



Vision AWARE

Self-Help for Vision Loss

All About Cataracts by Dr. Tina D. Turner

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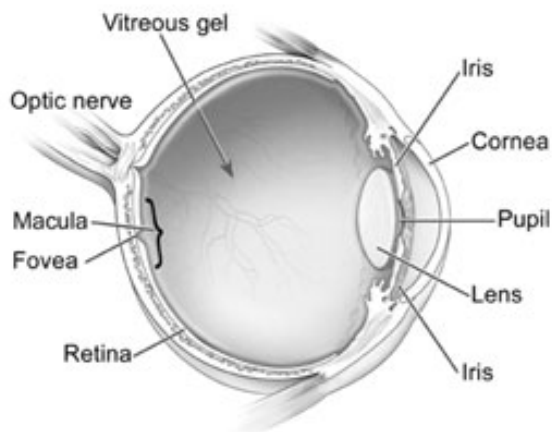
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1. [What Is A Cataract](#)
2. [What Other Kinds of Vision Changes Are Related to Cataracts?](#)
3. [What Causes Cataracts?](#)
4. [Are There Different Types of Cataracts?](#)
5. [What Are the Symptoms of a Cataract?](#)
6. [How Is A Cataract Diagnosed?](#)
7. [When Should an Individual Have Cataract Surgery?](#)
8. [What Are the Risks of Cataract Surgery?](#)
9. [What Happens After the Decision Is Made to Have Cataract Surgery?](#)
10. [What Is an Artificial Lens?](#)
11. [What Happens on the Day of Surgery?](#)
12. [How Is Cataract Surgery Performed?](#)
13. [How Long is the Recovery Time After Cataract Surgery?](#)
14. [Can a Cataract Come Back?](#)

1. What Is A Cataract?

A cataract is a progressive cloudiness (also called [opacity](#) or [opacification](#)), hardening, and yellowing of the normally transparent lens of the eye. According to the [National Eye Institute](#), approximately 50% of all Americans will either have a cataract or will have had cataract surgery by age 80.

To talk about cataracts, it's helpful to understand the parts of the eye, including the location and function of the lens, as shown in this diagram of the eye:



The lens is composed of transparent, flexible tissue and is located directly behind the iris and the pupil. Like the lens in a camera, the lens in the eye helps to focus light and images on the retina, which is the light-sensitive membrane that lines the inside surface of the eye. Nerve cells in the retina convert incoming light into electrical impulses. These electrical impulses are carried by the optic nerve (which is like a television cable) to the brain, which finally interprets them as visual images.

At birth, the natural lens is clear, colorless, and very flexible. Because it is flexible, it is able to change shape, without the help of bifocals or reading glasses, to focus on objects and people that are either nearby or at a distance.

The lens becomes more rounded to focus on near objects (see Fig 1) and more elongated (or stretched) to focus on objects that are far away (see Fig 2).

Over time, however, two primary changes begin to occur in the lens, usually after age 40:

- The lens becomes less flexible, begins to harden, and loses its ability to become more curved. As a result, it becomes difficult to focus on near images (especially print) without the help of bifocals or reading glasses.
- The lens gradually changes color, becoming yellowish or brownish, and is no longer transparent. As a result, vision acquires a "brownish" tint, making it difficult to tell the difference between certain colors, such as navy blue, brown, and black, or blue, green and purple.

This hardening and yellowing of the lens over time also causes the most common type of cataract, called a [nuclear sclerotic cataract](#). "Nuclear" refers to the gradual clouding of the central portion of the lens, called the nucleus; "sclerotic" refers to the hardening, or sclerosis, of the lens nucleus.

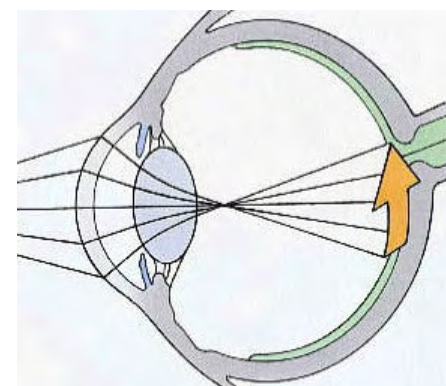


Fig 1: Lens is more rounded to focus on near objects

2. What Other Kinds of Vision Changes Are Related to Cataracts?

The hardening and yellowing of the lens over time can also produce the following functional vision changes:

- **Reduced ability to perceive contrast:** Seeing an object clearly against a background of the same color – a white coffee mug on a light tablecloth, or a brown chair against a dark rug, for example – becomes more difficult and requires an increase in background contrast to make it "stand out."
- **Problems with depth perception:** Judging distances accurately – the height of a step or curb, or the depth of a bathtub, for example – requires closer attention. In addition, shadows and shadow patterns can be incorrectly interpreted as drop-offs, level changes, steps, or obstructions.
- **Need for more light:** As we get older, we generally need three to four times more light to perform everyday activities. Seeing clearly enough to read, write, sew, knit, or do home repairs usually requires a brighter, more focused light along with reading glasses or bifocals. This need for increased light occurs gradually, and most people aren't aware that their lighting requirements have changed over time.
- **Increased sensitivity to glare:** Although we need more light as we get older, too much light can also cause problems. Bright outdoor sunlight or reflected light from a hallway with highly polished floors can make it difficult to see clearly because too much light can also produce glare, which can interfere with seeing our surroundings clearly.
- **Overall blurring:** People, objects, and colors look hazy, cloudy, and "washed out." This lack of detail makes it difficult to tell time, read, watch television, see food on a plate, and walk safely indoors and outdoors, since depth perception may also be affected.

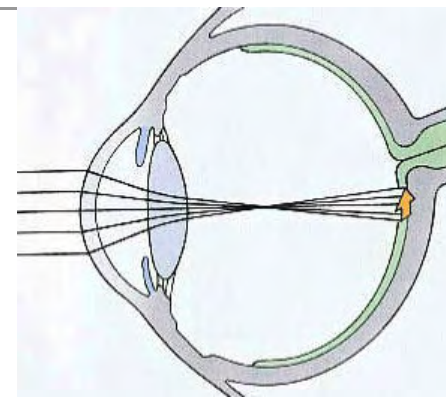


Fig 2: Lens is more elongated to focus on near objects

Some individuals with cataracts describe the effect as being similar to looking through a window that is hazy and streaked with dirt.

3. What Causes Cataracts?

The most common cause of cataracts is advancing age and the passage of time. While the origin and development of age-related cataracts is not yet completely understood, statistics suggest that the longer we live, the more likely it is that the lens will become less clear and flexible. According to data from the [Beaver Dam Eye Study](#), 38.8% of men and 45.9% of women older than 74 have visually significant cataracts.

In addition to the aging process, cataracts can also be caused by any of the following:

- **Medication:** Corticosteroids to reduce inflammation (such as prednisone)
 - **Physical injury or trauma:** A blow to the eye, a cut or puncture, chemical burns, or electric shock
 - **Radiation:** Long-term exposure to ultraviolet radiation from the sun (both UVA and UVB)
 - **Poor nutrition:** Diets that are deficient in antioxidants, such as beta-carotene (vitamin A), selenium, and vitamins C and E
 - **Smoking and second-hand smoke:** Individuals who smoke 20 or more cigarettes a day have twice the risk of nonsmokers for developing cataracts.
 - **Systemic diseases,** such as [diabetes and diabetic retinopathy](#);
 - **Eye diseases,** such as [uveitis](#), which is an inflammatory process that affects the interior of the eye;
 - Cataracts can also be inherited or congenital (from birth)
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4. Are There Different Types of Cataracts?

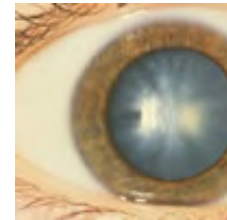
Yes. There are three primary types of age-related cataracts: Nuclear Sclerotic, Cortical, and Posterior Subcapsular. As a person ages, any one type, or a combination of any of these three types, can develop over time:

Nuclear sclerotic

This is the most common type of age-related cataract, caused primarily by the hardening and yellowing of the lens over time. "Nuclear" refers to the gradual clouding of the central portion of the lens, called the **nucleus**; "sclerotic" refers to the hardening, or **sclerosis**, of the lens nucleus. As this type of cataract progresses, it changes the eye's ability to focus, and reading (or close) vision may temporarily improve. This symptom is referred to as "second sight," but the vision improvement it produces is not permanent. A nuclear sclerotic cataract progresses slowly and may require many years of gradual development before it begins to affect vision.

Cortical

"Cortical" refers to white [opacities](#), or cloudy areas, that develop in the lens **cortex**, which is the peripheral (outside) edge of the lens. Changes in the water content of the lens fibers create clefts, or fissures, that look like the spokes of a wheel pointing from the outside edge of the lens in toward the center. These fissures can cause light that enters the eye to scatter, creating problems with blurred vision, glare, contrast, and depth perception. See [What Other Kinds of Vision Changes Are Related to Cataracts?](#) People with diabetes are at risk for developing cortical cataracts.



A cortical cataract. Source: National Eye Institute

Posterior subcapsular

This type of cataract begins as a small [opaque](#) or cloudy area on the "posterior," or back surface of the lens. It is called "subcapsular" because it forms **beneath** the **lens capsule**, which is a small "sac," or membrane, that encloses the lens and holds it in place. Subcapsular cataracts can interfere with reading and create "halo" effects and glare around lights. People who use steroids, or have [diabetes](#), extreme nearsightedness, or [retinitis pigmentosa](#) may develop this type of cataract. Subcapsular cataracts can develop rapidly and symptoms can become noticeable within months.

Visit [Visionweb](#) for illustrations of nuclear sclerotic, cortical, and posterior subcapsular cataracts.

Please note: A cataract is not a tumor, nor is it a "film" or tissue growth that develops over the cornea, or front surface of the eye. Although the majority of cataracts are not visible to the naked eye, there are some instances in which the pupil can appear white because the lens is completely clouded by a very dense cataract:

5. What Are the Symptoms of a Cataract?

Symptoms of cataracts can include any or all of the following:

- Blurred, hazy, or "milky" vision, as if looking through a dirty or cloudy piece of glass, or through glasses that always seem to need cleaning
 - Difficulty reading regular print and/or street signs
 - Needing a brighter, more focused light for reading and other close tasks, such as sewing and crafts
 - Problems with glare, especially bright sunlight and room lights
 - Sensitivity to oncoming headlights while driving at night
 - Difficulty seeing at night
 - Seeing "halos" around lights, especially at night
 - Problems telling certain colors apart, such as navy blue, brown, and black, or blue, green and purple
 - Problems with depth perception, such as judging the height of a step or curb, or the depth of a bathtub
 - Frequent changes in prescription eyeglasses or contact lenses
 - Development – or worsening – of nearsightedness
 - Double vision (diplopia), or seeing a "ghost" image when using the affected eye
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6. How Is A Cataract Diagnosed?

An ophthalmologist or optometrist diagnoses a cataract by doing a complete medical eye examination, which should include all of the following components:

A health and medication history:

- Your overall health and that of your immediate family
- The medications you are taking (prescription and over-the-counter)
- Questions about high blood pressure (hypertension), diabetes, smoking, and sun exposure.

A vision history:

- How well you can see at present, including any recent changes in your vision
- Eye diseases that you or your family members have had, including macular degeneration and glaucoma
- Previous eye treatments, surgeries, or injuries
- The date of your last eye examination

A refraction, or visual acuity testing:

- Distance and near vision [acuity tests](#) to determine the sharpness or clarity of your reading and distance vision
- Testing your vision with different lenses (sometimes contained in a machine called a [phoropter](#)) to determine if your vision can be improved or corrected with regular glasses or contact lenses

Visual field testing:

- To determine how much side (or peripheral) vision you have and how much surrounding area you can see.
- The most common type of visual field test in a regular eye exam is called a confrontation field test, in which the doctor briefly flashes several fingers in each of the four quadrants of your visual field while seated opposite you.

An eye health evaluation:

- An examination of the external parts of your eyes and your lens, using a special microscope called a [slit lamp](#). Your doctor will look for a yellowing of the lens, clefts/fissures, or white opacities that indicate the presence of cataracts.
- A [dilated eye \(or fundus\) examination](#), which includes the use of an [ophthalmoscope](#). Special eye drops, such as [tropicamide](#), will dilate, or open, your pupil, which allows the doctor to observe the internal parts of your eye, including the retina and optic nerve.
- A test of the fluid pressure (or aqueous humor) within your eyes.

Individuals who are over 40 should have a dilated eye examination from an ophthalmologist or optometrist at least every two years. African Americans and/or individuals with a family history of glaucoma who are over 35 should have a dilated eye examination from an ophthalmologist or optometrist every year.

Please note: While an ophthalmologist or optometrist can diagnose a cataract, only an ophthalmologist is qualified to perform cataract surgery. An ophthalmologist will have the initials M. D. after his or her name.

7. When Should an Individual Have Cataract Surgery?

Dr. Turner:

"To date, no medication or eye drop has been proven to prevent or reverse cataract formation. If a cataract is causing nearsightedness or a change in an individual's prescription, new prescription eyeglasses can help improve blurred vision. The only treatment for a cataract is surgical removal of the natural lens."

A cataract should not be removed simply because it is present. Many people have cataracts that do not cause blurred vision, interfere with activities of daily living, or otherwise prevent them from leading active and productive lives. In such cases, these individuals should not undergo unnecessary surgery to remove their cataracts.

However, if an individual has blurred vision that makes it difficult to read print or read signs while driving; has disabling glare while driving at night; or has difficulty engaging in hobbies such as knitting, crocheting, or doing crossword puzzles, it is time to consider cataract surgery. In short, if an individual has a cataract and resultant blurred vision that makes it difficult to do anything he or she wants and needs to do, it is time to consider cataract surgery.

If there are cataracts in both eyes that require surgery, the surgeries are usually performed several weeks apart. Cataract surgery on both eyes at the same time is not recommended because there is a possibility of complications affecting both eyes at the same time, the most worrisome being infection.

A cataract does not have to become "ripe" before it can be removed. In the past, the lens could not be extracted safely from the eye unless it was at a relatively advanced stage of development. With modern advances in cataract surgery, the lens can now be removed from the eye at any stage of development.

It is true that the longer a cataract develops, the more it hardens. The firmer or more developed a cataract is, the more difficult it can be to remove. In certain situations, it is safer to remove a cataract sooner rather than later; in most cases, however, an individual should not undergo cataract surgery unless he or she is experiencing blurred vision caused by the cataract.

It is also true that if cataracts are allowed to develop for long periods of time, they can cause inflammation or increased intraocular (within the eye) pressure that can lead to glaucoma. In these situations, it is extremely important to remove the cataract to prevent loss of vision from the resultant inflammation or glaucoma. This scenario rarely occurs in the United States, however, due to regular access to most types of health care.

It's important to understand that it is the patient who should – and must – make the decision to undergo cataract surgery. It is the doctor's responsibility to educate patients and give them the knowledge they need to make an independent and well-informed decision regarding cataract treatment."

8. What Are the Risks of Cataract Surgery?

Dr. Turner:

"All surgery entails risk. Fortunately, with favorable outcomes at approximately 98%, cataract surgery is highly successful. There is still potential for serious complications, however, some of which can result in pain, permanent loss of vision, or even loss of the eye.

These complications can include infection, retinal detachment, inflammation inside the eye, swelling in certain parts of the eye, retention of a piece of the cataract inside the eye, glaucoma, hemorrhage, possible worsening of certain eye conditions (such as [diabetic retinopathy](#)), and failure to improve vision if other eye diseases are present (such as [macular degeneration](#)). Sometimes, these complications may require further treatment or surgery in an attempt to repair them.

[Endophthalmitis](#) is a serious infection inside the eye that can develop after cataract surgery. Although many precautions are taken to prevent complications after cataract surgery, infection can still develop. The chance of developing infection after cataract surgery in the United States is approximately 0.1%.

Endophthalmitis after cataract surgery is usually the result of a bacterial infection. The most common bacteria found to be the culprits in this type of infection are the "staph" (staphylococcus) and "strep" (streptococcal) bacteria, which normally live on human skin. Endophthalmitis usually develops in the first week after cataract surgery and causes a range of symptoms, including pain, redness, decreasing vision, eyelid redness or swelling, or a yellow/green discharge from the eye.

Should any of these symptoms develop after cataract surgery, it is extremely important to seek medical care immediately. The sooner endophthalmitis is treated, the better the prognosis for the eye and vision. Endophthalmitis is treated either with antibiotics injected into the eye or with surgery plus antibiotics injected into the eye. Even with treatment, the vision and the eye can be permanently damaged.

[Retinal detachment](#) occurs when the retina, the light-sensitive tissue that lines the inside surface of the eye, develops a hole or tear and subsequently detaches, or falls away, from the wall of the eye. Once separated from the wall of the eye, the retina loses part of its blood supply, and without a blood supply, the cells in the retina begin to die. Once lost, retinal cells do not regenerate. It is the retina that is responsible for processing visual information and sending it to the brain. Thus, once the retina is damaged, it results in permanent loss of vision. The chance of developing a retinal detachment after cataract surgery is approximately 1 in 3000. If diagnosed early, a retinal tear can be treated with [thermal laser photocoagulation](#). Retinal detachment usually requires surgical intervention.

It is important that you fully understand the risks, benefits, and alternatives to cataract surgery, and that you ask any questions and voice any concerns you may have. In order to make a well-informed decision to have surgery, it is extremely important that you fully understand these risks."

9. What Happens After the Decision Is Made to Have Cataract Surgery?

Dr. Turner:

"Once a patient decides to have cataract surgery, the patient and surgeon should discuss plans for the surgery, such as the anesthesia that will be used, the patient's expectation for his or her vision, and what the patient should expect during and after the surgery.

Commonly, cataract surgery is performed with **topical anesthesia**. This is accomplished by instilling a very strong numbing medication into the eye. It is usually accompanied by medication in the patient's arm intravenously to help him or her feel relaxed and comfortable. This is the least risky form of anesthesia, and most patients do extremely well with topical anesthesia and some intravenous sedation. Sometimes, medication is injected around the eye socket to numb the eye and paralyze eye and eyelid movement. These injections carry their own risk, however, and are being used less frequently.

On occasion, **general anesthesia** may be needed. Since cataract surgery performed with topical anesthesia requires patient awareness and cooperation, general anesthesia is usually required for children, patients with developmental delays, and patients with dementia. During cataract surgery, patients must lay flat and still; therefore, patients with movement disorders, such as Parkinson's Disease or restless leg syndrome, may also require general anesthesia. Patients who have difficulty breathing while lying flat, or who have back or neck pain/disorders that prevent them from being comfortable when lying flat may also require general anesthesia for cataract surgery.

After deciding to have cataract surgery, the patient and physician should discuss the options for correcting his or her vision post-surgery. Artificial lenses, which are implanted in the eye during cataract surgery to replace the natural lens that is being removed, can make vision clear once again and, in some cases (but not always), reduce the need for corrective eyeglasses after surgery.

The surgeon will take special eye measurements before surgery, including the length of the eye and the curvature of the cornea, to determine what power the artificial lens should be.

Cataract surgery can decrease an individual's dependency on eyeglasses and, in some cases, eliminate the need for eyeglasses after surgery. However, some patients will still need eyeglasses to fully correct their distance and/or reading vision to 20/20."

10. What Is an Artificial Lens?

Dr. Turner:

"Once the natural lens in the eye has been removed, the eye loses its ability to focus light and images clearly on to the retina, the light-sensitive membrane that lines the inside surface of the eye. Before the development of artificial lenses, hard contact lenses or very thick eyeglasses were the only options for correcting vision after cataract surgery.

Artificial intraocular (within the eye) lenses were developed in the early part of the 20th century, and [Dr. Harold Ridley](#) implanted the first artificial lens in 1949 in London. In 1952, the first artificial lens was implanted in the United States at Wills Eye Hospital in Philadelphia. Since that time, cataract surgery and artificial lenses have continued to evolve and develop. In most cases, the natural lens is removed and the artificial lens is implanted during the same surgery. The artificial lens is usually placed within the lens capsule, which is the small "sac" or membrane that once enclosed the natural lens and held it in place.

Artificial lenses are made of inert (or non-reactive) plastics, such as [PMMA](#), silicone, and acrylic. Just like natural lenses, artificial lenses have refractive power, or the ability to bend light, which helps to focus light rays and images on the retina. Because of this refractive power, it is now possible to correct nearsightedness and farsightedness with artificial lenses."

Monofocal Lenses

- At present, monofocal lenses are the type most commonly implanted.
- Since "mono" means "one," monofocal lenses provide **one** type of **focused**, or clear, vision. They provide clear vision **either** at distance or near, but not both.
- Most patients who select monofocal lenses choose to have good distance vision and use reading glasses to help with near visual tasks, such as reading, computer work, or sewing.
- Some patients, however, may choose to have better near vision and use eyeglasses that will help correct distance vision.
- Monofocal lenses are typically covered by insurance and Medicare, and usually require no additional out-of-pocket payment.



An artificial lens looks like this intraocular lens

Astigmatic Lenses

- Astigmatic Lenses are monofocal lenses that can correct [astigmatism](#). The degree of astigmatism present in the eye must be less than +3.00 diopters, however, for astigmatic lenses to be effective.
- Because astigmatic lenses can correct astigmatism, they may reduce the need for an astigmatism correction in the patient's eyeglasses.
- Astigmatic lenses are **not** fully covered by insurance and Medicare, and usually require a substantial out-of-pocket patient contribution.

Dr. Turner:

"It is possible, however, to implant a monofocal lens in one eye for distance vision and a monofocal lens in the other

eye for reading vision. This technique is called [monovision](#) and can provide clear vision at both distance and near after cataract surgery.

Monovision works very well for some patients, while other patients do not tolerate it very well at all. If a patient has used monovision contact lenses in the past, with one eye corrected for distance and the other for near, the same type of monovision can be created with cataract surgery. If a patient has never experienced monovision, but is interested in learning more about it, it is recommended that he or she experiment with monovision eyeglasses or contact lenses prior to cataract surgery and determine if monovision is an appropriate solution."

Multifocal lenses

- Since "multi" means "more than one," multifocal lenses provide more than one type of focused, or clear, vision. They provide clear vision both at distance and near simultaneously.
- Because multifocal lenses correct both distance and reading vision, they can reduce the patient's dependence on eyeglasses and contact lenses.
- Multifocal lenses are not fully covered by insurance and Medicare, and usually require a substantial out-of-pocket patient contribution.

Dr. Turner:

"Multifocal lenses can present problems, however. As [The American Academy of Ophthalmology](#) notes, 'Pilots, night drivers or those who spend a lot of time in front of the computer may not be good candidates for multifocal lenses. Patients who are intolerant of a small amount of glare and/or halos around lights, especially at night, may not be good candidates for these types of lenses.' Also, patients who have significant astigmatism or macular disease should not have multifocal lenses."

You can learn more about artificial lenses at the following resources:

- [Multifocal Intraocular Lenses: Frequently Asked Questions](#) from the UCLA Laser Refractive Center
 - [Monofocal vs. Multifocal Implants](#) from ImproveYourVision.com
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11. What Happens on the Day of Surgery?

Dr. Turner:

"Cataract surgery is outpatient surgery. A patient will usually spend approximately four hours total at an ambulatory surgery center. After arriving and registering, the patient is taken to the preoperative area where the patient meets and is examined by a nurse, nurse anesthetist, and anesthesiologist.

The nurse will give the patient a series of several different types of eye drops to dilate the pupil and prepare the eye for cataract surgery. The nurse will also start an intravenous drip, review the patient's medical history, and determine the patient's understanding of the procedure.

The nurse anesthetist and anesthesiologist will confirm the patient's understanding of the surgery, confirm the surgical site, review the patient's medical history, discuss the anesthesia that will be used, and answer the patient's questions regarding anesthesia. The surgeon should also see the patient in the preoperative area to confirm and mark the surgical site and answer any questions the patient and their family and friends may have.

Once prepared for surgery, the operating room nurse and nurse anesthetist will take the patient to the operating room (OR). Once in the OR, the patient is positioned lying flat. It is very important that the patient be comfortable during the surgery. It is usually cold in the OR, and there are lots of warm blankets to keep patients warm. Instruments to monitor the heart and blood oxygen level are placed on the patient. To decrease anxiety and increase comfort, the patient is given an intravenous sedative.

The patient's eye and face are cleaned with diluted [Povidone-iodine](#). The patient is covered with a sterile drape, the eyelids are held open with a [speculum](#), topical anesthetic is instilled in to the eye, and an operating microscope is brought into position over the eye. Since the microscope light is shining into one eye and the other eye is covered with the drape, the patient will not be able to observe the surgery. The patient may see different colors and shapes of light as a result of the bright microscope light.

After being given medication to numb the eye and medication for sedation/relaxation, the patient should feel comfortable and should not experience any pain. If there is any discomfort, all the patient has to do is tell the surgeon, and additional medication will be administered. The goal of the OR team is to complete the surgery successfully with the patient completely comfortable. An average cataract operation takes approximately 10-20 minutes, but surgery times may vary.

After the surgery, antibiotic and anti-inflammatory medications are instilled into the eye and an eye shield is taped over the eye. The patient is then taken to the recovery area.

In the recovery area, breakfast is served, which is usually greatly appreciated as the patient has been without food and water since midnight. Instructions are given to the patient and their family and friends, including caring for the eye and restricting activity until the visit with the doctor on the following day. The patient shouldn't drive and should just lounge and relax for the next 24 hours.

Most patients don't experience pain after cataract surgery. A scratchy sensation after eye surgery is perfectly normal, but aching pain is not. As long as any discomfort can be relieved by over-the-counter acetaminophen, no action is needed. If acetaminophen does not relieve discomfort or pain, the doctor should be called.

12. How Is Cataract Surgery Performed?

Dr. Turner:

"Two very small incisions (one large, approximately three millimeters, or one-tenth of an inch, and one small, approximately one millimeter, or one thirty-second of an inch) are made in the cornea, which is the transparent dome-shaped membrane that covers the front part of the eye. A thick, gluey, [viscous](#) material ([Amvisc](#)® or [Viscoat](#)®) is injected into the front part of the eye to help maintain its shape during surgery. This viscous material is made from substances that occur naturally in the body. Because it is thick, this material will not leak out of the incisions during surgery.

Phacoemulsification

The surgeon creates an opening in the natural "sac" or "bag" that holds the lens in place, called the lens capsule. The lens is separated from the lens capsule by using a balanced salt solution. Once the capsule is open and the lens can move freely inside the capsule, a special ultrasound device is used to break the lens into small pieces and suck it out of the eye. This technique is called [phacoemulsification](#). Prior to the development of phacoemulsification, the lens used to be removed in one solid piece through a very large incision (8–12 millimeters, or ¼–½ inch). That surgery entailed considerably more risk and had a significantly longer recovery time.

After the lens is removed, additional viscous material is injected into the lens capsule to hold it open and make room for the new artificial lens. The folded artificial lens is inserted into the "sac" or capsule, where it is then allowed to unfold. The viscous material that maintained the shape of the eye during surgery is removed. The two incisions usually self-seal and do not require stitches.

Phacoemulsification was introduced more than 40 years ago and is now the most common method used to remove cataracts. Lasers are not yet commonly used to perform cataract surgery in the United States, but are currently being investigated in clinical trials in the United States to determine their effectiveness and advantages over phacoemulsification."

13. How Long is the Recovery Time After Cataract Surgery?

Dr. Turner:

"Some patients see very well the day after cataract surgery. Other patients see well a few days after surgery, and still others may need a full month to reach their maximum vision improvement.

During the first week after surgery, it generally is recommended that the patient keep the eye covered either with eyeglasses or the eye shield at all times to protect it from being bumped or rubbed. A small amount of pressure can easily open the incision, and protecting the eye prevents this. Also, it is recommended that the patient refrain from (a) bending with the head below the waist, (b) lifting over 10 pounds, and (c) straining (on the toilet, for example) to the point of holding one's breath. All these activities increase the pressure inside the eye and can open the incision.

Antibiotic and anti-inflammatory eye drops are used in the weeks after cataract surgery to help prevent infection and control inflammation. A few weeks after the surgery, the patient is checked for eyeglasses and given a final prescription.

Artificial lenses last for a lifetime, and with newer types of lenses, it is very rare to experience a lens-associated complication. Occasionally, an artificial lens can dislocate (move out of its intended position) and result in blurred vision. This usually occurs as a result of trauma to the eye and the doctor should be contacted immediately."

14. Can a Cataract Come Back?

Dr. Turner:

"Because a cataract is a clouding, or [opacification](#), of the natural lens and cataract surgery entails removal of the natural lens, a cataract cannot come back after surgery. Fortunately, artificial lenses do not form cataracts.

However, the lens capsule, which is the small "sac" or membrane that once enclosed the natural lens and held it in place, can become cloudy after surgery. This is called [capsular opacification](#) and it develops in approximately 25% of patients after cataract surgery. If this occurs, the patient may develop symptoms that are similar to those of a cataract (See [What Are the Symptoms of a Cataract?](#)), such as blurry or hazy vision, difficulty reading regular print, and sensitivity to bright lights and glare. Capsular opacification is treated with laser to create an opening in the center of the opacified lens capsule that allows light to enter the eye. The procedure is painless, requires less than five minutes, and is usually performed in the doctor's office."

Other Vision-Related Rehabilitation Services for Adults with Vision Problems

Visit the following links from VisionAWARE to learn more about eye conditions, vision-related rehabilitation services and professionals, low vision and low vision eye examinations, optical and non-optical low vision devices, and payment options for vision-related rehabilitation:

General Information and Resources

- [An overview of eye conditions](#) and [vision-related rehabilitation services and professionals](#)
- [Resources for vision-related rehabilitation products and services](#)

Eye Care and Low Vision Services

- [Finding the type of eye care professional who is right for you](#)
- [What is a low vision examination?](#)
- [What are low vision optical devices?](#)
- [What are low vision non-optical devices?](#)

Vision-Related Rehabilitation Services and Resources

- [An explanation of vision-related rehabilitation and services](#)
- [The types of professionals who provide vision-related rehabilitation services](#)
- [How do I pay for vision-related rehabilitation services?](#)
- [Self-help and support groups for adults who are blind or have low vision](#)

Also, be sure to visit [VisionAWARE's](#) Question & Answer links for more information on [Personal Self-Care](#), [Home Management](#), and [Home Modifications](#).

Visit the Following Online Resources for More Information About Cataracts and Cataract Surgery

- [All About Vision](#) - Cataract signs and symptoms, causes, and treatment, with illustrations of the functional visual effects of cataracts.
- [DocShop.com](#) - A cataract surgery guide, including information about symptoms, types, diagnosis, and treatment
- [ImproveYourVision.com](#): The Cataract Center: What are cataracts, cataract prevention, multifocal IOL, phacoemulsification, monofocal vs. multifocal implants, insurance coverage
- [The Macula Center](#) - Also about cataracts, including causes, prevention, surgery, and illustrations of the functional visual effects of cataracts
- [MayoClinic.com](#) - Cataracts: An introduction, signs and symptoms, causes, risk factors, when to seek medical advice, treatment, self-care, and prevention
- [Medline Plus](#) - An interactive tutorial about cataracts
- [National Eye Institute](#) - Facts about cataracts: A definition, causes and risk factors, symptoms and detection, treatment, current research
- [National Eye Institute Publications Catalog](#) - A range of publications about cataracts, in English and Spanish

- [National Institutes of Health: Senior Health](#) - Cataracts: Definition, development and risk factors, symptoms and detection, treatment and prevention, frequently asked questions
 - [StLukesEye.com](#) - Cataracts defined, with illustrations of the functional visual effects of cataracts. Includes information on cataract surgery, including selecting an implant and frequently asked questions
 - [Vision Channel](#) - An overview of cataracts, including types, causes, signs and symptoms, and diagnosis
 - [West Texas Eye Associates](#) - An explanation of cataracts and cataract surgery, with illustrations of the functional visual effects of cataracts
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About VisionAWARE

AWARE is a 501 (c)(3) non-profit social service organization. AWARE's primary focus is [VisionAWARE](#), a "Self-Help for Vision Loss" web site that includes Questions & Answers on a wide range of topics, including eye diseases and disorders, home management, home modification, reading and writing, personal care and grooming, recreational activities, crafts, braille, computers and technology, and helpful services and resources.

For more information, e-mail Maureen A. Duffy, AWARE's Editorial Director, at maureen.duffy@visionaware.org

[Your donation](#) can help us continue to promote self-help vision rehabilitation hints, provide step-by-step adaptive techniques, and disseminate information on services and independent living resources to adults with vision loss, their families and friends, caregivers, and related professionals.

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