CONDITION

Cataracts

Learn how cataracts affect vision, what raises the risk, how eye doctors diagnose them, and when cataract surgery may help.

WHAT IT IS
Cloudy area in the eye lens

BODY SYSTEM
Eyes and vision

MAIN SYMPTOMS
Blurred vision, poor night vision, glare and halos, faded colors

WHAT CAUSES IT
Aging-related lens changes

HOW IT IS DIAGNOSED
Comprehensive eye examination and slit-lamp examination

MAIN TREATMENT
Cataract surgery

CAN IT BE CURED?
Yes, surgery removes the cataract

IS IT AN EMERGENCY?
Sometimes, sudden vision loss or severe eye pain

LONG-TERM OUTLOOK
Gradual vision loss, but surgery is generally effective

Overview

A cataract is a cloudy area in the lens of the eye. The lens is a clear structure behind the colored part of the eye. It focuses light onto the retina, the light-sensitive tissue at the back of the eye.

A healthy lens is mostly transparent. With a cataract, proteins and fibers within the lens change and become cloudy. Light no longer passes through or focuses as clearly. Vision may become blurred, dim, hazy, or less colorful.

Most cataracts develop gradually with aging. They can affect one or both eyes, although each eye may change at a different rate. Cataracts do not spread from one eye to the other and are not contagious.

Cataracts matter because they can interfere with reading, driving, recognizing faces, working, and moving around safely. Early changes may be manageable with updated glasses, brighter lighting, and reduced glare. When a cataract begins to limit important daily activities, surgery can remove the cloudy lens and replace it with a clear artificial lens.

A cataract is not a growth on the surface of the eye. It also differs from glaucoma, macular degeneration, and other eye conditions that may cause vision loss. An eye examination can help determine which condition is affecting vision.

Symptoms

Cataracts usually develop slowly. A person may not notice the early changes, especially if one eye sees better than the other.

Common symptoms include:

Some people temporarily become better able to read without glasses as the lens changes. This is sometimes called "second sight," but it does not mean the cataract is improving. Near vision often becomes blurry again as the cataract progresses.

Cataracts generally do not cause eye pain, marked redness, or a sudden loss of vision. Those symptoms may point to another eye problem and should not be assumed to be from a cataract.

Contact an eye care professional promptly for a new or sudden vision change, new flashes of light, many new floaters, or a dark curtain or shadow in the field of vision. Seek emergency care for sudden severe eye pain, major vision loss, an eye injury, or eye symptoms accompanied by severe headache, nausea, or vomiting.

- Blurred, cloudy, or hazy vision
- More difficulty seeing in dim light or at night
- Glare from sunlight, headlights, or indoor lighting
- Halos around lights
- Colors that appear faded, yellowed, or less vivid
- Frequent changes in a glasses or contact lens prescription
- Double vision in one eye
- A need for brighter light when reading
- Reduced ability to see contrast, such as a light-colored object against a pale background

Causes and risk factors

Aging is the most common cause of cataracts. Over time, the lens becomes less flexible and less transparent. Changes in its proteins and fibers can scatter or block light.

Cataracts are often described by the part of the lens they affect. A nuclear cataract forms near the center. A cortical cataract develops in the outer part and may create spoke-like cloudy areas. A posterior subcapsular cataract develops near the back surface of the lens and may cause glare or reading difficulty earlier than some other types.

Factors associated with a higher chance of developing cataracts or developing them earlier include:

Do not stop a prescribed corticosteroid like prednisone or hydrocortisone because of cataract concerns without speaking with the clinician who manages the medicine. The risks of stopping treatment may be greater than the eye-related risk.

Some babies are born with cataracts, while others develop them during childhood. These are called congenital or pediatric cataracts. They may be related to genetic changes, metabolic disorders, infection during pregnancy, or other conditions. Sometimes no cause is found. A significant cataract in a child needs timely specialist assessment because clear vision is important for normal visual development.

Wearing sunglasses that block ultraviolet radiation, avoiding smoking, and managing diabetes may support eye health. These steps cannot guarantee that cataracts will be prevented, and they cannot clear a cataract that has already formed.

- Older age
- Diabetes
- Cigarette smoking
- Long-term exposure to ultraviolet light from the sun
- Previous eye injury, inflammation, or surgery
- Use of corticosteroid medicines, especially over a long period
- Radiation exposure
- A family history of cataracts
- Heavy alcohol use

Diagnosis

An optometrist or ophthalmologist can diagnose a cataract during a comprehensive eye examination. An ophthalmologist is a medical doctor who specializes in eye disease and eye surgery. An optometrist provides eye examinations, vision correction, and care for many eye conditions.

The examination usually includes a visual acuity test using an eye chart. The clinician may also check how glare affects vision and whether an updated glasses prescription improves it.

A slit-lamp examination uses a microscope and a narrow beam of light to examine the front structures of the eye, including the lens. Dilating drops may be used to enlarge the pupil so the clinician can examine the lens, retina, and optic nerve more fully. The effects of dilation can include temporary light sensitivity and blurred near vision.

Eye pressure may also be measured. Additional tests may be needed if symptoms could be caused by glaucoma, retinal disease, corneal disease, or another condition.

The presence of a cataract does not automatically mean surgery is needed. The clinician will consider how much the cataract affects vision and whether that change interferes with activities that are important to the patient. Before surgery, measurements of the eye help select the strength of the replacement lens.

Treatment and management

No medicine, eye drop, supplement, or exercise has been proven to remove an established cataract. In its early stages, however, practical changes may improve day-to-day vision.

These may include an updated glasses prescription, brighter task lighting, anti-glare measures, magnifying aids, and limiting night driving if glare makes it unsafe. Regular eye examinations can track changes in vision and check for other eye conditions.

Cataract surgery is the definitive treatment. It may be considered when the cataract interferes with activities such as reading, driving, working, watching television, managing medicines, or moving around safely. Surgery may also be recommended when a cataract prevents an eye specialist from examining or treating another eye condition.

There is usually no need to wait until a cataract is "ripe." The decision is generally based on symptoms, examination findings, overall eye health, and the patient's goals. Cataracts that cause little difficulty can often be monitored.

During the most common operation, called phacoemulsification, the surgeon makes a small opening in the eye. Ultrasound energy breaks the cloudy lens into small pieces, which are removed. A clear artificial lens, called an intraocular lens or IOL, is placed inside the eye. Cataract surgery is commonly performed without an overnight hospital stay.

Different IOLs provide different focusing options. A monofocal lens usually provides clear focus at one main distance. A toric lens can correct some astigmatism, which is an uneven curve of the cornea. Multifocal and extended-depth-of-focus lenses may reduce dependence on glasses at more than one distance, but they can have tradeoffs such as glare, halos, or reduced contrast. Some people will still need glasses after surgery regardless of lens type.

The surgeon will review expected benefits, lens choices, and possible risks. Other eye diseases, including macular degeneration, glaucoma, diabetic eye disease, or corneal problems, can limit how much vision improves.

Patients should tell the surgical team about all medicines and supplements they take. Blood thinners and other prescribed medicines should not be stopped unless the treating clinician or surgical team provides specific instructions.

After surgery, patients generally use prescribed eye drops and avoid rubbing or pressing on the eye. Instructions about bathing, exercise, lifting, driving, and eye protection vary with the procedure and individual circumstances. The surgical team's directions should take priority over general information.

Complications

An untreated cataract can gradually reduce vision. This may make driving, reading, and recognizing hazards more difficult. Poor vision can also contribute to falls, loss of independence, and reduced participation in usual activities. In uncommon cases, a very advanced cataract may contribute to inflammation or increased pressure inside the eye.

Cataract surgery is generally effective, but no operation is risk-free. Possible complications include infection inside the eye, bleeding, inflammation, swelling of the cornea or retina, increased eye pressure, movement of the artificial lens, retinal detachment, and persistent vision problems. Serious complications are uncommon, but they may threaten vision and require prompt treatment.

Months or years after surgery, the thin capsule that holds the artificial lens may become cloudy. This is called posterior capsule opacification. It is sometimes described as a "secondary cataract," although the original cataract has not grown back. An ophthalmologist can usually treat the cloudy capsule with a brief laser procedure called a YAG laser capsulotomy.

After cataract surgery, obtain urgent advice from the surgical team for increasing redness, worsening pain, discharge, or vision that becomes worse rather than better. Sudden vision loss, severe eye pain, new flashes or numerous floaters, or a curtain-like shadow requires immediate eye care.

Follow up

If a cataract is not yet limiting daily life, routine follow-up may include periodic eye examinations and an updated vision prescription when needed. The appropriate schedule depends on age, symptoms, diabetes, other eye conditions, and the rate of change. Arrange an earlier visit if vision begins to interfere with driving, reading, work, or safe movement.

After surgery, follow-up visits allow the clinician to check healing, eye pressure, vision, and the position of the artificial lens. Use prescribed drops as directed and attend scheduled visits even if the eye feels comfortable.

Some temporary blur, mild irritation, or light sensitivity can occur during recovery. The care team can explain what is expected for the specific procedure. Worsening symptoms should not be saved for a routine appointment.

Continue regular eye examinations after cataract treatment. Surgery removes the cataract but does not prevent glaucoma, macular degeneration, diabetic eye disease, or other conditions that can affect vision.

Sources

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