia-Correcting Lens Implants, the active one without the rings and the passive one with the rings.

#### 1. The Accommodating Lens

An Accommodating Lens Implant not only treats your cataract but can also reduce your dependence on glasses. It does so by recreating accommodation similar to your eye's natural lens. It can reduce or eliminate glasses for most activities, including reading a book, working on the computer, and driving a car.

An Accommodating Lens "flexes" using the eye's natural muscles to focus on subjects at various distances, delivering a continuous range of

vision: far, intermediate, and near. The lens can flex because it has a tiny hinge to let the optic move back and forth as you focus from distance to near.

Because your muscle was not used much after you developed presbyopia, it can take some time for it to function again. Typically patients see in the distance the first week after the operation, pick up the intermediate range during the second week, and begin reading after the third week.

## 2. The Multifocal Lens

Multifocal Lens Implants are essentially tiny implantable bifocals. They are manufactured with very fine rings that divide the lens into multiple focus points so you can see well at a variety of distances. These are passive lenses, not requiring any muscular activity in your eye for focusing. From the moment you leave the operating room you have the ability to see both far and near.

The multiple focus points are what make this lens so effective for reading, but the compromise is that they do require a period of adjustment as you learn to use this new optical system. There is a slightly greater change of having difficulty with halos or rings around lights (five in 100) and glare (five in 100) as compared to a Basic Monofocal Lens or an Accommodating Lens (one or two out of 100). Over time most people grow accustomed to these disturbances and cease to notice them, while others may continue to notice them long after surgery. You may have some difficulty distinguishing an object from a dark background, especially in areas with less light. You should take extra care when driving at night.

## BiOptics

The Toric lens corrects astigmatism, but doesn't correct presbyopia. The Accommodating and the Multifocal Lens Implants correct presbyopia but do not correct astigmatism.

If you want to correct both astigmatism and presbyopia, we recommend BiOptics, a special treatment for double correction. First we use an Accommodating or Multifocal Lens Implant to correct the presbyopia, and then we wait one to three months to let the eye settle down, during which time eyeglasses are worn. Once the eye is stable we perform the second stage, a planned Laser Vision Correction procedure to correct the residual astigmatism.

Basic Intraocular Lenses are not used to take patients out of eyeglasses. You will likely need eyeglasses, at least part of the time, after cataract surgery. If you want to reduce your dependence on eyeglasses you will need a Premium Intraocular Lens.

## Section 5: Related Topics

### Cataract Surgery After LASIK, LASEK, or Epi-LASIK

If you had LASIK, LASEK, Epi-LASIK or any other corneal refractive procedure your eyes were surgically altered to reduce your need for eyeglasses or contact lenses.

Now that you have a cataract you have a new problem that needs to be addressed exactly the same as any other person who has a cataract. Having had previous refractive surgery does not exempt you from the risks and benefits of cataract surgery as outlined in this booklet.

After cataract surgery most patients need eyeglasses, at least part of the time. That's the reality of cataract surgery. The fact that you had a refractive operation in the past does not change this reality. If you have a cataract operation you may need eyeglasses afterwards, even if you did not need them between your refractive procedure and the time of your cataract operation.

### Laser Enhancements

If you previously had corneal refractive surgery and you need eyeglasses after cataract surgery, we may be able to perform another laser procedure to reduce your need for them. If you elect to have another treatment, you will be charged the standard fees we charge for any refractive enhancement procedure.

### Pre-op testing

For operations performed at the surgery center, we do not routinely ask you to obtain any pre-operative blood tests, x-rays, or electrocardiograms, because there is no evidence that they affect the results of your operation one way or another. If you are a diabetic we will check your blood sugar on the day of surgery.

For operations performed at a hospital we follow their rules and obtain whatever tests they require.

## Pre-op diet

For operations performed at the surgery center, we do not require that you fast. We prefer that you take all your regular medications and eat as you would normally. We want you to stay on your regular schedule with as few interruptions as possible.

For operations performed at a hospital, we follow their rules about fasting and medication usage. You will receive those instructions when arrangements are made with the hospital.

## Coumadin and blood thinners

You must let us know if you take blood thinners. With rare exceptions, we prefer that you continue to take your blood thinners even on the day of surgery. Experience has shown that the risk of bleeding during cataract surgery while taking blood thinners is considerably lower than the risk of systemic complications if the blood thinners are stopped.

So, unless we tell you to stop them, you should continue to use your blood thinners as intended.

## Anesthesia

Almost all of our cataract operations are performed using a gentle, but effective topical anesthetic. It does not require any needles or injections near your eye.

Your eye will remain very comfortable throughout the operation. You might notice some pressure in the eye, some touch around the eye, and some cold water on the eye. The sensations are normal and mild. If you find that you are uncomfortable, simply say "Ouch," and we will give you an additional anesthetic.

We do not routinely use any needle injections as part of our cataract surgery anesthesia, but sometimes we do it we feel a patient needs it.

We only rarely use general anesthesia, because in most cases the risks outweigh the benefits. We will, however, use sedatives if we feel it will help you relax for the operation.

## Payment for surgery

Depending on your insurance plan, your operation may be covered in full, or you may be required to pay a fee.

A few excellent insurance plans pay for the operation completely. Most insurance plans pay us a reduced fee for the operation, and then require you to pay co-payments or deductibles. If your insurance plan requires you to pay these fees we will collect them prior to your operation.

Our surgery office knows the policies of most insurance plans, but it cannot possibly know all of them. You should always check with your insurer yourself to determine its policies.

#### Payment for post-operative visits

Depending on your insurance plan, post-operative visits may be covered in full, or you may be required to pay a fee.

Some excellent insurance plans pay for the operation and all related costs for 90 days after the operation. Some lesser insurance plans pay us a reduced fee for the operation, and then require you to pay co-payments or other fees for each office visit. If your insurance plan requires a co-payment for these visits we will, naturally, collect them at the time of your visit.

Our surgery office knows the policies of most insurance plans, but it always remains in your best interest to check with your insurer yourself to determine its policies.

#### Post-operative care

After your operation you need to carefully take care of your eye. There are only a few post-op instructions, but they must be followed conscientiously.

1. Do not rub your eye. It may be sensitive from the operation and may even tear a bit. It may ache, feel scratchy or feel irritated. These sensations are normal and will go away.
2. You may take a mild analgesic, such as two Extra-Strength Tylenols, if you have mild pain or discomfort. You should not have any significant pain. If you do, please call the office and let us know.
3. You may resume your normal routine immediately. There are no restrictions on your activities. You may bend, stoop, lift, play golf, or whatever else you like to do.
4. You may watch television or read, though you may find that your vision is still blurry. After all, you just had an operation and are beginning your recovery from it.
5. You should resume all your regular medications.
6. Whether you are inside or outside, you may be light sensitive. You should wear sunglasses whenever you like for eye comfort.

#### Post-operative eyedrops

You need eyedrops after the operation to help your eye heal. You will be given instructions for which drops to use and how to use them.

## When will I see?

The time to vision recovery varies widely from patient to patient. Some patients see almost immediately; others take days to weeks for the vision to return. The speed of recovery following uncomplicated surgery depends on the patient's healing ability, the density of the cataract, the size of the eye, the amount of inflammation or edema that develops after surgery and a host of other factors.

Please be patient. Remember that a recovery period is required after any operation. You should plan to take it easy and let the eye recover at its own pace.

## Schedule and time

Your surgical team consists of people are involved in providing “state-of-the-art” surgical care. The surgeon is only one component of a team that includes nurses, clinical and surgical technicians, surgical assistants, and support staff.

There are many factors that affect our ability to stay on schedule during a surgery day, but it ultimately depends on our commitment to taking whatever time is required to provide the best care to every patient. Please realize that we spend considerable time and effort trying to coordinate all aspects of each patient's individual situation into a working schedule. If your operation and care requires more time than we expected, we will simply take as much time as we need. We will not compromise your care just to be on time for another patient or vice versa.

## Transportation

Be sure to arrange transportation for our surgery and your first follow-up visit. You may be sedated and your vision may be blurry, making it unsafe to drive yourself.

## Cataract and Glaucoma Surgery

If you have both a cataract and glaucoma we might recommend a combined treatment for you. The most common one we recommend is ECP, short for Endocyclophotocoagulation.

ECP is an endoscopic laser treatment. A tiny needle-sized endoscope is slipped into the eye at the end of the cataract operation, and while looking at the television monitor the surgeon examines and treats the normally hidden ciliary processes, where the intraocular fluid is made.

About six weeks after the treatment, the average patient treated with ECP gets to stop using one of the eyedrops, and also has a slightly lower eye pressure even after the drop is stopped.

# Section 6: Patient Responsibilities

You should be aware that you have certain responsibilities when it comes to your surgical care.

1. You have the responsibility to provide accurate and complete information concerning your present complaints, medical history, allergies and other matters relating to your health.
2. You have the responsibility to let us know if you do not understand the course of your medical care and what is expected of you.
3. You have the responsibility to keep appointments and to notify the facility when you are unable to do so.
4. You have the responsibility to follow the treatment plan developed for you. If you have concerns about your ability to follow the plan, you have the responsibility to express such concerns.
5. You have the responsibility to contact your insurance company to determine your coverage and policies for ambulatory surgery.
6. You have the responsibility to pay your bills. You are responsible for any deductibles, coinsurances and/or co-payments on or before the day of surgery.
7. You have the responsibility to be respectful of facility property and the property of other persons in the facility.
8. You have the responsibility to be considerate and respectful of the staff at the facility.
9. You have the responsibility to be considerate and respectful of other patients in the facility.

# INFORMED CONSENT FOR CATARACT OPERATION AND/OR IMPLANTATION OF INTRAOCULAR LENS

(Leave this copy in your booklet. We will have another copy for you to sign)

## Introduction

This information is given to you so that you can make an informed decision about having eye surgery. Take as much time as you wish to make your decision about signing this informed consent. We encourage you to ask questions, as we strongly feel that the more you know about the procedure the more we will both benefit.

We can let you know of any unusual circumstances in your eye and help you determine the probability that you will see better after cataract removal and lens implantation. Since each person is a unique individual with different needs and requirements, only you can determine if you are having enough difficulty with your vision to consider having your cataract removed.

Except for unusual situations, a cataract operation is indicated only when you cannot function satisfactorily due to poor sight produced by the cataract. You must remember that the natural lens within your own eye, even with a slight cataract, has some distinct advantages over any synthetic lens.

After your doctor has told you that you have a cataract, you and your doctor are the only ones who can determine if or when you should have a cataract operation based on your own visual needs and medical considerations.

## Alternative Treatments

You may decide not to have a cataract operation at this time. Depending on your visual function and lifestyle there are three alternatives available to you.

**Do Nothing.** If the cataract is mild and you are experiencing no difficulties with what you are seeing, there is no need to do anything. Almost everyone will get a cataract if they live long enough. However, many of those cataracts will not progress to the point where the functional vision is sufficiently affected and the patient actually needs something done. Therefore, if you are happy with your vision, don't worry about it. Leave the cataract alone and do nothing.

**Change Your Glasses.** Sometimes just changing your glasses will help in the early stages of cataracts. We will let you know if this is a possibility in your case. Sometimes, we are able to improve your vision a little bit with a change in glasses, but not enough to meet your visual needs. Sometimes, we have reached the point where it is not advised that you change your eyeglasses any more until after the cataract is removed.

**Cataract Removal and/or Intraocular Lens Implantation.** If you are actually having problems seeing to do the things you want to do and if changing your glasses won't give you enough sight, the other alternative is to consider cataract removal and/or intraocular lens implantation. Presently this operation is performed about three million times per year in the United States alone with a very high probability of success.

### Consent for Operation

In giving my permission for a cataract extraction and/or for the possible implantation of an intraocular lens in my eye, I declare I understand the following:

- Cataract removal, by itself, means the removal of the natural lens of the eye by a surgical technique.
- If an intraocular lens is implanted, it is done surgically. It is intended that the small plastic lens will remain in my eye forever.
- No doctor can guarantee the results of cataract removal and/or intraocular lens implantation for me or for anyone else. The results of surgery in my case cannot be, and have not been guaranteed.
- After the cataract has been removed, my surgeon may decide that it is not in my best interest to proceed with implantation of the intraocular lens, even though I may have given you permission to do so.
- Anything is possible when operating on the eye, including infection, hemorrhage, macular edema, retinal detachment, retained portion of cataract, corneal edema, intraocular lens dislocation, inflammation, injury to iris, posterior capsule opening, vitreous loss, glaucoma, posterior capsule clouding, uncomfortable or irritated eye, unwanted visual images, and double vision. It is possible my vision could be worse. I could lose all of my vision or lose the eye. These and other complications may occur whether or not a lens is implanted and may result in poor vision, total loss of vision (blindness), loss of the eye, or even death.
- Anything is possible with any type of operation, including problems with anesthesia, drug reactions or other factors that may involve other parts of my body including a possibility of brain damage and even death.

- I understand that cataract surgery and the calculations for intraocular implants are not "an exact science." I accept that I might need to wear glasses or contact lenses subsequent to surgery to obtain my best vision.
  - This is true even if I did not wear eyeglasses prior to cataract surgery.
  - This is true even if I had LASIK in the past.
  - This is true even if I had another refractive operation in the past.
  - This is true even if I receive a Premium Lens Implant
  
- At some future time the intraocular lens that has been implanted in my eye may need to be repositioned, removed or exchanged for another one. This will require further surgery.
  
- Clouding of the lens capsule causing loss of vision is common after modern cataract surgery and is generally accepted as a side effect. It may require a brief laser procedure to open a window in the capsule.
  
- Nothing is foolproof. No surgical procedure is without risk. I understand that the only way to avoid all risk is to not have an operation.

The basic procedures of cataract surgery, the benefits, risks, and alternatives have been explained to me. Although it is impossible for me to know of every possible complication that may occur, my questions have been answered to my satisfaction. In signing this informed consent for cataract operation, and/or implantation of intraocular lens, I am stating I have read this informed consent (or it has been read to me) and I fully understand it and the possible risks, complications, and benefits that can result from the surgery.

I wish to have Doctor \_\_\_\_\_ perform a cataract operation with an intraocular lens implant on my

RIGHT eye                       LEFT eye

\_\_\_\_\_  
Patient (or person authorized to sign for patient)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

\_\_\_\_\_  
Patient's name, printed