

Patient's Report

New eyes for old, sort of

This article appeared in the November 2016 issue of *Alberta Views* magazine.

The lights are hurting more than the knife.

I'm on the operating table, with Dr. Bryce Ford looking down at me through a massive microscope, the source of those painfully bright lights. I can't see past them to Dr. Ford himself. And all he is seeing of me is my right eye, staring up at him through a hole in the blue cloth covering my upper body.

The eye is staring, all right. The upper and lower lids have been pulled apart by eyelid retractors. I cannot blink. Yet the retractor setup itself, which I had been dreading, isn't bothering me at all. Just the not-being-able-to-blink part.

I had already seen the whole operation done on someone else, thanks to YouTube. The procedure removes the lens inside one's eye. This is done when the lens has clouded up and become a "cataract," which is the correct term for a lens in this sorry condition. In its place, you get a new lens.

This is not a contact lens, or a pair of those thick "cataract glasses" of yesteryear. Nowadays you get a new lens *inside your eye*. Not only that, the inside of your eye has been measured from front to back with ultrasound and laser light, so that if you are nearsighted or farsighted the new lens will correct for that. And for astigmatism, too.

A veritable medical miracle, this.

Cataracts typically take many years to develop. Your vision gradually becomes murky and yellowish, until one day you realize that you're just not seeing very well, especially at night, when the glare of oncoming headlights is overwhelming. Eventually you fail the eye test for your driver's-licence renewal.

Such tests are demanded of old people, and with good reason, for cataracts occur mainly in folks aged 60 and up. I'm nearly 70. I hadn't waited for the test. My regular eye doctor had looked into my eyes with his "slit lamp"—also painfully bright, because the pupils were dilated—and agreed with me that my cataracts were now bad enough to justify getting them fixed. He had got me lined up with Dr. Ford to do the job.

Back to the operating table. My wife Cia and I had arrived at the surgical suite in south Calgary on February 2nd, 2016, at 9:45 in the morning. I had been prepped by (1) pulling disposable blue slippers over my shoes, (2) putting on a puffy blue hair-net and (3) receiving a *lot* of eyedrops, some of which numbed the eye to be operated on, in this case the right, which had been identified by marking a small "X" just above the eyebrow.

Mistakes can always be made ...

Most cataract surgeons prefer to do one eye at a time instead of both. They like to check the result on the first eye before moving on to the other. If all has gone well, three weeks later you get the second operation. If all has not gone well—every form of surgery has its risks—then you have at least one eye that's no worse off.

This is going through my mind as I lie in a comfortable hospital bed, one patient of several lined up outside the operating room to await Dr. Ford's hopefully sure hand. It's cool in here to the point of chilliness. I am offered a blanket, which feels nice, and I'm also given an Ativan tablet (lorazepam tranquilizer) to ward off anxiety. I'm not very anxious—my blood pressure and heart rate are barely elevated—but I stick the pill under my tongue anyway, just in case. No IV needle in the arm, no knock-out anesthetic. Just a pleasant chat with one of the other

doctors, who knows who I am and comes over to tell me how much he likes my books. Good. Maybe they'll be extra-careful with me.

Now it's time to walk into the OR and climb onto the table. Here is Dr. Ford. He's smiling. "Good morning, Ben. How are you feeling?"

"Just fine. And very happy to be getting my eyes done."

He smiles again. A cataract surgeon routinely restores people's sight, which has to make this profession a particularly rewarding one.

I surrender my glasses (I'm pathetically near-sighted) and the aforementioned cloth goes over my face. On come the lights. These are not the sort of lights one usually sees in operating rooms. You know, the kind that glare down from a large, saucer-shaped fixture. Those might have been present, but all I can see are two small ones, roughly rectangular and close together. They seem to be quite close to my face.

And they are unbelievably bright. My left eye, safe under the cloth, clamps shut. The right eye has no choice but to remain open, meanwhile signalling my brain urgently that this had better stop right away.

It doesn't, of course. But soon the eye no longer cares. Drugged, it stares straight up into the blue-white inferno overhead. In case the eye and I have not yet got the idea, Dr. Ford instructs me to look directly at one of the lights, can't remember which.

"Let me know if you have to cough or sneeze," he says matter-of-factly. Whoa, if I do that while he has something sharp sticking into my peeper ...

Surprisingly, the eye seems not to have been immobilized. At least, I don't think it is. When I walked into the operating room I was able to move both my eyes around and look at the setup. The anesthetic eyedrops they have given me must be keeping the eye pretty still. Also, it gets injected with painkiller. I hardly notice the needle.

Nor do I flinch as the knife goes in. It is a wee little knife, only a few millimetres across, inserted at the edge of the cornea, just above the iris. My view distorts slightly as the blade presses on. I can see something dark moving around inside my eye. I know from watching YouTube videos that the thin layer of transparent skin covering the lens—I mean the cataract—has to be peeled away, so that is what Dr. Ford is doing. It doesn't take him long.

Then comes the critical step. He inserts the "phacoemulsifier." (The word is pronounced "FAKE-O-emulsifier," amusing.) This is a tube with a point on the end. The point vibrates very quickly, producing ultrasonic waves that break up the cataract. At the same time, the tube sucks the pieces out. While this is happening, the device emits a cheery penny-whistle sound, rising and falling, that tells the operator how much suction is being applied.

I'm thinking, there's no going back now. The lens in my eye is being extracted. Twenty of my 60 diopters of focus are being taken away. (The 40 diopters that remain are provided by the cornea itself.) Brilliant reds and blues drift about in my field of vision. Wow! What a light show!

And there is no pain at all. Even the impossibly bright lights are no longer hurting. I am lying there with a guy poking around inside my eye, and I'm not minding a bit.

Something moves into view from the side. I detect an edge on this thing. The edge moves around a bit, there is some further prodding, then suddenly I can see clearly.

Well, not *really* clearly. The focus is fuzzy. But it's much better than it was before Dr. Ford inserted the spiffy "intraocular lens." It's made of acrylic plastic. It has two springy arms along the edge to hold it in place, centred below the rim of the iris where the natural lens had been.

A bit more fiddling, then the eyelid retractors come off. The lights from hell swing out of the way. The cloth is removed. I am asked to slide my legs off the table, and a nurse helps me to stand. I glance at my watch. The operation has taken only ten minutes.

Next door to the OR is a softly lit recovery alcove, where I sit with a couple of other post-op patients. We don't speak, whether from amazement or shock I don't know.

But I could shout for joy. The eye works! The view is still a bit blurry, everything is reddish, and any straight line—a wall corner, a chair leg—has a ghost image beside it.

“Is this normal?” I ask the nurse.

“Oh, yes,” he says. “It'll go away in a day or two.”

Already I'm seeing better out of my right eye than out of the left, which still has a cataract. It also needs the glasses I'm not wearing.

Okay, I slip them on. The left eye is now in focus, while the right eye, which doesn't need glasses anymore, is way overcorrected. Weird. As I hastily remove my specs again, it occurs to me that until I get the left eye fixed I can just wear a contact lens on it.

Soon I'm allowed to rejoin Cia in the waiting room. She peers into my operated eye. There's some swelling around the socket, probably from those nasty retractors, but the eye itself looks fine, as if nothing has happened to it. No stitches have been required. No blood has been spilled. It's as if the human eye has been *made* for this operation.

Cia drives me back to our hotel a short distance away. (We had come in from Canmore the evening before.) I rest for a few hours until friends show up. Then I pop a contact into the left eye, and we stroll over to a sushi place nearby for dinner. By bedtime my right-eye vision is noticeably better. Not as good as the left, even with its cataract, but there's less of that red tinge and the ghost images are fading.

In the morning I open the hotel-room curtains, yawn—and the view takes my breath away. It's not a view of the mountains, like we get from our home in the Rockies. It's a view of a parking lot along the McLeod Trail strip. But when I look at it through my right eye, everything is wonderfully sharp and clear. I can read the licence plates. I'm seeing more acutely than I can ever remember.

Off we go for the day-after-surgery appointment with Dr. Ford. Before he comes in, an assistant gives me a standard eye test. With the de-cataracted eye I can read the 20/20 line on the chart!

Bryce Ford checks over his handiwork. “Everything looks fine, Ben,” he says. “See you in three weeks.”

I shake his hand. “Thanks, Bryce,” I say. “Good job.” He smiles. And on February 23rd it all happens again with the other eye.

Thanks to Alberta's universal health-care system, cataract surgery is available at no charge to anyone who needs it. Otherwise the cost would have been about \$3000 per eye. If Ben had opted for “toric” lenses to treat his mild astigmatism, or the latest “multifocal” lenses, which eliminate the need to wear reading glasses, he would have had to pay \$900 to \$1500 per eye.

And to answer a question some of you may be asking, no, cataract surgery is not the same thing as LASIK (laser-assisted in-situ keratomileusis, which reshapes the cornea). However, LASIK can be used after cataract surgery to tweak up your vision if the corrective power of the new lens proves to be a bit off.

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