



new lens

on life

protecting against cataracts

- Do not smoke.
- For prolonged sun exposure, wear wraparound sunglasses that block out UV rays.
- Eat an eye-healthy diet with lots of omega-3 fatty acids and plant foods rich in antioxidant beta carotene, lutein and vitamin C.
- Have regular eye exams (one every two years if you are age 60 or older). For the recommended frequency, go to www.eyesite.ca.

Cataracts can strike at any age, but surgery is helping thousands of Canadians see clearly again

DIANA SWIFT

Three years ago, Christina Galbraith was shopping at the Toronto Eaton Centre for a ski vacation when she had to admit that there was something definitely wrong with her left eye. “I’d always had good long-distance vision, but now I was having trouble reading the store signs along the mall, and I wasn’t sure where to place my feet on the stairs,” says the 63-year-old retired kindergarten teacher. “Lately, my left eye had been feeling as if it had something soft and filmy coating it. I put it down to allergies or dry eye and kept putting in drops, but they didn’t help at all.”

Two weeks later, an optometrist told her she was getting near-sighted and prescribed eyeglasses. But as the vision in her left eye deteriorated to the point where she felt uneasy driving and crossing busy streets, Christina sought another opinion. “It looks as if you’ve got the beginnings of a significant cataract,” the second optometrist said, and referred her to an ophthalmologist.

Three weeks later, the specialist diagnosed her with a cataract in her left eye — an opaque clouding of the lens that had likely been developing over many years. Christina was scheduled for surgery two and a half months after her consultation. “I was pleasantly surprised at how quickly the whole

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process went," she says. "I thought it would involve several months' wait time, even for an initial consultation with an ophthalmologist."

HOW A CATARACT FORMS

The lens is an Aspirin-sized organ lying behind the cornea and the iris. Its job is to focus light on the retina, the screen at the back of the eye where images are formed. It consists of cells containing proteins that are suspended in liquid. Under the influence of aging and oxidative damage, the proteins may clump together and form a painless but light-blocking veil on the lens. (Cataract comes from a Greek word that means a rushing down, as with a waterfall or a portcullis pulled down over a window.)

The effect of this clouding is much like that of grease smeared on the lens of a camera. The clumped proteins reduce the sharpness of the information reaching the retina, and as the clear lens takes on a white or yellowish colour, vision becomes tinted and colours are blunted. "I recall everything having a brownish tinge — even the bright blue house across the street — especially when I covered up my right eye and saw only with my left," says Christina.

"If the cataract is limited to the edge of the lens, it may not affect vision much," says Dr. Lorne Bellan, head of the ophthalmology department at the University of Manitoba in Winnipeg and president of the Canadian Ophthalmological Society (COS) based in Ottawa. "But the opposite is true if it occurs in the centre or covers the entire lens." Left untended, a cataract may give the eye a milky appearance and can eventually result in vision loss.

WHAT CAUSES A CATARACT?

The chief cause of this lesion is aging, says Bellan. "The average age for cataract removal is 74. When cataracts form in patients in their early 60s or younger, there are usually genetic factors involved." Indeed, Christina's grandmother had developed cataracts in her early 60s. And according to the COS, age-related cataracts can occur in people as young as 40. Even newborns can have them, in which case prenatal infections and heredity are the probable culprits.

Other risk factors, says Bellan, are oral corticosteroids, excess exposure to sunlight and smoking. Ocular injuries, such as blows, punctures, exposure to intense heat or chemical

burning, can trigger these lesions, as can eye infections and certain diseases such as diabetes. According to the COS, some researchers now hypothesize that excess alcohol may play a role.

HOW IS A CATARACT TREATED?

A peripheral cataract that is not impairing vision may be left in the eye. A central or extensive lesion, however, needs to be surgically extracted and replaced with an artificial lens. Eye drops, pills, special diets and exercises will not reverse cataracts. "Treatment has come a long way with the advent of new implantable lenses," says Bellan. "In the early days, people who had cataracts removed had to wear glasses with thick Coke-bottle lenses like the ones the comedian George Burns had."

WHAT HAPPENS IN SURGERY?

An ophthalmologist first examines the patient with precise instruments to determine the location, size and type of the cataract and to measure the eye for an appropriate artificial lens. "In this process, we measure axial eye length and the curvature of the cornea," says Dr. Susan Lindley, an ophthalmologist at McGill University



could you be developing a cataract?

- Have you noticed a painless blurring of your vision?
- Do you have episodes of double vision in one eye?
- Have your eyes become more sensitive to light?
- Are you noticing glare more frequently — for example, when you drive at night?
- Have you had to change your prescription for eyeglasses more often in recent years?
- Do you need to hold materials closer when you read or do close-up work?
- Have you or others noticed a white or yellow tinge to one of your pupils?



cataract stats

- An estimated 250,000+ cataract procedures are performed in Canada each year.
- By age 70, an estimated 35% to 40% of Canadians will develop cataracts.
- More than 95% of patients experience improved vision after cataract surgery.
- Most people with a cataract in one eye will develop a lesion in the other eye within a few years.
- In Canada, the acceptable wait time from cataract diagnosis to surgery has been set at 16 weeks. Many provinces are meeting or bettering this standard.

Health Centre in Montreal.

Since Christina's affected lens was in her long-distance eye, her eye specialist recommended a monofocal lens with a far focus. (It is also possible to get a multi-focal lens.) She prepared for surgery by instilling antibiotic drops in her eye for several days beforehand.

Cataract surgery is a painless 10-minute outpatient procedure, done usually under local anaesthetic. With the aid of a microscope, the surgeon makes a small self-sealing incision in the cornea and breaks up the damaged lens with an ultrasound device, which also removes the debris. The clear capsular bag that holds the lens is left in place. "Contrary to what many people think, a laser is not used in cataract removal but may be used later to burn off residue left behind in the capsule," says Bellan. The new lens is implanted, and if the wound does not appear to be self-sealing, it is closed with a suture.

Afterwards, the patient must wear a plastic eye shield for about a week, even overnight, and must avoid bringing the eye into contact with water or shampoo. Antibiotic and anti-inflammatory drops are also used. The patient must also avoid strenuous activity and heavy lifting for about a week. Some surgeons also advise patients not to put pressure on the eye by bending over.

AFTERWARDS


For Christina, the surgery had an immediate and dramatic effect. "Even on the way home from the hospital with the eye guard on, I could see far ahead again," she says. "My husband laughed at me for shouting out the licence plate numbers of cars and the street numbers of buildings. And the colours were all so vivid again!"

For Noel Thomas, a 70-year-old community radio producer in Montreal, two cataract operations, two years apart, have restored his vision to 20/20. "I have a far-focus lens in one eye and a near-focus lens in the other, so I don't even need reading glasses now," he says.

Lindley, however, sounds a cautionary note. "Results are not absolutely guaranteed, but they do tend to be very good these days," she says. The biggest fear, notes Bellan, is a post-operative eye infection (endophthalmitis), which affects about one out of 2,000 patients. And occasionally during surgery, the delicate capsular bag will tear, spilling cataract fragments into the back of the eye. When this happens, a patient may need a second operation to remove the particles. "I tell my patients that there's a less than 1% risk of needing a second operation," says Lindley. "But patients do have about a five times higher risk of retinal detachment than patients not having cataract surgery."

Sometimes, too, the back of the capsular bag will become cloudy months or years after surgery. Laser treatment can help restore clarity of vision by burning an opening in the cloudy membrane.

Christina's only problem has been a suture that refused to dissolve and had to be removed about a year later. "I started driving again right away, and I can see right down to the end of the mall!" she says.

For more details on cataracts and other eye problems, visit the website of the Canadian Ophthalmological Society at www.eyesite.ca and click on Public Information. 

If you have just had cataract surgery, see your eye surgeon ASAP if you experience...

- eye pain, swelling or discharge
- deteriorating vision or loss of sight
- nausea or vomiting
- sudden onset of floaters or flashing lights
- an injury to the affected eye