

Glaucoma Research Society of Canada News & Information



We Support New Ideas

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Spring 2016



Calling All Members!

We need you, your families and friends to walk or run in the Scotiabank Toronto Waterfront Marathon on Sunday, October 16, 2016 and help raise money for glaucoma research

Last year your Society's participation in the Marathon raised \$65,000 for research! This year with your help, we can do even better.

You're invited to the Glaucoma Research Society of Canada's Annual Meeting of Supporters Thursday, October 6, 2016

CNIB Conference Centre
1929 Bayview Avenue, Toronto
Free parking in underground garage

Drug 'cocktail' could restore vision in optic nerve injury

Research from Boston Children's Hospital suggests the possibility of restoring at least some visual function in people blinded by optic nerve damage from glaucoma.

Scientists restored vision in mice with optic nerve injury by using gene therapy to get the nerves to regenerate and - the crucial step - adding a channel-blocking drug to help the nerves conduct impulses from the eye to the brain. In the future, they believe, the same effect could be achieved with drugs alone.

The new study is the first to restore vision with an approach that could realistically be used in the clinic, and that does not interfere with tumour suppressor genes.- *Cell online, Jan. 2016*

Scientists link three more genes to glaucoma risk

DNA analysis in a recent study led to the discovery of three more genes associated with primary open angle glaucoma. The newly identified genes bring the total number of such genes to 15, providing the most comprehensive genetic profile of glaucoma to date.

Researchers report that this discovery could boost efforts to fight the eye disease.

"These findings open avenues for the pursuit of new strategies to screen for, prevent and treat glaucoma," said Dr. Paul Sieving, director of the U.S. National Eye Institute.

- *Nature Genetics online, January 2016*



Dr. Rajiv Bindlish answers your questions about glaucoma

What are the possible treatments for closed angle glaucoma? Is cataract surgery one of them?

The mechanism of the glaucoma determines the best treatment. The main cause for angle closure is pupillary block where the lens and the iris are in contact so fluid cannot flow from behind the eye to the drain of the eye that is in front of the iris and lens.

In this case, treatments include eye drops to lower eye pressure, pilocarpine to constrict the pupil, laser or surgical iridotomy to open the angle and cataract surgery to remove the large lens.

Sometimes if the eye pressure is not controlled, conventional glaucoma surgery is used.

Recent studies from China have shown that cataract surgery is beneficial in managing closed angle glaucoma.

My father has glaucoma and can't drive. Could laser surgery help his vision?

A certain amount of peripheral (side) vision is needed in order to drive. This may be specific to the jurisdiction you reside in.

Advanced glaucoma causes a restricted visual field. Other eye conditions that may make driving difficult include cataracts, macular degeneration or stroke.

Treatments for glaucoma include eye drops, laser and surgery. Although controlling eye pressure can slow the worsening of glaucoma, there is no cure nor any means of bringing back lost vision.

I have been using Travatan, the kind with preservatives, for many years. I now have light sensitivity and see halos and star effects on car headlights and street lights. I also have migraines every day. Could this be from the eye drops?

Long-standing glaucoma eye drop use can lead to ocular surface disease with dry eyes and inflammation of the eyelids. This can result in visual symptoms such as glare, blurred vision and halos. The preservatives in eye drops are a major factor.

Some ways to reduce ocular surface disease include using preservative-free glaucoma drops, cleaning the eye lid margins, applying warm compresses on the eyes, and having sufficient Omega-3 fatty acid. Restasis eye drops also help.

Glaucoma can also lead to earlier onset cataract formation with similar visual symptoms. You may want to have the cataract removed if it is becoming visually significant.

Usually migraines are not directly related to ocular surface disease but chronic eye discomfort can be difficult for some people, precipitating the onset of migraines.

Are there any specialists in southwestern Ontario experienced in performing trabectome surgery?

There is currently no one in southern Ontario who does trabectome surgery. Other surgical options, including iStent and Xen/Aquesys implants, may be available in London and Kitchener.

I have received alarming emails warning that reading from mobile phones in the dark can cause serious vision problems including irreversible macular degeneration. Please comment.

This type of unsolicited chain email has no basis in scientific fact. No evidence links smart phone use to early onset macular degeneration, glaucoma or cataracts.

My husband has been diagnosed with incipient glaucoma with pressures of 21-28, but no medication was prescribed. When is medication normally prescribed?

While lowering eye pressure in certain individuals is beneficial, other ocular risk factors also contribute to glaucoma development. There is no such thing as a critical eye pressure. IOP in the twenties raises a flag for glaucoma, but does not indicate glaucoma disease.

Because the higher the eye pressure the greater the risk, most doctors start considering treatment when the eye pressure is in the mid to high twenties. This is based on individual cases and is not for everyone.

I suspect that your husband has a healthy optic nerve and normal visual field and that is why his ophthalmologist has elected to hold off treatment. The most critical thing is for your husband to maintain his regular follow-up appointment schedule, so if any changes are found in the future, treatment can be started promptly.

Has any research been done on the role of apoptosis in the development of glaucoma?

Apoptosis, programmed cell dying, does play a large role in glaucoma. Numerous ongoing studies in this area are looking at ways of preventing and detecting apoptosis.

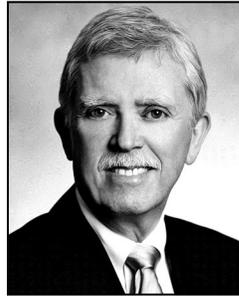
Several studies have been supported by the Glaucoma Research Society of Canada. You may want to read about some of these research grant projects on our website: www.glaucomaresearch.ca.

**Email your questions
about glaucoma to
info@glaucomaresearch.ca**

or call

416-483-0200 1-877-483-0204

President's Message



The Glaucoma Research Society of Canada had another successful year financially, thanks to \$65,000 raised in the Scotiabank Marathon and generous support from our donors including bequests of nearly

\$75,000 and marketable securities worth almost \$20,000. This support enables us to make \$275,000 in research grants this year.

Giving marketable securities can be a very tax-efficient way to combine charitable giving and tax planning. Other methods include using life insurance and designating the Society as a beneficiary under RRSPs, RRIFs or TFSA's.

With continued contributions from our supporters, the Society will be able to make a significant difference by funding research aimed at the eradication of glaucoma as well as improved treatment.

The Board and I particularly want to acknowledge and thank all of our volunteers, supporters and others who helped make our third year of participation in the Marathon such a success. Special thanks again to Executive Secretary Dr. Mark Shaffer and Susan Schouela.

After the Society continued under the *Canada Not-for-profit Corporations Act* and adopted new by-laws, its only members now are the directors. Former members and others will, as in the past, be invited to attend an annual meeting in the fall that will be similar to previous AGMs.

This year's annual meeting for supporters is scheduled for Thursday, October 6.

Financial and other information, such as research projects, is available on GRSC's website. The Society is working to update the website to make it more user-friendly and interactive.

- James M. Parks, President

Eating leafy greens daily may help eye health

A recent study showed that higher daily consumption of green leafy vegetables may be associated with decreased risk of glaucoma.

Researchers think there is an impairment of blood flow to the optic nerve in glaucoma and that an important factor that regulates blood flow to the eye is a substance called nitric oxide. Green leafy vegetables contain nitrates which are precursors to nitric oxide.

The study suggests that when you eat a high amount of green leafy vegetables, you have greater levels of nitric oxide in your body. Although the study found an association between eating more leafy greens and a lower risk of glaucoma, it didn't prove cause-and-effect.

- *JAMA Ophthalmology online, January 2016*

Powerful ways for you to help fund research

You can give an existing life insurance policy or purchase a new one naming the GRSC as owner/beneficiary. Gifts of an existing policy entitle the donor to a fair market value tax receipt, which may be greater than the cash surrender value.

You can also designate the GRSC as the beneficiary under a life insurance policy, a registered retirement savings plan, a registered retirement income fund or a tax-free savings account. In that way, the funds will be paid directly to the GRSC without passing under a will or through an estate.

Giving marketable securities eliminates tax on a capital gain and entitles the donor to a fair market value receipt. This is more tax efficient than giving cash after selling the securities. Donors should seek tax advice in connection with gifts of insurance policies or securities or by making designations.

The Glaucoma Research Society of Canada is a national registered charity funding research into finding a cure for glaucoma. Since 1989, the GRSC has raised over three million dollars for research.

Charitable Registration No 889178695 RR0001

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