What to do about cataract

After treatment, you may see better than you have in decades.

Have you noticed that colors aren’t as bright as they used to be? That there is more glare at night? That your distance vision is hazy, even with new glasses?

By the time you turn 65, chances are about 50-50 that you will have begun to develop a cataract, a clouding of the clear lens that focuses light onto your retina (the light-sensitive tissue at the back of the eye that sends the image to your brain via the optic nerve). The lens is composed of water and proteins arranged to let light through with minimal distortion. With age, the proteins can clump together, letting less light through and blurring vision. You may also be at increased risk for cataract if you regularly take corticosteroids or the anti-cancer drug tamoxifen. (For other risk factors, see “Can cataract be prevented?” on page 5.)

Age-related cataracts start small, usually in the center of the lens, and may develop in one or both eyes. At first they cause no symptoms, but as they grow over months or years, problems such as blurring, glare, double vision, dull color vision, poor night vision, and worsening nearsightedness can make it frustrating to read and dangerous to drive.

Cataract surgery was once complicated and risky, so ophthalmologists usually waited until vision was severely limited before proceeding. Today, cataract surgery is one of the easiest, most common, and safest surgeries performed in the United States. Americans spend $6.8 billion annually to treat cataracts, which account for over half the medical costs for vision problems in people ages 65 and over. You should consider it as soon as vision problems start to interfere with usual activities. (See “Is it time for surgery?” on page 4.)

One treatment, many choices

Despite promises on the Internet and in other media, you can’t get rid of a cataract with exercise, supplements, or eye drops. The only way to do it is surgical removal of the cloudy or discolored lens and replacement with a clear artificial lens. The procedure is usually performed under local or topical anesthesia on an outpatient basis.

The most common technique is phacoemulsification, also called small incision surgery. The surgeon makes a 1/8-inch incision in the side of the eye’s clear domed surface (the cornea) and inserts a slender probe. The probe delivers ultrasound waves to break up the central part of the lens, then vacuums up the lens (see illustration). The replacement lens, folded to fit inside the probe, is inserted through the incision and into the lens capsule, where it unfolds. The surgeon may close the incision or allow it to heal on its own.

Conventional extracapsular cataract extraction, also called large-incision surgery, is more invasive. Instead of breaking up the clouded lens, the clinician removes most of it in one piece through a larger incision (approximately 3/8 inch) under the upper eyelid. After the replacement lens is inserted, the incision is stitched. Recovery takes four to six weeks; during that time you must restrict exercises and activities, particularly bending that could put stress on the incision. This type of surgery can also worsen astigmatism by changing the shape of the cornea. If your ophthalmologist recommends the procedure, find out why. It may be necessary because of a particularly hard cataract or weak lens capsule. But if the surgeon is using conventional extracapsular surgery because he or she lacks training or experience with phacoemulsification, seek another opinion.

A third procedure, intracapsular surgery, carries a high risk of complications and is seldom used today.

Preparing for surgery

Before surgery, your clinician will use ultrasound to evaluate the shape of your eye and calculate the strength of the replacement lens. Insurers consider these essential parts of the process and will cover the cost. Your clinician may also suggest other specialized eye exams to help predict the outcome of surgery; insurers regard many of these as experimental and do not provide coverage.

Tell your surgeon about all medications you’re taking. If you have glaucoma, you may need to stop or change your eye drops temporarily. Let your surgeon know if you take an alpha blocker or have ever taken one. Alpha block-
Is it time for surgery?

Cataract surgery is never an emergency procedure, so you have plenty of time to ask questions and consider some nonsurgical measures. Here are some things to think about:

- Would a stronger distance prescription, increased lighting, or shielding your eyes against glare help you see better?
- Are you having trouble driving, reading, or performing your usual work and home activities? For example, a cab driver may need surgery sooner than someone who doesn’t drive.
- How much improvement does your ophthalmologist expect from the surgery?
- Do you have other vision problems that might be easier to assess or treat after cataract removal? Would these conditions make surgery more difficult?
- Does your insurance cover cataract surgery? (It usually will be covered if your vision is impaired and tests as 20/50 or worse with glasses.)

Choosing your lenses

After the cataract is removed, the lens must be replaced. For most people, that means inserting an intraocular lens within the lens capsule at the time of surgery. Several types are available. The choice depends on the shape of your eye, other vision problems or eye diseases you may have, and your own preferences and priorities. Before surgery, you need to think about the type of lens best suited to your situation. Make sure your physician is aware of your usual daily activities and knows which of these you’d most like to perform without glasses. The options include the following:

Monofocal lenses. These lenses restore clear vision at a set distance. If you wear glasses or contacts for distance vision, your vision without glasses may be much improved after surgery. But you will need separate glasses for reading and perhaps also for intermediate distances (such as working at the computer or playing piano).

To eliminate the need for reading glasses, the surgeon can implant a distance lens in one eye and a close-up lens in the other (just as some people wear a different contact lens prescription in each eye).

“With this option, some people don’t need eyeglasses,” says Claudia Richter, M.D., a clinical instructor in ophthalmology at Harvard Medical School’s Massachusetts Eye and Ear Infirmary. “But not everyone adjusts well—they may feel lopsided, clumsy, or bothered by diminished depth perception. If depth perception is very important to you, this is not a good option.”

Toric lenses. These are shaped to correct astigmatism and reduce the need for glasses to correct distance vision. You should see better without glasses, but some astigmatism may still remain. Because of their shape, toric lenses (brand names Staar Surgical Intraocular Lens and AcrySof Toric IOL) occasionally slip out of alignment during the first few days after surgery and require a minor surgical correction.

Multifocal lenses. Like bifocals and progressive eyeglasses, multifocal lenses are designed to help with presbyopia, the age-related difficulty in shifting focus from far to near. Multifocal lenses (ReZoom and AcrySof Restor) combine correction for near, intermediate, and distance vision. Your vision will improve over the first couple of months as your brain learns to see at various distances through the new lenses. Training may help this process.

In a 2006 Cochrane Library review of several controlled trials, multifocal and monofocal lenses provided similar distance vision without glasses. Multifocal lens users were more likely to be able to read without glasses (26%–47%) compared to those fitted with monofocal lenses (1%–11%). But users of multifocal lenses are more likely to be bothered by glare and see haloes around lights at night. They may also have more difficulty seeing in low light or distinguishing an object in front of a background of a similar color. One brand (ReZoom) incorporates two extra focusing zones to make vision clearer in low light.

Multifocal lenses do not work well in people with much astigmatism and certain other eye conditions. The size of your pupil also matters. If your pupils are small, light won’t get through the part of the lens that provides near vision; if they are very large, you’ll notice more glare and haloes at night.

Accommodative lenses. These hinged lenses (brand name Crystalens) move in response to your eyes’ focusing muscles, providing distance, intermediate, and near vision.

A 263-person clinical trial submitted to the FDA found that accommodative lenses provided significantly better vision than standard monofocal lenses. At intermediate and near distances, about half of accommodative lens users (and fewer than 5% of monofocal lens users) had near vision of 20/25 or better. Distinguishing objects from backgrounds was equally
**Can cataract be prevented?**

Age is the major risk factor for cataracts. If you live long enough, you’ll probably develop them. Other factors that affect risk include the following:

**Tobacco.** Smokers develop cataract earlier. The risk slowly declines after you quit, but never returns to average.

**Alcohol.** Alcohol consumption slightly increases the risk of cataract, and the more you drink, the greater the risk. Swedish researchers found that women who had one or more alcoholic drinks per day were about 11% more likely than nondrinkers to need cataract surgery, and they needed surgery about two years earlier.

**Sunlight.** Long-term exposure to ultraviolet B rays from the sun can increase risk. Protect your eyes with sunglasses and a broad-brimmed hat.

**Diet.** There’s some evidence that a well-balanced, low-fat diet with plenty of fruits and vegetables may help reduce your risk of cataracts.

Easy with both kinds of lenses. Accommodative lenses haven’t been directly compared with multifocal lenses in clinical trials. If you have a high level of nearsightedness, farsightedness, or astigmatism, accommodative lenses will not be offered.

Medicare and most insurers cover cataract surgery, but not treatment of presbyopia, which is regarded as an elective procedure. If you choose to implant multifocal or accommodative lenses, Medicare will pay only the amount required for surgery and implantation of standard lenses. You must pay the remainder out of pocket, and some choices can cost thousands of dollars extra.

**After surgery**

Unless you have a medical condition that warrants close observation in the hospital or makes it unsafe to recuperate at home, someone will drive you home after you leave the recovery room. Ask your clinician about permitted activities. After phacoemulsification, you will probably be able to use your eyes within hours and resume all but the most strenuous activities within days. You will take antibiotics and use cortisone drops or ointment and nonsteroidal anti-inflammatory drops to prevent infection and reduce inflammation while your eyes heal.

Depending on which kind of lens you have implanted, you may see better immediately, or your vision may improve over several weeks. More than 98% of people eventually have improved vision. Possible complications include bleeding within the eye, glaucoma, and infection; you’ll also always be at a slightly increased risk of a detached retina.

After about 30% of cataract operations, the lens capsule supporting the implant eventually becomes cloudy. This is sometimes called an after-cataract or secondary cataract. To remedy the problem, the ophthalmologist can drill a tiny hole in the capsule with a laser to let the light through. This is usually a quick and painless office procedure. Some ophthalmologists do it preventively, but in that case it’s not covered by insurance.

**Selected resources**

[www.health.harvard.edu/AE](http://www.health.harvard.edu/AE)  

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**IN BRIEF**

**Hot flash herb no better than placebo in large trial**

Black cohosh is the most popular herbal supplement used by perimenopausal and menopausal women, but its effectiveness against hot flashes and night sweats remains unproven. The herb, extracted from the roots and underground stems (rhizomes) of a perennial plant native to North America, is available over the counter in tablet, liquid, or capsule form. While there’s no dearth of black cohosh studies, their inconsistency in design and results have made it difficult to evaluate the herb’s effectiveness and safety, especially beyond three months.

Now, in the longest and largest placebo-controlled trial to date, researchers have found that black cohosh—used alone or with other botanical supplements—is no better than placebo in relieving hot flashes and night sweats. The yearlong investigation, called the Herbal Alternatives (HALT) for Menopause Study, was funded by the National Institutes of Health. Results were published in the Dec. 19, 2006, *Annals of Internal Medicine*.

The HALT researchers randomly assigned 351 women, ages 45–55 and with an average of six hot flashes per day, to receive one of five therapies: black cohosh alone; a multibotanical supplement containing black cohosh; the black cohosh–containing multibotanical plus advice to increase soy intake; hormone therapy (estrogen with or without a progestin); or a placebo. After one year, there was no significant difference in hot flash frequency (or intensity) between any of the three black cohosh groups and the placebo group. On the other hand, women taking hormone therapy had, on average, four fewer hot flashes per day than women receiving the placebo. There were no significant differences in reported side effects, except the hormone therapy group noted more breast pain and menstrual difficulties.
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