

Cataracts

The lens in your eye is like a clear window; when a cataract forms, that window gets foggy, so light can't pass through sharply anymore and everything looks blurry or washed out.

THE ONE-LINE TRUTH

The clear lens of the eye slowly turns cloudy, making vision hazy and dim.

The chain — how it unfolds

1. Lens proteins clump and scatter light — why: The normally clear, organized proteins in the lens lose their structure and form cloudy clumps, so incoming light bounces in random directions instead of passing straight through to the retina.
2. Vision becomes blurry and colors look dull — why: The scattered light creates a fuzzy image on the retina, and the cloudiness filters out some wavelengths of light, making colors seem faded or yellowed (like looking through a dirty window).
3. Glare and halos appear around lights — why: Bright light sources (like car headlights or streetlights) scatter even more when they hit the cloudy lens, creating starbursts or rings that make night driving dangerous and uncomfortable.
4. You need frequent prescription changes for glasses — why: As the cataract grows, it changes the way the lens bends light (its refractive power), so your old glasses stop working and you need stronger or different lenses every few months—but eventually no glasses prescription can sharpen the view through a very cloudy lens.
5. Daily tasks become harder and you lose confidence — why: Reading, recognizing faces, driving, and watching TV all get frustrating or unsafe, so you may avoid activities you used to enjoy and feel isolated or dependent on others.
6. Risk of falls and accidents rises — why: Poor contrast sensitivity and depth perception mean you may miss steps, curbs, or obstacles, leading to trips and fractures (especially hip fractures in older adults).
7. Untreated cataracts can eventually cause complete vision loss in that eye — why: If left for many years without surgery, the lens can become so dense and swollen that it blocks all useful light and may even trigger glaucoma (high pressure inside the eye) by pushing the iris forward and clogging the drainage channels.

- 8.** Cataract surgery restores clear vision and quality of life — why: Removing the cloudy lens and replacing it with a clear artificial lens (an intraocular lens implant) lets light pass cleanly again; most people see dramatically better within days, can return to their normal activities, and have a much lower risk of falls and depression.

Spot it — what you see, and why

- Cloudy or blurry vision that gets worse over time: The normally clear lens inside the eye becomes cloudy (proteins clump together), so light cannot pass through cleanly—like looking through a foggy window.
- Colors look faded, yellowed, or less bright: The cloudy lens absorbs and scatters light unevenly, filtering out some colors (especially blues) and making everything look dull or yellowed—like wearing tinted sunglasses you can't take off.
- Glare or halos around lights, especially at night: The clumped proteins in the lens scatter incoming light in all directions instead of focusing it neatly, so bright lights (headlights, streetlamps) spread into rings or starbursts.
- Trouble seeing at night or in dim light: The cloudy lens blocks even more of the already-limited light available in the dark, so the retina (the 'camera film' at the back of the eye) doesn't get enough light to form a clear picture.
- Double vision in one eye (monocular diplopia): Uneven cloudiness in different parts of the lens splits the incoming light into two paths, creating two overlapping images—even when the other eye is closed.
- Frequent changes in eyeglass or contact lens prescription: As the lens proteins swell and shift, the lens shape and focusing power change, so the prescription that worked last month no longer brings things into focus.

Red flags — act now

- Sudden, painful loss of vision (may signal acute angle-closure glaucoma, retinal detachment, or infection rather than simple cataract)
- Red, painful eye with cloudy cornea (suggests acute glaucoma or infection, not cataract alone)
- New floaters, flashes of light, or a curtain over part of vision (possible retinal tear or detachment, especially after cataract surgery)
- Vision loss in an infant or young child (congenital cataract can cause permanent vision loss if not treated early)
- Rapidly worsening cataract in one eye only (may indicate trauma, inflammation, or another eye disease)

Treat it — in this order

1. Phacoemulsification cataract surgery with intraocular lens (IOL) implantation → The surgeon uses ultrasound to break the cloudy lens into tiny pieces, vacuums them out, and slides a clear artificial lens into the empty lens capsule. This restores a clear path for light to reach the retina, reversing the vision loss caused by the cataract. Most people see dramatically better within days.
2. Topical antibiotic drops (e.g., moxifloxacin) started one day before surgery and continued for 1–2 weeks after → These drops kill bacteria on the surface of the eye before and after surgery, dramatically lowering the risk of endophthalmitis (a severe infection inside the eyeball that can destroy vision). Modern prevention (prophylaxis) has reduced this infection rate to roughly 1 in 3,000 surgeries.
3. Topical corticosteroid drops (e.g., prednisolone acetate 1%) four times daily, tapered over 2–4 weeks → Steroids calm the immune response inside the eye after surgery, reducing swelling, redness, and scar tissue formation. This keeps the new artificial lens clear and the eye comfortable, and prevents cystoid macular swelling (edema) (fluid pockets in the retina that blur central vision).
4. YAG laser capsulotomy for posterior capsule opacification (PCO) → Months or years after cataract surgery, the thin bag holding the artificial lens can turn cloudy (like cellophane wrinkling), blurring vision again. A quick laser pokes a hole in the cloudy bag, instantly clearing the light path. It's painless, takes minutes, and restores vision without needing another full surgery.
5. Updated eyeglass prescription and brighter lighting while waiting for surgery → A new glasses prescription can sometimes squeeze a bit more clarity out of the eye by correcting nearsightedness or farsightedness that the cataract has shifted. Brighter lights and magnifiers help with reading. These are temporary aids that buy time if surgery must wait.

Your top priorities at the bedside

1. Assess how much the vision loss affects daily safety and independence, including reading, driving, walking, and self-care tasks. — why: Cataracts grow slowly, so people often adapt without realizing how much vision they have lost. We need to know if they are at risk for falls, car accidents, or medication errors so we can help them plan surgery at the right time and arrange support.
2. Check for signs of urgent eye problems like pain, redness, flashing lights, or sudden vision changes, and report these to the provider immediately. — why: Cataracts themselves do not cause pain or sudden changes. If these symptoms appear, it means something else is wrong—like a detached retina, infection, or pressure buildup—and the person needs emergency eye care, not just cataract evaluation.

3. Teach the patient about fall prevention at home, including using bright lights, removing tripping hazards, and using handrails. — why: Blurry, cloudy vision makes it hard to see edges, steps, and obstacles clearly, especially in dim light. Falls are a major risk while waiting for surgery, so simple home changes can keep the person safer.