Glossary

**Aqueous humor** an ocular fluid that bathes and nourishes the front parts of the eye

**Cataract** a clouding of the eye’s natural lens. The cause of cataracts could be old age, genetic inherited diseases, trauma, use of medications like phenothiazines or steroids, diabetes etc...

**Cornea** the clear window of tissue in front of the iris. The cornea is the first refracting surface of the eye. Corneas can be remodeled now to help refractive errors by means of refractive surgery like Lasix. Sometimes the cornea can become cloudy after a cataract operation.

**Glaucoma** an ocular disease associated with damage to the optic nerve that may eventually lead to blindness

**Intraocular Lens** an artificial lens made of plastic or silicon that is implanted in the eye at the time of cataract surgery. The intraocular lens allows the eye to focus on objects. Intraocular lenses or implants can also be placed into eyes that have had previous cataract surgery.

**Iris** the colored part of the eye

**Phacoemulsification** a type of Extracapsular cataract extraction in which the posterior capsular membrane is permitted to stay in the eye. The purpose of leaving a clear posterior membrane is to place an implant in this posterior capsular structure. Phaco is performed as a “small incision” cataract operation and, thus allows patients to recover more quickly

**Retina** the highly developed and specialized nervous tissue that converts focused rays of light to electrical impulses that flow to the brain by means of the optic nerve

**Optic nerve** a large nerve located behind the eye that carries visual signals to the brain
What You Need to Know About Cataracts

Cataracts are the clouding of the eye's lens, like a window that is "fogged" with steam. When the lens becomes cloudy, light rays cannot pass through it easily and vision becomes blurry. Cataracts are not a growth or a film and do not have to be ripe to be removed. Cataracts start out small and have little effect on vision at first. But as the cataract grows, it clouds more of the lens. You should see your Eye M.D. if you experience:

- Eye injuries
- Certain diseases, such as diabetes
- Medications, such as steroids
- Genetic inheritance

Cataracts are very common — one in every seven persons in the United States has a cataract.

Frequent, unprotected exposure to UV-A and UV-B rays Currently, there are no medications, eye drops, exercises or glasses that will cause cataracts to disappear. And if cataracts don't interfere with your life, you may decide not to do anything about them. When they do begin to interfere with daily activities, they can be treated surgically.

CATARACTS VARY FROM PERSON TO PERSON

- One or both eyes can be affected.
- Part or all of the area of vision may be blocked.
- Loss of vision is usually gradual.

A cataract is a clouding of the normal clear lens of the eye, which prevents light from passing through to focus properly on the retina. Cataracts are a significant cause of blindness in some parts of the world, but fortunately for Americans, technological advances and the availability of new procedures mean they can save their sight. New advances and techniques have made cataract surgery one of the most successful and life-improving surgical procedures.

Contrary to popular myth, a cataract does not have to be "ripe" before it is removed. You should consider having surgery if cataracts make it hard for you to see well enough to do the things you enjoy. Talk to your Eye M.D. if cataracts are interfering with your lifestyle.

Cataract surgery is the most frequently performed surgical procedure in the United States, with more than 1.5 million people having cataract surgery each year. Cataract surgery is usually covered by medical insurances, including Medicare.
Should I Have Cataract Surgery?

When the decreased vision caused by cataracts begins to interfere with daily activities, such as reading, driving and watching television, cataract surgery should be considered. There currently are no medications or eye drops available to make cataracts dissolve naturally. The most common type of cataract surgery performed in the United States is phacoemulsification, usually done as an outpatient procedure under local anesthesia. During this surgery, the Eye M.D. makes a tiny incision through which he or she removes the cloudy natural lens. When the cataract is removed, the surgeon will replace it with a clear plastic intraocular lens (IOL) implant. Stitches might be used, but they will usually dissolve naturally.

Lasers are not currently used to remove or treat cataracts. However, your Eye M.D. may use a laser after cataract surgery to create a clear area and improve vision if the area behind the IOL becomes cloudy several months or years after surgery. Cataract surgery in the United States is a very safe procedure. However, as with any surgery, there is always the risk of complications.

Cataract surgery is the most frequently performed operation in the United States and is also one of the most successful. More than 1.5 million people have cataract surgery each year, with most of those treated regaining useful vision.

Cataract Surgery Techniques

Using the extracapsular cataract extraction technique, the surgeon makes an incision where the cornea and sclera meet. Carefully entering the eye through the incision, the surgeon gently opens the front of the capsule and removes the hard center, or nucleus, of the lens. Using a microscopic instrument, the surgeon then suction out the soft lens cortex, leaving the capsule in place.

Phacoemulsification is a modification of the extracapsular cataract extraction. In phacoemulsification, the nucleus is fragmented by an ultrasonic oscillating probe. The nuclear fragments are simultaneously suctioned from the eye. The size of the incision is smaller than the incision needed to remove the capsule in the extracapsular technique.

An intraocular lens (IOL) is a clear plastic lens that is implanted in the eye during the cataract operation. Lens implants have certain advantages. They usually eliminate or minimize the problems with image size, side vision and depth perception noted by people who wear cataract eyeglasses. They are also more convenient than contact lenses because they remain in the eye and do not have to be removed, cleaned, and reinserted.

Lens Implants Help Focus Light

restore distance vision (eyeglasses may still be needed for near vision)
avoid the need for contact lenses and cataract glasses
maintain side vision and depth perception.

Lens Implants Are Appropriate for Nearly All Patients,
though there is some risk. Complications are usually temporary or treatable. Discuss the risks and benefits with your eye specialist before surgery.
AFTER SURGERY
You should be able to see better and return to your normal activities soon! In the meantime, you should:

GET A RIDE HOME
-- you won't be up to driving.

USE MEDICATION AND EYE DROPS
to help prevent infection and help the eye heal. (Follow the directions exactly.)

WEAR AN EYE PATCH,
eye shield or temporary glasses as prescribed. (These help reduce glare.)

AVOID BENDING, HEAVY LIFTING AND STRENUOUS EXERCISE
for several weeks.

KEEP FOLLOW-UP APPOINTMENTS
-- your eye specialist will want to check your progress.

Call your eye specialist right away if you have any bleeding, increased redness or swelling, sudden pain or decreased vision.

OTHER VISION CORRECTION METHODS
If an intraocular lens isn't implanted, a substitute lens must be used to restore useful vision.

Your eye specialist will help you decide which option will give you the best vision.

CATARACT EYEGLASSES
Spectacles may be prescribed after surgery. If side effects such as excess magnification and poor side vision/depth perception occur, they can be minimized by turning your head instead of the eyes.

CONTACT LENSES
There are various types of lenses that provide good side vision with normal magnification.

Eyeglasses may still be needed for close work.

If cataract surgery has already been performed, an intraocular lens can still be implanted in most cases. This is called a secondary implantation. Ask your eye specialist about it.

RESEARCH CONTINUES in the hope of helping with cataracts through:

IMPROVED DIAGNOSTIC METHODS
that will help predict how well the person will be able to see after surgery

NONSURGICAL TREATMENTS
that may be developed in the future.

GREATER UNDERSTANDING
about what causes cataracts and how their development might be prevented

TECHNICAL ADVANCES involving contact lenses, implant lenses, and surgical instruments and techniques

THE FUTURE IS BRIGHT FOR PEOPLE WITH CATARACTS!
With treatment, most can enjoy better vision soon.

☐ HAVE YOUR EYES EXAMINED regularly.

☐ RECOGNIZE THE SYMPTOMS of cataracts.

☐ SEEK TREATMENT PROMPTLY, if needed.

HERE’S LOOKING AT YOU!
On the right are the four stages of a typical modern cataract operation performed at Wayne Memorial Hospital by Charles S. Zwerling, MD, FACS, FICS

This modern method of surgery can be divided into 4 basic phases:

1. Phacoemulsification of the cataract and removal of the lens nucleus

2. Aspiration of residual cortical material

3. Implantation of intraocular lens or “implant”

4. Closure of wound