



# How are you treating your eyes?

Many Canadians abuse their most precious faculty **Philip Holden**

## **AFTER OVER-WEARING HER CONTACT LENSES**

at an all-night party during her first year of university, Jane Hendricks, now 35, learned the hard way what can happen when you leave your contacts in too long.

“The funny thing was, it happened after I had actually taken out my contact lenses,” recalls Jane, who lives in Vancouver. “I was rubbing my right eye, and, suddenly, I felt like someone had stuck a knife in it.” The contact lenses had irritated her cornea, and when Jane started rubbing her eye, a large tear developed in the irritated area.

A friend rushed her to the nearest emergency department, where her eye was frozen with anaesthetic drops and examined. The hole in her cornea was so large, doctors told her, that they could see the damage without the usual magnification required.

Jane went home with an eye patch and a warning not to over-wear her contact lenses again. The good news was that corneal cells grow back (and the hole disappeared) in just 24 hours, and there was no permanent impact on her vision. Still, Jane was so shaken by the experience, she couldn't bear to put in her contact lenses for almost a month.

Like Jane, many Canadians unwittingly put their eye health at risk every day. Here are some of the biggest threats.

## **Smoking**

Smoking contributes to the development of heart disease and arteriosclerosis (hardening of the arteries). This can lead to vascular disease of the eyes and damage to the optic nerve, resulting in significant vision loss or blindness.

Smoking also contributes to the risk of diabetes and diabetic retinopathy, in which blood vessels and nerves in the retina are damaged by too much glucose in the blood. Some 5% of Canadians currently have diabetes, and this has huge implications for public health in terms of diabetic retinopathy, says Dr. David Maberley, professor and division head of the Department of Ophthalmology and Visual Sciences in the Faculty of

Medicine at the University of British Columbia in Vancouver. “What patients with diabetes should know is that maximizing control of blood sugar will reduce the risk of vision loss,” he says.

Even if you’re a young adult (under age 40), smoking increases your risk for developing senile cataracts (clouding of the lenses) as well as macular degeneration, a progressive eye disease that affects the central portion of the retina and is the leading cause of blindness in the Western world. And while there’s a huge genetic component in macular degeneration, smokers “have a high independent risk regardless of genetic makeup,” says Maberley.

## Poor eye protection

**SUN** A broad-brimmed hat and sunglasses with 100% ultraviolet light protection will help to prevent cortical cataracts caused by sun exposure. However, just as important, sunglasses will protect the delicate skin around the eyes that is vulnerable to basal cell carcinoma. When skin cancer occurs in the eyelid, surgery to remove it can leave eyes chronically dry and uncomfortable and, in some cases, threaten vision.

## NEW HELP FOR DAMAGED CORNEAS

While cataract patients have long had the option of replacing their damaged lenses with synthetic ones, cornea patients have had to rely on transplantation with corneas from scarce human donors. But recently Canadian and Swedish scientists developed a biosynthetic cornea that has the potential to help restore sight to millions of people. The cornea is the thin, transparent film on the eyeball that helps to focus light. Once in place, a synthetic cornea —

**SPORTS** The most common sports-related eye injuries happen in sports that involve a ball or a puck, including hockey, baseball, basketball and racquet sports. “We still see middle-aged hockey warriors with traumatic eye injuries because they weren’t wearing visors or eye protection,” says Maberley.

**HOME** Don’t think a pair of regular eyeglasses or sunglasses will protect your eyes at home, particularly if the weed whacker throws a stone or you drop an open bottle of cleaning fluid on the floor. Even playing fast and loose with caustic household cleaners and bleaches can put eyes at risk through splashing, so you need to be very careful when cleaning sinks, tubs and toilets.

And if you’re a big do-it-yourself fan and love the feel of a hammer in your hands, you need eye protection in the form of safety glasses or goggles with a polycarbonate lens that won’t break or shatter on impact. Even minor injuries can severely damage the eye, warns Maberley.

**OTHER** The Canadian Ophthalmological Society (COS) also advises consumers to protect their eyes when using

made of human collagen grown in yeast and moulded into a corneal shape — stimulates the eye to grow new corneal cells on the implant. In a recent study, nine out of 10 patients treated with the man-made corneas experienced improved vision. “This technique regenerates the cornea from within,” says Dr. May Griffith, a senior scientist at the Ottawa Hospital Research Institute.

— Diana Swift



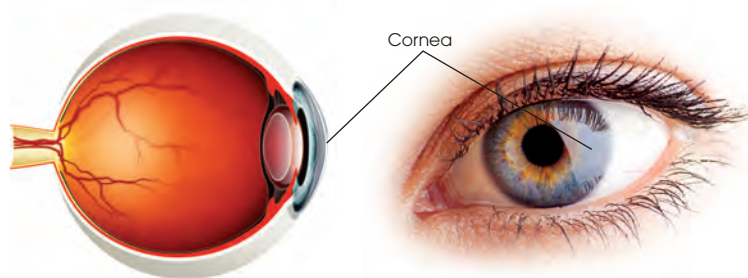
elastic devices such as bungee and exercise cords and to treat fireworks with great care.

## Misusing contact lenses

As in Jane’s case, over-wearing contact lenses is one of the most common risk scenarios for those who eschew eyeglasses. This endangers ocular health because it cuts off oxygen and irritates the eye, causing the cornea to swell and raising the risk of corneal abrasions and infection — and can sometimes result in permanent damage.

“Don’t put your corneas at risk of infection or damage by over-wearing your contact lenses or sleeping in them,” cautions Dr. Shalu Pal, an optometrist in private practice in Toronto. She also recommends that you have a backup pair of eyeglasses with your current prescription. “If your eyes are red or tired, stop wearing your contact lenses and put your glasses on,” she advises. “Give your eyes a break; wear your glasses in the morning and before you go to bed to allow your eyes to breathe.”

Don’t wear your contact lenses while swimming unless they are one-day disposable lenses and you intend to throw them away as soon as you get out of the water, she says. Bacteria in swimming pools, lakes, rivers and hot tubs can contaminate the lenses and cause a serious eye infection.





Pal also warns that contact lenses need to be changed as directed. “A contact lens is a piece of plastic that breaks down with time and use. You wouldn’t drink spoiled milk, would you?” Improper lens care, including not cleaning and storing lenses properly, can also raise the risk of eye infection significantly. Use fresh contact lens solution when storing your lenses,” advises Pal. “Don’t reuse solution.”

Similarly, the use of over-the-counter cosmetic contact lenses to temporarily change eye colour can cause swelling, corneal tears and allergic reactions, any of which can lead to permanent vision loss. At the end of the day, contact lenses are medical devices that need to be fitted correctly by an optometrist, says Pal. to ensure the right lenses are selected for you. “One size does not fit all. Cosmetic lenses purchased online with no medical guidance can be risky.”

## Ignoring changes in vision

According to the COS, the following sudden changes in vision signal the urgent need to be seen by a physician:

- sudden spots, flashes of light, lightning streaks or jagged lines of light, wavy or

watery vision, blurry faces, distortions or wavy lines, halos around lights or double vision

- changes in the field of vision such as shadows, curtain-like vision loss, black spots or blurriness in central or peripheral (side) vision
- changes in colour vision
- loss of sight such as decreased or no vision in one or both eyes
- physical changes such as crossed eyes, eyes that turn in, out, up or down, pain or signs of infection (redness, swelling, discharge)

## Skipping eye examinations

Do you know how often you should have your eyes examined by an ophthalmologist or optometrist? “Having your eyes examined and giving a family history of eye disease are important,” confirms Maberley. “Canadians should be accessing services and examinations throughout their lives,” he says.

The first eye exam should be at six months of age, says Pal. “Early detection of vision problems can prevent developmental delays, educational setbacks and behavioural problems in

children,” she points out. “Children learn through their eyes, and if they can’t see well, their development and early years of education can be hindered.”

The COS recommends the following eye examination schedule for people with no eye problems:

- **AGES 19 TO 40** at least every 10 years
- **AGES 41 TO 55** at least every five years
- **AGES 56 TO 65** at least every three years
- **OVER AGE 65** at least every two years

Those at higher risk for eye problems should see an eye doctor more frequently. These include people...

- with diabetes
- of African or Hispanic descent
- with a tendency toward high pressure within the eye
- with a family history of eye conditions such as glaucoma, cataracts, macular degeneration or retinal detachment
- with a previous eye injury
- taking certain medications, such as heart or arthritis drugs
- with very poor eyesight

People older than 40 in this high-risk group should have an eye exam every three years. For those over the age of 50, an eye exam is recommended every two years, and for those over 60, an eye exam should be conducted annually.

## CANADA’S VISION CARE: NOT A PRETTY SIGHT

In 2009, The National Coalition for Vision Health (NCVH) conducted a research project to take the pulse of vision health in Canada. The results, according to the NCVH, were nothing less than “shocking.”

Canada faces a crisis in eye health care, says the coalition’s recent report, *Vision Loss in Canada 2011*. An aging population, a shortage of specialists (many are retiring and not being replaced), increasing health-care costs, underfunded research and a lack of preventive programs are to blame. The NCVH notes the following:

- In 2032, the total annual cost of vision loss in Canada is projected

to skyrocket to \$30.3 billion, up from \$15.8 billion in 2007.

- 200 Canadian workers suffer eye injuries each day.
- Four million-plus Canadians had age-related eye disease causing blindness in 2007.
- 60% of Canadian children with reading difficulties have undetected and uncorrected vision problems.
- Compared with normally sighted people, those with vision loss experience double the incidence of difficulties in daily living, double the incidence of falls, double the death rate, triple the incidence of depression and quadruple the incidence of hip fractures.