

Topic Page: [Cataract](#)

Definition: **cataract** from *Philip's Encyclopedia*

Opacity in the lens of an eye, causing blurring of vision. Most cases are due to degenerative changes in old age but it can also be congenital, the result of damage to the lens, or some metabolic disorder such as diabetes. Treatment is by removal of the cataract and implanting an artificial lens.

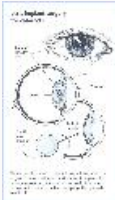


Image from:

[Cataracts in New Harvard Guide to Women's Health, The](#)

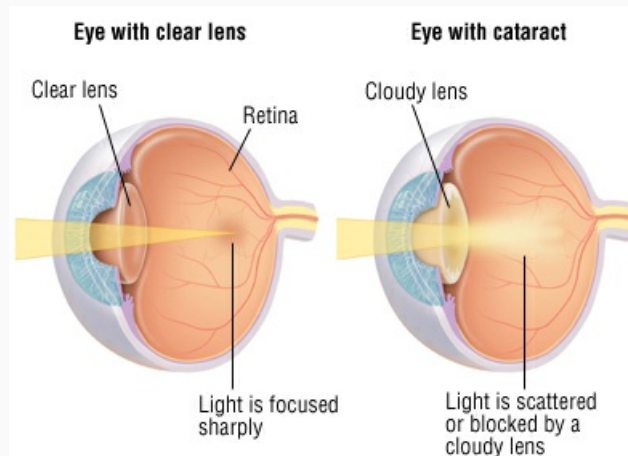
through a waterfall.

Summary Article: **Cataracts**

From *Harvard Medical School Health Topics A-Z*

What Is It?

The eye's lens is a transparent structure that focuses images on the light-sensitive retina. Cataracts are cloudy areas in the lens. They occur when certain proteins in the lens form abnormal clumps. These clumps gradually get larger and interfere with vision. They distort or block the passage of light through the lens. "Cataract" means "huge waterfall" or "enormous downpour," which is how some people describe their clouded sight, like trying to look



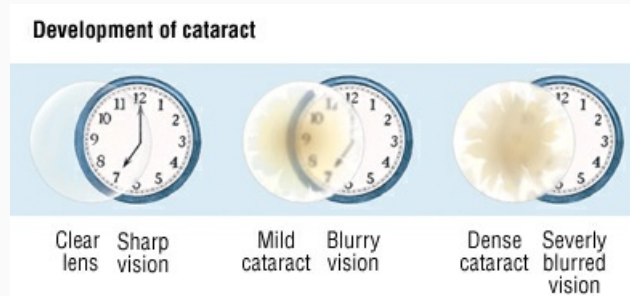
In many cases, cataracts are age-related. They first appear in the 40s or 50s, but may not affect vision until after age 60. In other cases, cataracts may be caused by eye trauma, long-term diabetes, corticosteroid medications, or radiation treatments. In infants, cataracts can be present since birth (congenital) or can occur as a result of an infection that happened during pregnancy, especially toxoplasmosis, cytomegalovirus, syphilis, rubella, or herpes simplex. In infants and young children, cataracts also can be one symptom of a disease that affects how the body processes carbohydrates, amino acids, calcium or copper.

Cataracts are the world's leading cause of blindness, accounting for about 42% of all cases of blindness. In the United States, most cataracts are age-related and affect more than half of all Americans older than 65 to some degree. Although the exact cause of age-related cataracts is unknown, some scientists suspect chemical changes affecting eye proteins called α -crystallins. Current research suggests that α -crystallins prevent the abnormal clumping of other types of proteins into cataracts. What causes cataracts is the subject of active research. Prolonged exposure to bright sunlight and smoking have been identified as factors.

Symptoms

Cataracts typically do not cause any symptoms until they have grown large enough to interfere significantly with vision. Once symptoms of cataracts develop, they can include:

- Cloudy or blurry vision
- Double vision (diplopia)
- Colors appear faded
- Seeing halos around lights
- Increased sensitivity to glare



Diagnosis

Your doctor will suspect cataracts based on your age, medical history, and symptoms. Your doctor can diagnose cataracts by widening (dilating) your pupil with medication and examining your eye. You also will have a visual acuity test, which uses an eye chart to check the effect of the cataract on your vision.

Expected Duration

Cataracts are long-term problems. In most patients, vision gets worse over time.

Prevention

In general, there is no way to prevent age-related cataracts. However, people with diabetes may decrease their risk of developing cataracts by controlling their blood sugar. To help prevent infection-related cataracts in a fetus, women should check with their doctors about the need for rubella immunizations before becoming pregnant. Pregnant women should see a health care professional regularly for prenatal care.

Treatment

Although some people with cataracts can improve their vision by using eyeglasses, magnifying lenses, or stronger lighting, the only way to cure cataracts is with surgery. When you consider whether to have surgery, you'll need to weigh how bad your vision is against the small risk of surgery.

Cataract surgery involves removing the clouded lens and then either replacing it with a plastic lens inserted in the eye during surgery or wearing a contact lens or special cataract glasses.

Current surgical options are:

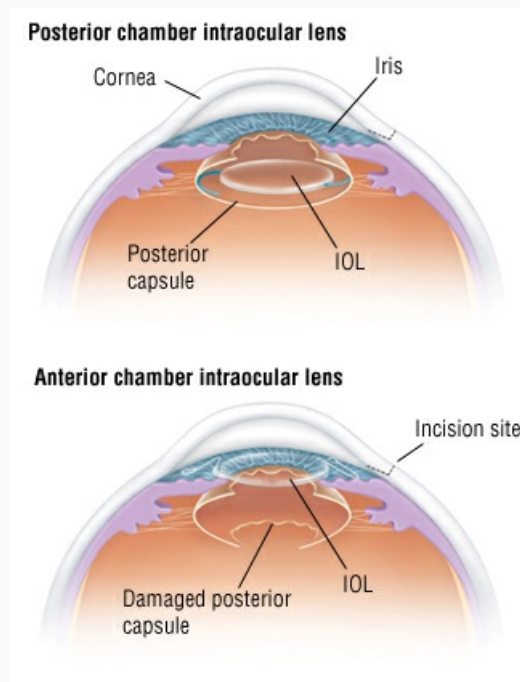
- Extracapsular cataract extraction — Either most of the cataract is removed manually or sound waves are used to break the clouded lens into tiny pieces, which are then vacuumed out. The lens

capsule surrounding the lens is left intact.

Intracapsular cataract extraction — Both the lens and the lens capsule are removed.

After the lens is removed, it is replaced by one of three options:

An intraocular lens — A plastic lens placed in the eye during cataract surgery. Currently, almost all cataract patients have intraocular lenses placed at the time of surgery. Since a new lens will be placed in the eye and since the power of the new lens can be chosen by the doctor in consultation with the patient, a patient may choose to change their glasses prescription. Thus a near-sighted or far-sighted person could choose to have perfectly focused vision at distance without glasses. Work is being done on bifocal intraocular lenses as well but they are in a development phase and not for everyone.



A contact lens

Special cataract glasses with very powerful magnification

When To Call A Professional

Call your doctor whenever you have trouble seeing clearly. If you are older than 40, schedule an eye exam with your doctor every two years, even if you have not noticed any change in your vision.



For a person with healthy eyes, vision is clear.



For a person with cataracts, vision is blurred. The glare of sunlight further disrupts vision.

Prognosis

Cataract surgery improves the vision of 95% of patients who have it. In patients who have intraocular lens replacements, 90% have 20/40 vision or better. In some people who have had extracapsular surgery, part of the lens capsule eventually becomes cloudy, causing a condition called an after-cataract. This can be corrected with laser surgery.

Additional Info

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