



A ray of light
What you should know about Lasik



Out and about
How a helping hand changed Pat's life

MEDIA PLANET

October 2011

WORLD SIGHT DAY

SPECIAL ISSUE
2011
WORLD SIGHT DAY



GRANTING A MOM A MIRACLE

How life-changing cataract surgery gave Caroline new opportunities—and allowed her to continue caring for her children

PHOTO: CBM CANADA

If you've been diagnosed with AMD, put the power of Vitalux® plus OMEGA-3 to work for you

Combines the AREDS formulation with **1052mg of ultra-pure omega-3** to delay progression of AMD and maintain healthy vision.

Vitalux®-S plus OMEGA-3 is available without beta-carotene for smokers or those who recently quit.

To be sure this product is right for you, always read and follow the label.

*#1 Eye Doctor recommended ocular vitamin.

Alcon Alcon Canada Inc., 2665 Meadowpine Boulevard, Mississauga, Ontario, L5N 8C7 © 2011 Novartis 10/11 OP11249

Vitalux® plus OMEGA-3 and Vitalux®-S plus OMEGA-3 are registered trademarks.

SAVE \$3.00

on Vitalux® plus OMEGA-3 or Vitalux®-S plus OMEGA-3

This coupon is good for \$3.00 off Vitalux® plus OMEGA-3 or Vitalux®-S plus OMEGA-3, any size. This coupon is valid only toward the purchase of product indicated. Coupon cannot be transferred, sold, exchanged, or reproduced. Any other use of this coupon constitutes fraud. RETAILER: Alcon Canada Inc. will redeem this coupon for the face value plus our specified handling fee, provided you receive it toward the purchase of Vitalux® plus OMEGA-3 or Vitalux®-S plus OMEGA-3. Only one coupon per purchase. Void where prohibited or restricted. Consumer will pay retail tax(es), where applicable, on price without coupon. For redemption, mail to: Alcon Canada Inc., P.O. Box 3000, Saint John, New Brunswick, E2L 4L3. Valid only in Canada. Not valid where prohibited by law. Expiry date: December 31, 2012.

Alcon © 2011 Novartis 10/11

Vitalux® plus OMEGA-3 and Vitalux®-S plus OMEGA-3 are registered trademarks.



CHALLENGES



A direct result of our aging population, **more Canadians than ever** are suffering from vision loss or related diseases—80 percent of which are completely preventable.

Celebrate World Sight Day by increasing awareness

People living with vision loss are not statistics. They're real people we all know and care about. They're our parents, spouses and children—our neighbours and our friends.

Our country is on the cusp of a vision loss epidemic the likes of which we have never experienced before. Like every other country in the world, Canada is getting older every year, and so are Canadians. This is causing more people than ever to experience the loss of their sight due to age-related eye diseases like macular degeneration and glaucoma.

In fact, in 2006 Statistics Canada reported that 836,000 people in Canada were blind or partially sighted. Just five years later, our researchers estimate this number has already climbed to more than one million. Over the next 25 years, it has the potential to double.

Affecting the quality of life

Vision loss isn't life-ending, but it certainly is life-changing. It affects work,

income, self-esteem, dignity, family relationships, the ability to drive, leisure activities, community involvement and the activities of daily living.

We know that clinical depression is three times more common in people with vision loss compared to the general population. Seniors with vision loss face twice the risk of falls, four times the risk of hip fractures and a greater risk of having medication errors. They are admitted to nursing homes on average three years before they would be otherwise.

In 2003, in recognition of the growing crisis in vision loss in Canada and around the world, the Canadian government was instrumental in helping to pass a resolution called The Global Initiative for the Elimination of Avoidable Blindness at the World Health Assembly, the highest decision-making body of the World Health Organization.

On that occasion, the Canadian government as well as governments from around the world made a commitment to develop a national vision plan by 2005, and to begin implementing the plan by 2007.

John M. Rafferty
President & CEO, CNIB

“Vision loss isn't life-ending, but it certainly is life-changing. It affects work, income, self-esteem, dignity, family relationships, the ability to drive, leisure activities, community involvement and the activities of daily living.”

Eight years later, many WHO member states have established national vision health plans, and many countries, including the United Kingdom, Australia and India, are well on their way with implementation. But still, no such plan exists in Canada.

Be aware and educated

Effective diagnosis of eye disease, vision rehabilitation, increased funding and research, and a strong public education strategy will create a better understanding and awareness of vision health in our country and around the world.

Today, on World Sight Day, we take this opportunity to highlight how we can work together around the world to eliminate avoidable blindness. Governments, development agencies, and eye care professionals must mobilize the cause of bringing vision rehabilitation services to people who are blind and partially sighted here in Canada, and around the world.

JOHN M. RAFFERTY
editorial@mediaplanet.com

Want results? Follow the ray of light

Laser eye surgery has been around since the late 1980s, and it has spawned a few variations since then.

LASIK (laser-assisted in situ keratomileusis) is a type of surgery in which the cornea is reshaped to change its optical power, correcting vision problems like nearsightedness and astigmatism.

When LASIK is performed, the doctor numbs the eye with drops before making a semicircular eye-flap incision. The surgeon lifts the flap, exposing the cornea. A computerized laser vaporizes a portion of the cornea. After surgery, a doctor might provide anti-inflammatory drops and an antibiotic for the next few days to prevent swelling of the tissues, infection and inflammation.

More than 95 percent of patients are satisfied with their results, but not everybody achieves their dream of perfect vision. There are two main reasons. One, the eye is under-corrected, meaning that not enough corneal tissue is removed to bring the eye to 20/20 vision.

The other main reason is that the eye does not respond well to the laser. Unintended visual shifts can take place, causing progressively weakening vision over time. Patients might experience visual halos around light sources (especially at night), blurred vision and extremely dry eyes.

Wavefront LASIK

In the last decade, a LASIK variation was introduced, called “wavefront” or custom LASIK. Wavefront is a new way of mapping refraction by boun-

ding light into the eye and catching it as it comes out. It provides an individualized, “fingerprint” pattern of the eye that allows the surgeon to reshape the cornea very precisely.

This method allows ophthalmologists to detect even the most minute corneal imperfections or abnormalities that would have been missed in the past. The reasoning is that, if corneal imperfections and aberrations can be reduced post-surgery, unwanted side-effects like visual halos would disappear.

Ophthalmology professor H. Dwight Cavanagh, at the University of Texas Southwestern Medical Center at Dallas, says that, thanks to this technology, “We have a higher percentage of patients reaching 20/20, and they're also happier with their night vision.”

LASEK: A new option

More recently, another LASIK variation has become available—LASEK (laser epithelial keratomileusis). The extremely thin epithelial layer is lifted from the eye's surface before laser energy is applied for reshaping. After the procedure, the epithelium is replaced on the eyes surface.

LASEK is used mostly for people with corneas that are too thin or too steep for LASIK, and has had good results. But a 2007 study published in the “Journal of Cataract and Refractive Surgery” concluded that outcomes also depended on the surgeon's experience.

INDRANI NADARAJAH
editorial@mediaplanet.com

WE RECOMMEND

Giving a mom a miracle
How a cataract procedure provided by Vision2020 changed Caroline's life.
PAGE 4

Astigmatism myths p.3
Clearing up the truth about effective treatment.

Supplement your vision p. 6
How vitamin use can give your sight an extra edge.

MEDIA PLANET

WORLD SIGHT DAY
1ST EDITION, OCTOBER 2011

Responsible for this issue:
Publisher/Business Developer: Darshan Thomas
darshan.thomas@mediaplanet.com
Designer: Penelope Graham
penelope.graham@mediaplanet.com
Contributors: Stuart Foxman, Julia Morgan, Indrani Nadarajah, John M. Rafferty

CBM Canada, CNIB

Photo Credit: All images are from iStock.com unless otherwise accredited.

Managing Director: Gustav Aspegren
gustav.aspegren@mediaplanet.com

Distributed within:
National Post, October 2011
This section was created by Mediaplanet and did not involve the National Post or its Editorial Departments.

FOLLOW US ON FACEBOOK AND TWITTER!
www.facebook.com/MediaplanetCA
www.twitter.com/MediaplanetCA

Mediaplanet's business is to create new customers for our advertisers by providing readers with high-quality editorial content that motivates them to act.

DID YOU KNOW?

“The wide-ranging Nurse's Health Study, involving 500,000 nurses, also examined the link between cataract development and nutrition. It showed that those nurses with high beta carotene and Vitamin A intake were less likely to develop cataracts.”

NEWS

If you suffer from both near and far-sightedness, finding a vision solution can be confusing. The good news is astigmatism is easier to treat than commonly perceived.

TIP
1
GLASSES SHOULD ALWAYS BE FITTED BY A PROFESSIONAL

CLEARING UP ASTIGMATISM MYTHS

When you're near-sighted, objects at a distance are blurry, and when you're far-sighted nearby objects are blurry.

But what if objects are blurry at any distance? That's astigmatism, a common condition that can be corrected with glasses, contact lenses, or laser eye surgery.

The extent to which astigmatism can be fixed surprises some, says Dr. Avi Wallerstein, a Montreal ophthalmologist. He doesn't characterize astigmatism as "worse" than other vision problems. Yes, astigmatism has special features, but it simply calls for another type of prescription. Many mild cases require no treatment at all.

Instead of a cornea that's equally curved in all directions (like a sphere), people with astigmatism have a "warped" cornea, with more curve in one direction (like a football). Usually, people with astigmatism are born with it (and can also be near- or far-sighted). In rarer cases, people develop astigmatism later, often after an eye injury.

For those who are near-sighted or far-sighted only, the length of the eye is the issue; the corneal surface is



still round. It's the curved shape that makes astigmatism unique.

Signs include distorted vision, naturally, as well as headaches, excessive squinting and eye strain. An eye doctor can assess the astigmatism and discuss corrective options.

The pros and cons of correction

One solution is glasses, which are ground in the opposite shape of the cornea. As the glasses' shape coincides

with the cornea's abnormal curvature, any shift—and glasses do move—can make the correction less precise. The loss of some peripheral field of vision, which can affect anyone with glasses, is also more pronounced with astigmatism.

Contacts are suitable too, contrary to one misconception. Hard lenses, which tend to work best, actually re-shape the uneven surface of the cornea. But they're more difficult to tolerate. Soft lenses, to dispel another

myth, are also effective for low and moderate astigmatism (and are more comfortable). Often, this requires "toric" lenses, which have a bevel. When the lens rotates, wearers can notice momentary blurriness, until the lens returns to its correct position.

Another option is laser eye surgery, which removes tissue to reshape the cornea. This procedure typically offers excellent results for astigmatism. "Today, the precision of laser surgery is better than ever, in terms of accuracy," Dr. Wallerstein notes. "Less tissue than ever before needs to be removed, and can be as little as a fraction of the thickness of a human hair. This is really important to the correction of astigmatism."

Many people with astigmatism mistakenly believe they aren't candidates for laser eye surgery. If anything, the improvement over glasses and contacts is more dramatic for them than for individuals with other vision problems. "Patients with astigmatism are the ones who are happiest after laser eye surgery," says Dr. Wallerstein.

STUART FOXMAN
editorial@mediaplanet.com



NEWS IN BRIEF

Glaucoma: The thief that robs you blind



Dr. Neeru Gupta
President,
Canadian
Glaucoma Society

Experts warn that vision loss is on the rise in Canada, with glaucoma a leading cause of blindness in our aging population.

Glaucoma is a disease that causes damage to the optic nerve, a part of the central nervous system that carries visual information from the eye to the brain.

Globally, glaucoma is the leading cause of irreversible blindness with 70 million affected. Currently, it is estimated that more than 400,000 Canadians are living with glaucoma. The problem is that the disease attacks vision slowly. Because peripheral vision is usually the first to go, 50 percent of patients with glaucoma have no idea that they have it.

"It is a thief," says Dr. Neeru Gupta, president of the Canadian Glaucoma Society, and professor, as well as Dorothy Pitts, chair of Ophthalmology and Vision Science at St. Michael's Hospital, University of Toronto. "Glaucoma steals vision quietly and painlessly. Left undetected, it leads to irreversible vision loss. An eye examination is the only way to detect it."

Risk factors aren't always clear

Age is a big risk factor. "The chance of getting glaucoma increases with each passing year, particularly after age 40 years", Gupta explains.

Other risk factors include a family member with glaucoma, elevated eye pressure, being of African or Asian descent, near sightedness and high blood pressure.

Many patients with glaucoma will never develop high pressure in the eye.

What can be done?

While there is no cure for glaucoma as yet, the good news is that further vision loss from the disease can be slowed in many cases.

All current treatments for glaucoma lower eye pressure. Even patients who do not have high pressure respond to these treatments, according to the evidence. Medicine comes in the form of eye drops that are to be used regularly. In some cases, laser and incisional surgery are needed to lower pressure.

Reasons for vision loss

There are three big reasons why people go blind from glaucoma:

A major problem is that patients are often diagnosed when the disease is already advanced; another challenge is that patients don't take their medicines as directed, so continue to lose their sight. Patients that are under-treated also risk continued vision loss.

INDRANI NADARAJAH
editorial@mediaplanet.com

Refreshing relief for dry eyes

"There wasn't a dry eye in the house"—the old saying is hardly true. Studies show that about 20 percent of people will suffer from dry eye syndrome at some point.

While there's no cure, the good news is that the discomfort can be managed.

Why are dry eyes such a problem? In an "ask the expert" column for the Canadian National Institute for the Blind, Dr. Desmond Fonn of the University of Waterloo's School of Optometry notes that, "Over the course of a day, we blink nearly 12,000 times—for people with dry eye syndrome, each blink can be irritating and even downright painful."

Symptoms of dry eye syndrome can include a gritty or burning sensation, the feeling that something is in your eye, itchiness, blurred vision, sensitivity to light, and eyes that tire easily. It's enough to drive someone to tears—except that's the very problem. Dry eye syndrome results from insufficient lubrication and moisture in the eye.

Age is the biggest cause

Anyone can have dry eyes sometimes, due to excessive sun, too much time staring at the computer or smoke. But

the symptoms are temporary. Dry eye syndrome is chronic, and there are many possible causes:

- Age—the most common cause, as tear production usually decreases as we get older;
- Allergies;
- Vitamin deficiencies;
- Side effect of medications (e.g. anti-histamines, antidepressants, birth control pills);
- Other diseases, like lupus or rheumatoid arthritis;
- Long-term contact lens wear;
- Living in a dusty, dry, or windy climate—think winter in Canada.

Your eye doctor can confirm dry eye syndrome with simple tests and recommend care.

A drop of relief

Treatments depend on your specific condition and severity, but can include artificial tears (a solution that restores the stability of the eye's natural "tearfilm"), lubricating ointments, and medicated eye drops.

If your contacts cause dry eyes, some alternative lenses maintain a protective layer of water around the lens.

In more serious cases, another treatment is punctal occlusion—a procedure that keeps more tears on



your eyes by blocking the ducts in your lids that drain tears away.

For dry eyes, Fonn cautions against using over-the-counter drops designed to "get the red out." Many contain a vasoconstrictor, which constrict blood vessels to make your eyes whiter. While your eyes may feel better for a time, the dry eye syndrome remains, and your condition could actually worsen when you stop the drops.

Reduce the risk

You may not be able to change some risk factors, like age, but you can reduce the chance of dry eyes by:

- Staying hydrated;

■ Watching your intake of alcohol and caffeine, which have a dehydrating effect.

- Using a humidifier;
- Cleaning your contact lenses daily and replacing them as directed;
- Wearing close-fitting/wraparound sunglasses, especially on windy days;
- Positioning your computer monitor at or just below eye level to minimize eye strain.

All are simple steps that, for your eyes, can avoid you being left high and dry.

STUART FOXMAN
editorial@mediaplanet.com

Sponsoring a cataract surgery... \$33
Giving a mother her sight back... priceless.



You can turn disability into ability.
www.cbmcanada.org 1.800.567.2264

cbm
christian blind mission
together we can do more

MEDIA PLANET
WE WANT YOUR FEEDBACK!
editorial@mediaplanet.com



Facebook.com/MediaplanetCA
Twitter.com/MediaplanetCA

INSPIRATION

4

VISION HEALTH FACTS



Did you know?

836,000 Canadians

1 There are 836,000 Canadians living with significant vision loss in Canada.

Vision loss is avoidable

2 Seventy five percent of all vision loss in Canada is avoidable.

\$15.8 per Canadian

3 Vision loss costs Canadians \$15.8 billion each year.

Health care costs

4 In Canada, in 2007, vision loss had the highest direct healthcare costs of any disease over cancer, cardiovascular diseases, and diabetes.

Her vision clouded by cataracts and abandoned by her husband, Caroline needed a miracle in order to continue caring for her two young children. **Through Vision 2020, she received the life changing procedure that has restored the light in her life.**

Giving a mom the miracle of sight

Caroline waited patiently in the ladies ward of Sabatia Eye Hospital with her two young children, a four-year-old daughter and a seven-month-old baby boy.

With no husband to support her, Caroline came here with only her children and her faith.

Scraping enough money together for a bus trip to the cbm Canada-supported hospital in Western Kenya, Caroline was hoping for a miracle—one of sight.

Living in the dark

For the past three years she had been blind with bi-lateral cataracts. She had never seen her baby son.

“I would ask my sister and my friends, ‘Is my little boy healthy?’ and they would describe his tiny face to me, and assure me he was healthy and content,” recalls Caro-



A SIGHT FOR SORE EYES
Prior to her procedure, Caroline had never seen her baby son.
PHOTO: CBM CANADA

line. Last year, just after her son was

born, Caroline’s husband told her to take their two children and to go live with her sister. He thought she was “useless” because she couldn’t clean, cook or care for the children.

The gift of sight

Caroline is just one of the 18 million people in our world who have lost their sight due to cataracts. Age, trauma or disease causes the lenses in their eyes to cloud over.

“Thanks to the generosity of Canadians, Caroline received a life-changing 12-minute cataract surgery that completely restored her

eyesight—for only \$33,” says Ed Epp, executive director of cbm Canada.

No longer does Caroline have to ask others if her children are healthy and happy.

“I am imagining what people are going to say when they realize I can see! God has done miracles for me,” she laughs.

Sabatia Eye Hospital is just one of cbm’s 803 projects in 89 of the poorest countries of the world.

COURTESY OF CBM
editorial@mediaplanet.com

PROFILE

cbm Canada

■ **cbm Canada**, formerly known as Christian Blind Mission, is a non-profit Christian development organization that aims to improve the lives of people with disabilities in the poorest countries of the world. cbm currently serves over 25 million people every year.

A founding and active member of “VISION 2020: The Right to Sight”, cbm is a world leader in preventing and curing blindness.

To date, cbm has performed over 10 million cataract operations in the poorest countries of the world, with the financial assistance of many Canadians.

FACTS

A global initiative

Vision 2020 is the global initiative of the World Health Organization (WHO) and other partners aiming at dramatically reducing avoidable blindness by the year 2020. According to WHO, about 284 million people in our world are visually impaired and 39 million of these people are blind. Ninety percent of the world’s visually impaired popula-

tion live in developing countries.

It’s estimated 80 percent of all visual impairments can be avoided or cured. In low-income countries, cataracts remain the leading cause of blindness.

Read more on the web:

www.vision2020.org/main.cfm

$\frac{20}{200}$

R

$\frac{20}{100}$

YOU AT RISK

$\frac{20}{70}$

OF LOSING YOUR VISION?

Age-Related Macular Degeneration (AMD) Is The Leading Cause Of Vision Loss In Canada.

Complete this checklist to find out if you are at risk.

- Over age 50*
- Female
- Fair skin or light eyes
- Unbalanced diet
- Overweight
- A family member has AMD*
- Frequent exposure to sunlight
- Cardiovascular disease
- Smoke or recently quit
- High blood pressure and/or cholesterol

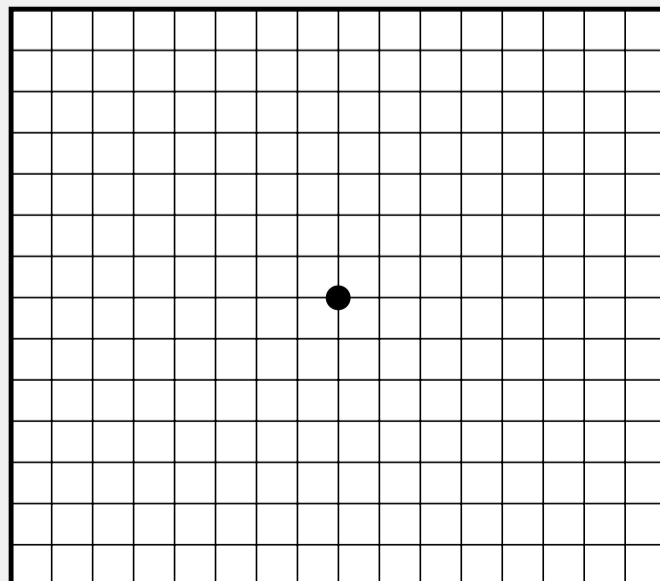
*These are your greatest risk factors for developing AMD

If you checked any of these boxes, especially those in bold, you could be at risk for AMD. Talk to an eyecare professional to learn about treatment options that could help prevent the disease.

Brought to you by Alcon Canada Inc.

Take this simple vision test now.

The first line of defense for AMD is awareness. This test will alert you to any changes in vision that may indicate a problem.



INSTRUCTIONS:

1. Wear your reading glasses, if you normally use them, and hold the Amsler Grid about 14 inches from your face.
2. Focus on the dark dot in the centre of the grid. While looking at this dot, you still should be aware of the lines of the grid.
3. If you notice any blurred, wavy or missing lines, contact your eyecare professional as soon as possible.

INSPIRATION

Embarking on the ride of a lifetime

In the early 1980s, Pat Gates of Halifax, Nova Scotia, was told she would eventually lose her vision to diabetic retinopathy, a condition affecting more than half a million Canadians. Without treatment, the condition can advance to permanent vision loss or even blindness, usually in both eyes.



Gradually, her eyesight began to fail. One day she couldn't see the steps when getting off a bus. She missed one and fell, a tumble that terrified her and damaged her pride. She decided then and there she was never going to ride the bus again.

Pat's vision became a lot worse in 2000 and life changed drastically overnight—she gave up her job and rarely left her apartment.

Left in isolation

A single person with no immediate family, Pat became dependent on friends to get out of the house. But some of them treated her as if she'd lost her faculties instead of her sight, which made her angry. Her social contacts dropped off, and she sank into despair.

Finally in 2009, Pat connected with CNIB. She met mobility specialist Peter Parsons, who helped her to navigate the stairs and hallways of her apartment building, and then to walk down the street and around the block.

A helping hand

CNIB's dedicated specialists work with people of all ages in their

own homes, communities or local offices providing emotional support and personalized rehabilitation services in everyday skills like walking safely with a white cane.

Eventually she told Peter she was ready for the bus.

When he arrived that day, Pat was shaking and thought she couldn't go through with the lesson. Peter reassured her she was not alone. They walked to the stop. A bus pulled in, Pat got on and took a seat, amazed.

"I'm on the bus! I'm on the bus!" she thought, realizing that at 54 she was feeling like a kid again—so proud. She hadn't set foot on a bus in 25 years.

Today Pat has an extremely active life and volunteers with CNIB to support others adjusting to vision loss.

"My life has done a complete turnaround," she says. "I'm so grateful to CNIB."

JULIA MORGAN
editorial@mediaplanet.com



A CLEAR DIRECTION
Since connecting with the CNIB, Pat now has the tools she needs to be mobile and self sufficient.
PHOTOS: CNIB

While age-related macular degeneration is becoming more prevalent as our population ages, high dose vitamins and effective drugs are helping patients.

HOPE FOR AMD PATIENTS

Age-related macular degeneration (AMD) is a disease that gradually destroys sharp, central vision. It affects the macula, the part of the eye that allows us to see fine detail. It causes no pain.

According to Dr. Alan Berger, ophthalmologist-in-chief at St. Michael's Hospital, AMD is increasing among Canadians primarily because of our ageing population. "People are living longer, diagnostic techniques are getting better, and it is better recognized now," he says.

"Very, very few people go completely blind from AMD, but they can go legally blind, which is 20/200 vision," he adds.

AMD occurs in two forms: wet and dry.

Wet AMD

The National Institutes of Health explains that wet AMD occurs when abnormal blood vessels behind the retina start to grow under the macula. These new blood vessels, which tend to be very fragile, often leak blood and fluid. The blood and fluid raise the macula from its normal place at the back of the eye. Damage to the macula occurs rapidly.

With wet AMD, loss of central vision can occur quickly. Wet AMD, is also known as advanced AMD. An early symptom is that straight lines appear wavy.

Wet AMD is treated with laser surgery and photodynamic therapy, though not always successfully. However, in the last five years, drugs (injected directly into the eye) are working very well at treat-



ing moderate to severe wet AMD. The drawback is that patients may have to have the injection monthly.

Dry AMD

Dry AMD occurs when the light-sensitive cells in the macula break down, gradually blurring central vision in the affected eye. As dry AMD worsens, individuals may see a blurred spot in the center of their vision. Over time, central vision is lost.

The most common symptom of dry

AMD is slightly blurred vision. Dry AMD generally affects both eyes, but vision can be lost in one eye while the other eye seems unaffected.

A common early sign of dry AMD is drusen, yellow deposits under the retina.

Risk factors

The greatest risk factor is age.

Other risk factors include: smoking, obesity, race (Caucasians are more susceptible), and family history. Women

also appear to be at greater risk.

Vitamins count

The Age Related Eye Disease Study (AREDS) showed that specially-formulated supplements containing high dose antioxidants with zinc slowed the progression of intermediate and advanced AMD in patients.

The ongoing AREDS 2 is investigating the effects of lutein, zeaxanthin and omega 3 fatty acids on AMD. The study will also look at whether reduced zinc

and/or beta carotene will impact the progression to advanced AMD, says Berger.

"We strongly advocate these high-dose vitamins for patients with moderate to severe AMD. I also tell my patients to adopt a healthy lifestyle and stop smoking," Berger says.

INDRANI NADARAJAH
editorial@mediaplanet.com

INSIGHT

CXL: AN EFFECTIVE NEW TREATMENT FOR KERATOCONUS

You may not have heard of keratoconus, but—according to Dr. Mark Cohen, co-national medical director of LASIK MD, a national provider of laser vision correction and corneal specialist at the University of Sherbrooke—approximately one in 500 people suffer from this disorder.

Keratoconus is a slow, progressive eye disease affecting the cornea, the clear, dome shaped surface of the eye, causing it to bulge forward into an irregular cone shape. This can result in a substantial decrease or distortion of vision, such as seeing multiple images of an object. The disease is usually diagnosed during the adolescent years. During this time the changes to the cornea tend to progress faster whereas in the patient's twenties or thirties, they level off and plateau.

Though the causes of keratoconus are largely unknown, Cohen says rubbing one's eyes repeatedly can potentially stretch and damage the cornea. "The persistent rubbing of eyes can cause the cornea to become misshapen," he says, "possibly leading to this condition." Allergy sufferers, because of constant eye-rubbing, are also at risk. Genetic factors also play a role.

Treatment options

Traditionally, eyeglasses or soft contact lenses may be used to correct the mild nearsightedness and astigmatism caused in the early stages of keratoconus.

However, in the past 10 years, a new technique known as corneal collagen cross linking (CXL) has been developed and used to treat keratoconus. Cohen says the method originated in Europe and has been available in Canada for the past four years.

The CXL procedure involves initially removing the surface skin of the cornea,

then placing a few drops of the vitamin riboflavin onto the cornea. Ultraviolet light is then applied to the eye, prompting collagen bonds to form in the cornea.

Cohen says LASIK MD clinics have successfully performed over 500 CXL procedures, and they've seen excellent results.

"When a keratoconus patient undergoes CXL, the elasticity of the cornea dramatically decreases, effectively becoming stiffer" he adds. "As a result, this procedure stops the disease from progressing."

"UV exposure from the sun naturally strengthens the cornea with age," says Cohen. "This is likely why the condition tends to stop progressing once a keratoconus patient reaches their twenties or thirties," he says the CXL procedure speeds up that natural process.

An additional benefit to CXL is the ability to combine it with laser vision correction. The laser is used to smooth the surface of the cornea and correct blurry vision. The patient can then undergo CXL to strengthen the cornea.

"Patients may still need to wear corrective lenses," says Cohen. "But laser eye surgery combined with CXL makes wearing glasses or contacts much more manageable."

Just a few years ago, keratoconus patients didn't have a way to stop this progressive disease, so in severe cases it led to the need for a corneal transplant. Cohen is hopeful that corneal transplants as a treatment for keratoconus will become a thing of the past.

"When the diagnosis is made in the early stages of the disease, that's when we see the best results," says Cohen. "Our hope in the near future is to detect keratoconus patients at even younger ages, and to intervene as soon as possible."

INDRANI NADARAJAH
editorial@mediaplanet.com

TAKING ACTION

Supplement your vision

■ **Question:** What measures can you take to further increase your eye health?

■ **Answer:** Anti-oxidants and supplements can give your vision a boost.

Vitamin supplementation has been a vexed topic in the medical community—to pop or not to pop?

There is no doubt that common vitamin deficiencies result in visual disturbances. According to the World Health Organisation, three-quarters of eye conditions causing blindness can be avoided. Maintaining optimal levels of vitamins A, B1 and B2, can reduce the occurrence of eye conditions which cause blindness, especially in populations unable to obtain adequate nutrition.

Increasingly, scientific studies are suggesting that supplements have the potential to prevent or slow the progression of cataract and age-related macular degeneration (AMD).

The question is: how much is enough?

Antioxidants

Dr. Lester Packer, senior scientist at the University of California at Berkeley, has shown that antioxidants are a key component in healthy ageing of the body and eyes.

The normal, healthy lens contains a higher level of Vitamin C than any other body organ except the adrenal glands. When cataracts are forming, however, the Vitamin C level in the lens is very low. This reduction in Vitamin C is due to the eyes impaired ability to secrete Vitamin C into the aqueous humor and the body's overall Vitamin C deficiency.



There is compelling evidence to show that the risk for cataracts is 60 percent less among individuals who have been taking supplements with vitamin C or E for more than 10 years. However, mega-doses of Vitamin C (1,000-2,000 mg) are not recommended.

Less well-known is alpha-lipoic acid, which is also beneficial for healthy eye function. Dr. Packer has published important research on the ability of this antioxidant to halt complications resulting from blood sugar imbalances and hardening of the lens.

B vitamins

Vitamins B1 (thiamine) and B2 (riboflavin) are also important for eye health. A vitamin B1 deficiency can lead to substantial visual disturbances and confusion. People suffering glaucoma have also been found to have low blood levels of vitamin B1.

Vitamin B2 deficiency can cause bloodshot eyes and eye inflammation. Vitamin B2 has also been shown to reduce the risk of developing cataracts.

AREDS

The Age-Related Eye Disease Study (AREDS), conducted under the auspices of the National Institutes of Health, showed that high levels of antioxidants and zinc can reduce the risk of vision loss from advanced age-related macular degeneration by about 19 percent in high-risk patients (patients with intermediate AMD or advanced AMD in one eye but not the other).

AREDS followed patients for between six to eight years.

INDRANI NADARAJAH
editorial@mediaplanet.com

19%

■ **The amount of reduced risk to vision loss as a result of consuming high levels of antioxidants and zinc.**

Improve your vision. Change your life!

WHY CHOOSE LASIK MD?

- Canada's only national LASIK provider with over 25 locations
- Treatment of nearsightedness, farsightedness and astigmatism
- State-of-the-art technology:
 - Standard and Custom LASIK/PRK
 - All-Laser LASIK
 - CXL Corneal Collagen Cross-Linking for keratoconus



Dr. Avi Wallerstein
MD, FRCS
Co-Founder, Co-National
Medical Director

Dr. Mark J. Cohen
MD, FRCS
President, Co-Founder,
Co-National Medical Director

OUR SURGEONS HAVE PERFORMED OVER 500,000 PROCEDURES

LASIK MD

VISION

FREE Consultation
1-877-433-9389
www.lasikmd.com

LASER VISION CORRECTION

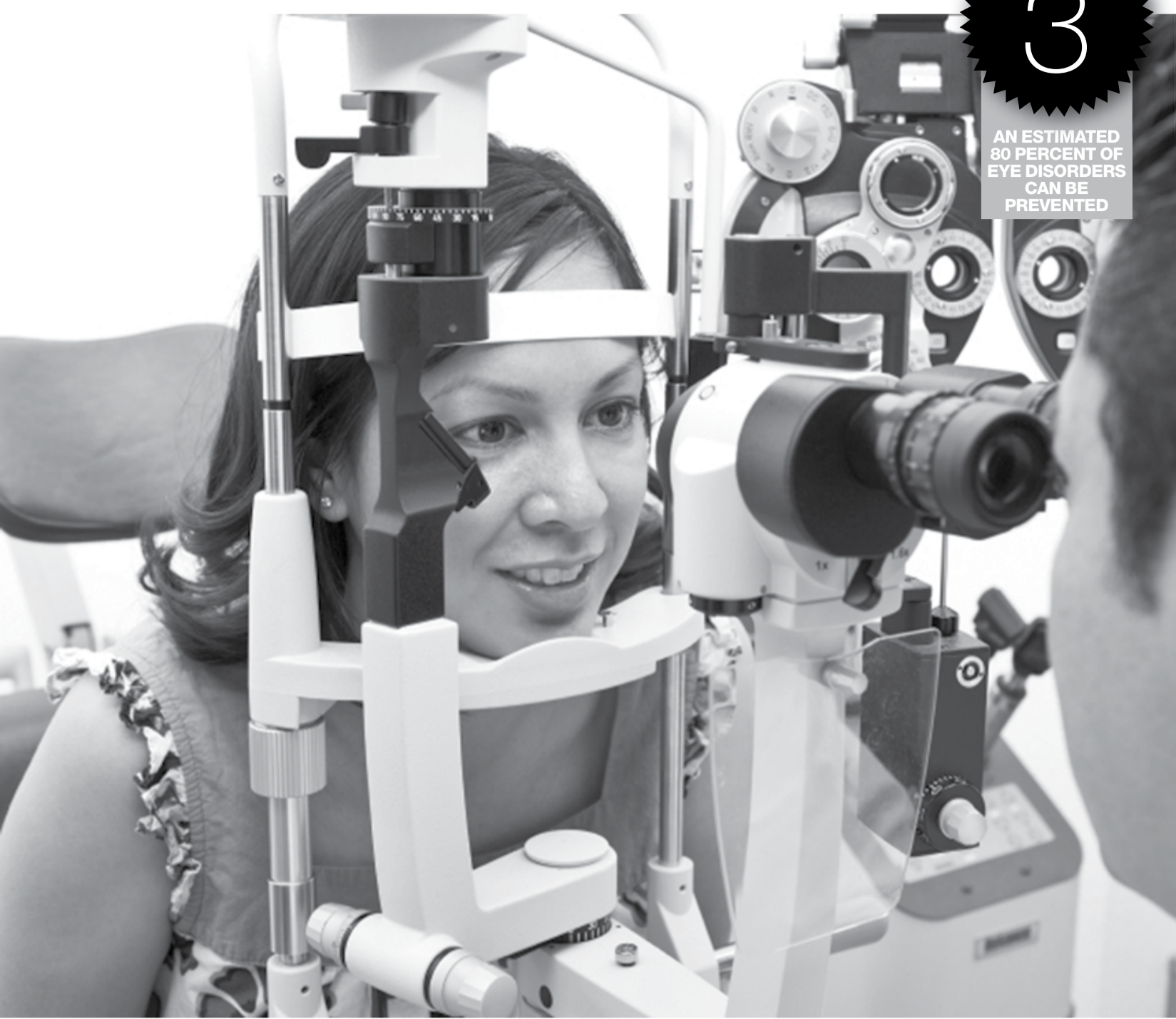
Starting at

\$490 /eye*

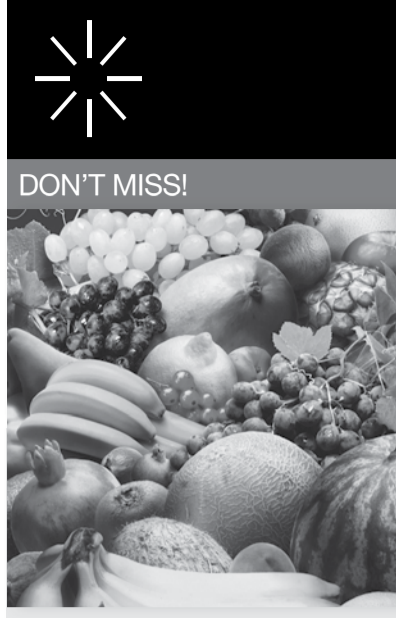
Financing Available



* Prices are subject to change without prior notice and vary based on prescription strength. Call for Custom LASIK pricing. Applicable to surgery on both eyes only. Other conditions may apply.



TIP
3
AN ESTIMATED 80 PERCENT OF EYE DISORDERS CAN BE PREVENTED



A healthy diet leads to healthy eyes

Good nutrition is crucial for both general and eye health. It helps our body to grow, protect against infection and to function properly.

The main focus on eye nutrition has been on the anti-oxidant vitamins A, C and E, which are found in many different types of colourful fruit and vegetables. They can also be found in nuts, seeds, dairy products and eggs.

Lutein and eye health
More recently, however, it has also been suggested that two types of antioxidants, lutein and zeaxanthin, are also beneficial to eye health.

These can be found naturally in vegetables and fruit. For example, lutein can be found in yellow peppers, mango, bilberries, and green leafy vegetables such as kale, spinach, chard and broccoli.

Zeaxanthin can be found in orange sweet peppers, broccoli, corn, lettuce (not iceberg), spinach, tangerines, oranges and eggs.

Some studies have found that people who consume a diet rich in lutein and zeaxanthin, also tend to have a lower risk of developing age-related macular degeneration (AMD).

Freshen up
Good nutrition does not cost a fortune. The first step is to minimize the amount of processed foods in the diet, which cost more anyway, in favour of fresh, colourful produce.

Reduce or eliminate all types of refined sugars. High levels of sugar in the blood spells bad news for eye health, and people with diabetes are three to four times at risk for getting cataracts. Cataract prevention is especially important for people with diabetes, because diabetic retinopathy can accelerate for six months following cataract surgery.

Stay hydrated by drinking eight glasses of water per day and eat foods high in beta-carotene, Vitamin C and Vitamin E. These antioxidants are one of the most important combatants against free radicals, which are a major cause of cataract formation. Foods rich in antioxidants include garlic, onions, beans, vegetables, celery, apples, carrots, tomatoes, turnips and oranges.

A healthy diet revolving around colourful fruits and vegetables, particularly leafy greens like kale and spinach will set the foundation for a healthy body and healthy eyes.

Keeping a lookout for cataracts

Question: If you suffer from cataracts, what should you consider before pursuing corrective surgery?

Answer: Before going under the knife, ensure you've taken as many measures as possible to reduce symptoms.

The ancient Greeks and Romans thought cataracts were formed as a result of 'evil' liquids that flowed into the eye.

Today, our theory is far less fanciful—according to the Canadian Ophthalmological Society, a cataract is a clouding of the eye lens, which is located near the front of the eye. The lens helps to focus light on the retina, at the back of the eye, to form the images we see.

A cataract may affect just a small part of the lens, or it may cloud the entire lens.

Symptoms
The signs and symptoms of cataracts include: clouded, blurred or dim vision; increasing difficulty with night vision; sensitivity to light and glare; seeing "halos" around lights.

Other symptoms include frequent changes in eyeglass or contact lens prescription; and double vision in a single eye.

Currently, surgery is the only effective treatment.

When to consider cataract surgery

Until a patient decides to have surgery, there are some ways of dealing with cataract symptoms. These include:

- Making sure that eyeglasses or contact lenses are the most accurate prescription possible;
- Using a magnifying glass to read;
- Improving the lighting in the home with more or brighter lamps;
- Wearing sunglasses and/or a broad-

brimmed hat to reduce glare when outdoors;

- Limiting night driving as much as possible.

"The ancient Greeks and Romans thought cataracts were formed as a result of 'evil' liquids that flowed into the eye."

Reducing the risk of cataracts

While it is not clear what causes cataracts, it may be possible to reduce one's risk of developing them through some simple measures:

- Having regular eye exams.;
- Quitting smoking.;
- Wearing sunglasses when out-

doors as ultraviolet light may contribute to the development of cataracts.;

- Diabetics should keep their blood sugar levels under control as they are known to get faster growing cataracts at an earlier age. Diabetes is thought to raise a person's cataract risk by about 40 percent.

The wide-ranging Nurses' Health Study, involving 500,000 nurses, also examined the link between cataract development and nutrition. It showed that those nurses with high beta carotene and Vitamin A intake were less likely to develop cataracts. Antioxidant vitamins such as vitamins C and E also appear to slow the development of cataracts.

INDRANI NADARAJAH
editorial@mediaplanet.com

Buying contacts? Focus on the facts

Contact lenses are hardly new—Leonardo da Vinci sketched an early idea for them 500 years ago, and they were successfully fitted as far back as the late 19th century.

Today, an estimated 125 million people around the world wear contacts. While contact lenses are well established, you may still have questions. Are contacts right for you? What are your choices? And what are the pros and cons?



Here are six things you need to know.

■ Contacts or glasses?

Contacts usually offer better vision than glasses, don't get in the way of activities (like sports), don't fog, and to some people, look better.

Consider though that contacts require more care, planning (for your wearing schedule), and follow-up visits to the eye doctor. Some contact lens users also complain of excess tearing, itching, burning, sensitivity to light, dryness, and occasional blurred or distorted vision—all of which can get worse with improper care or cleaning.

■ Soft or gas permeable?

Contacts generally fall into these two groups.

Soft lenses tend to be more comfortable, have extended wear and disposable options, are quicker to adjust to, and stay in place better. However, they're less dur-

able, must be replaced more often, and aren't as good at correcting some vision problems.

Gas permeable lenses, meanwhile, offer the best correction for many conditions, are more durable, need to be replaced less, and are more breathable. But they're also less comfortable at first, and can slip off more easily.

■ Do they make lenses for you?

More people than ever can wear contacts, with the availability of lenses for a wider variety of vision problems. For instance, there are lenses to correct presbyopia (the gradual loss of close-up vision), and what are called scleral contact lenses for people with conditions like severe astigmatism, keratoconus, and corneal inflammation.

■ Do contacts suit your lifestyle?

As Health Canada says, anything that causes dry eyes—e.g. antihistamines, birth control pills, alcohol and air travel—can make contact lenses uncomfortable and increase the risk of an eye infection. Environmental contaminants like dust (think of your workplace), smoke, sprays and pollen can also irritate your eyes when

you wear contacts. Lenses also usually aren't prescribed if you don't produce enough tears, or if you have a history of viral infections of the cornea.

■ Is extended wear wise?

Certain contacts are designed for continuous wear. Yet, as noted by Health Canada, many doctors still question if that's smart. Overnight wear can lead to a buildup of micro-organisms on the lens, and could contribute to eye infection and corneal complications.

■ Do you have the right fit?

Everyone's eyes can respond differently to contacts. Sometimes, the power, diameter, and curvature of your lens can only be tweaked just right for you after you've worn them for a bit. If you're experiencing discomfort, or your vision isn't where it should be, talk to your eye doctor. A simple adjustment could put the solution you need within sight.

STUART FOXMAN
editorial@mediaplanet.com

INDRANI NADARAJAH
editorial@mediaplanet.com

"You have your mother's eyes"
isn't always a compliment.

Sometimes
it's a warning.

Age-Related Macular Degeneration (AMD)
is the leading cause of vision loss in
Canadians over age 50.¹

If someone in your family has AMD, you are at an increased risk. You are 4 times more likely to develop AMD if an immediate family member has this condition.²

Vitalux Healthy Eyes[®], eye doctors' #1 recommended ocular vitamin, can help.



An all-in-one ocular vitamin and multivitamin

- Provides the antioxidant vitamins and minerals that are essential for good eye health and to help reduce the risk of developing AMD
- Helps maintain overall good health
- Specially formulated for adults over 50

*Talk to an eyecare professional to learn more
about AMD and how to further reduce your risk.*

SAVE \$3.00

on Vitalux Healthy Eyes[®]

This coupon is good for \$3.00 off Vitalux Healthy Eyes[®], any size. This coupon is valid only toward the purchase of product indicated. Coupon cannot be transferred, sold, exchanged, or reproduced. Any other use of this coupon constitutes fraud. RETAILER: Alcon Canada Inc. will redeem this coupon for the face value plus our specified handling fee, provided you receive it toward the purchase of Vitalux Healthy Eyes[®]. Only one coupon per purchase. Void where prohibited or restricted. Consumer will pay retail tax(es), where applicable, on price without coupon. For redemption, mail to: Alcon Canada Inc., P.O. Box 3000, Saint John, New Brunswick, E2L 4L3. Valid only in Canada. Not valid where prohibited by law. Expiry date: December 31, 2012.

Alcon © 2011 Novartis 10/11
Vitalux Healthy Eyes[®] is a registered trademark.



*

To be sure this product is right for you, always read and follow the label.

*#1 Eye Doctor recommended ocular vitamin.

REFERENCES: 1. CNIB. Age-Related Macular Degeneration. <http://www.cnib.ca/en/your-eyes/eye-conditions/amd/> Last accessed Sept. 19, 2011. 2. Klaver CC, Wolfs RC, Assink JJ, et al. Genetic risk of age-related maculopathy. Arch Ophthalmol. 1998;116:1646-1651.

Alcon[®] Alcon Canada Inc., 2665 Meadowpine Boulevard, Mississauga, Ontario, L5N 8C7
© 2011 Novartis 10/11 OP11249

Vitalux Healthy Eyes[®] is a registered trademark.