

in focus special edition on Wavefront LVC

FOCUS EYE CENTRE NEWSLETTER

Ottawa-based freelance writer DAVID HARRISON, wrote a four-part article on Wavefront LVC that appeared in the *Ottawa Citizen* in August 2004. One year later, he follows up with Focus patients.

Another Look at Laser Vision Correction

By DAVID HARRISON

It was April 2004 when I sat and watched as two patients had their vision corrected at Focus Eye Centre in Ottawa. I was writing a feature for the Ottawa Citizen at the time, covering the latest in the field of laser vision correction (LVC). Now, one year later, it is time to check back with Marielle Nobert and Pat Woodcock to find out whether they are still happy with their Wavefront procedures. In an effort to find out how LVC survives the longer test of time, I will also talk to Jennie Maynard, one of Focus Eye Centre's early patients.

Marielle Nobert is a government hydrogeologist who had Wavefront PRK with Monovision in 2004. Her sister had gone through the procedure earlier and Marielle was looking forward to living life without the hassle of glasses and contacts.

Marielle didn't want to have to use reading glasses, so she chose to have Monovision. Monovision allows her to see both close and distant objects without glasses or contacts and is a good solution to the problem of ageing of the lens in the eye. The dominant eye is corrected for the best distance vision possible, while the non-dominant eye is left under-corrected by a small amount in order to act as the close vision eye.

Marielle's vision is 20/20 now and she is constantly amazed by it. "I'm in awe", she says. "No contacts at night, no travel problems. It's another form of Freedom 55."



Dr. David Edmison: many patients achieve better than 20/20 vision.

She can use a normal-size watch now instead of her old 'Big Ben' timepiece and loves being able to swim with her eyes open. "The results are extraordinary," she gushes. "Perfect comfort; I didn't even suffer any dryness through the

winter. It really is freedom from glasses and contacts."

Her recovery period had been somewhat challenging because a cat hair — courtesy of a feline companion — had lodged in one eye, while her right eye required a re-treatment. The healing process depends on the individual and is difficult to predict. Even so, only around 4% of patients require some form of follow-up laser treatment.

Even those with 20/20 vision will, as part of the natural ageing process, start to struggle with reading and close work as the lens in the eye starts to lose its flexibility and focusing ability. Presbyopia starts to arrive sometime after age 40.

On the whole Marielle says she has had no problems adapting to Monovision, other than remembering to use her distance eye when looking through a camera viewfinder. She can read most text easily and only occasionally has to resort to reading glasses for especially fine work, such as threading a needle.

Dr. Edmison, Medical Director of Focus Eye Centre, explains that while Monovision is a compromise, it works very well and approximately 99% of Focus patients over the age of 40 choose it. Less than 1% of those patients have it reversed. (Other solutions are in the pipeline and the future may provide a bifocal laser treatment where part of each eye is corrected for

Wavefront: It Just Makes Sense

If you look at the prescription from your optician, it comprises three numbers for each eye. If two people have the same three numbers in their pre-scription, then they will get identical lenses in their glasses, or identical contacts. But are their eyes really identical?

The answer is no. Their vision may be generally similar, in terms of which lines they can read on an eye chart, but that doesn't take into account all the small differences in shape across the eye. These higher order aberrations bend the light differently and prevent a perfect focus on the retina, which in turn limits the correction you can get with glasses or contacts.

That's where Wavefront comes in.

Wavefront, or "Custom LVC" as it is known in the U.S., makes a unique map of your cornea, including all those minor imperfections. Wavefront works by beaming light through the eye and taking detailed measurements as the light bounces back. These measurements are recorded on a virtual map, highlighting each patient's individual visual imperfections. During laser surgery this map is used by the surgeon to tailor the beam settings, making the procedure customized to the precise vision specifications of each individual patient.

As a result, Wavefront-guided surgery can lead to sharper, crisper vision. And because Wavefront is customized to your own eyes in a way that glasses and contacts can't match, it can often produce results that are better than you achieved with either glasses or contacts.

Dr. Edmison, Medical Director and founder of Focus, says that the majority of his Wavefront patients have recorded better vision than they were able to achieve before surgery — 91% of cases at Focus have resulted in patients achieving 20/20 uncorrected visual acuity or better after three months. And if you think that's impressive, you are right. He goes on to say that the theoretical limit of the human eye is around 20/8, so at 20/10 you can be sure that no-one in the world has much better vision than you.

In addition, patients also talk of an improved "quality" of vision. It is one thing to be able to read the 20/20 line

continued on page 2

close-up work and the rest is corrected for distance. As with Monovision, the brain can select the correct information to use in building its picture of the world.)

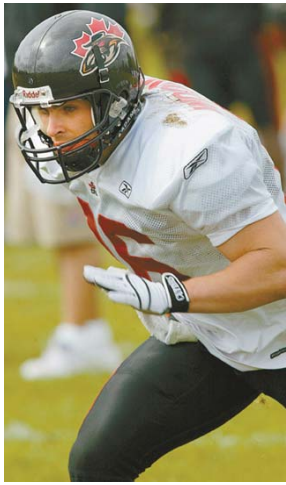
Quality LVC is not cheap, but as Marielle noted, she was spending money on her main pair of glasses, reading glasses, contact lenses and all manner of solutions and cleaners. Her last pair of glasses cost around \$700 when she added on all the extras for scratch resistance, thin lenses etc. "If I'd had it done 30 years ago, I'd have saved a fortune," she says.

LVC may mean freedom from glasses and contacts, but how will your vision after the procedure compare to glasses or contacts? Recent results with Wavefront have been so encouraging that Focus surgeons and staff routinely discuss with their patients the possibility of seeing better than they ever did with either glasses or contacts.

"It is imperative that a patient has reasonable expectations," insists Dr. Edmison, "but the outcomes that we are achieving with Wavefront make better than 20/20 vision a real possibility."

In fact, the majority of Wavefront patients have recorded better vision than they were able to achieve before surgery — 91% of cases at Focus have resulted in patients achieving 20/20 uncorrected visual acuity or better after three months. These results are being seen elsewhere as well. A recent U.S. Navy study reported that 97% of their patients were seeing 20/20 or better following Wavefront, up from an already impressive 88% for those who didn't have a Wavefront procedure.

It was Wavefront and its promise of a much lower risk of night vision complications that drew Pat Woodcock, the Ottawa Renegades wide receiver, to Focus and LVC. Night games under the giant floodlights would be impossible with halos and glare, but after discussions



Pat Woodcock in full flight

with Dr. Edmison, Pat felt comfortable going ahead.

"Dr. Edmison took care of everything," says Pat, who had Wavefront PRK in April 2004 and was back catching a football a week later. "He put all my fears at ease and answered all the questions that my wife and I had. I definitely felt comfortable in his hands."

"I've had seven years of perfect vision. It's so much easier to deal with life."

"Two weeks after the procedure things were great," he adds. "I wasn't feeling tired or anything."

When asked if the procedure met all of his goals, Pat's answer is simple: "Absolutely," he says. "There was no discomfort after the first couple of days and I have never had any night vision problems. I play a lot of games at night so that would have been a big problem."

Pat is about due for his one-year check-up but he already knows that his vision is better than it was with glasses or contacts before the procedure. "It's most noticeable when I'm driving," he says. "I can see the street signs from much farther away."

So, one year on and two happy customers... but

what about the longer term prognosis? Will LVC continue to maintain the benefits seen immediately after the procedure?

It was February 1998 when Jennie Maynard elected to undergo LVC at Focus. Jennie runs The Real Diaper Store, a home-based business specialising in baby products. Like Marielle and Pat, she also had PRK, but unlike the others, Wavefront wasn't available at that time.

Jennie had started wearing glasses at age 21 and by 1998, at age 27, she needed to wear them all the time (with a prescription of around -4.5 diopters in both eyes). She was close to getting married and wanted unencumbered vision at her wedding. Her husband-to-be had gone through laser vision correction a couple of years earlier and despite her lingering fears, the procedure made sense. She wasn't enjoying swimming

Wavefront: It Just Makes Sense (continued from page 1)

on the eye chart in the high contrast environment of black letters on a white background, but that's not the real world. In the real world, there are dull days, dark nights, rain, fog and other circumstances where you still need to be able to see clearly. Wavefront is improving the quality of a patient's vision all the time.

Night vision in particular has been improved greatly by the advent of Wavefront.

"In the past, if a patient had large pupils, I would caution them that they were at risk of experiencing some possible night vision difficulties such as glare and halos," says Dr. Edmison. "With Wavefront, night vision problems have been dramatically reduced; very few, if any, of our Wavefront patients have experienced any night vision problems."

It won't be long before people with 20/20 vision, who don't wear glasses or contacts, start calling Focus to inquire about LVC.

fear," she says, "so in the end I just did it."

Her worst fears seemed to have been realised on the evening of her surgery. One of the bandage contact lens put in place to protect her eye during the healing process, had slipped, but Jennie didn't know what had happened. "I was scared and in pain," she recalled. "I called Focus at 10 p.m. and someone was at my door in Kanata within 30 minutes. That's service!"

Her bandage contact lens safely back in place, Jennie's vision was 20/20 within 24 hours of the procedure, and settled at 20/15, where it remains today.

Jennie has no regrets. "I have had seven years of perfect vision, she says. "I feel like I did when I was a

teenager. No need to struggle with glasses, no more 'Oops I dropped a contact'. It's so much easier to deal with life."

Asked for her advice to prospective patients, Jennie points out that the sooner you have it done, the longer you will have to enjoy the results. "It's better than paying for contacts for the next umpteen years."

"Talk to the staff at Focus," she adds. "A lot of them have been through it themselves."

The short-term results are great, the recovery quick and the benefits last. So, what's stopping you enjoying LVC? If it's just an irrational fear, Marielle Norbert says she will even hold your hand during surgery. ■



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