



Eyelights

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Glaucoma and Driving

For many people driving is an essential part of their daily life and not being able to drive can have a significant effect on their quality of life. When it comes to deciding whether a person has satisfactory vision for driving there are two aspects to consider. The first is central vision, which is the vision you use for looking at objects straight ahead. The second is your peripheral or side vision that you use to see objects in your wider field of view.

For nearly all people with glaucoma their central vision is intact so this is not usually a problem. Glaucoma can damage central vision, but this does not happen until late in the disease process. Even in advanced glaucoma, patients may maintain good central vision. Central vision is what is normally tested when you read the letters on an eye chart.

However, the main issue with glaucoma is that it causes loss of peripheral vision (termed visual field loss), and it is for this reason that some people with severe or advanced glaucoma may not be safe to drive. Peripheral vision is your side vision that allows you to identify objects coming in from the sides or above and below.

Loss of peripheral vision has an impact on driving because it makes it difficult to see objects to your side. For example, you may not be able to see pedestrians approaching from the side or cars driving alongside you, which could be a problem when you try to change lanes or make turns. Glaucoma can also affect your ability to rapidly adapt to bright sunlight or glare at night, which can also affect your safety to drive.

If glaucoma is at an early stage then the peripheral vision is usually still satisfactory for those affected to be able to drive safely. Hence it is very important that diagnosis is made early and that patients are treated and monitored closely in order to prevent worsening of glaucoma to the more advanced stages (Figure 1). Those suffering from glaucoma can help by ensuring that they take their eye drop medication regularly and not miss doses. Unfortunately the vision loss from glaucoma is irreversible and so preventing visual field loss in the first place is crucial. It is reassuring that the majority of people who are diagnosed with glaucoma in New Zealand do have early or moderate disease only and are still able to drive safely.

When an eye specialist assesses someone's suitability for driving they follow the guidelines set by the New Zealand Transport Agency (NZTA). For all licence classes, the minimum standard is a visual acuity

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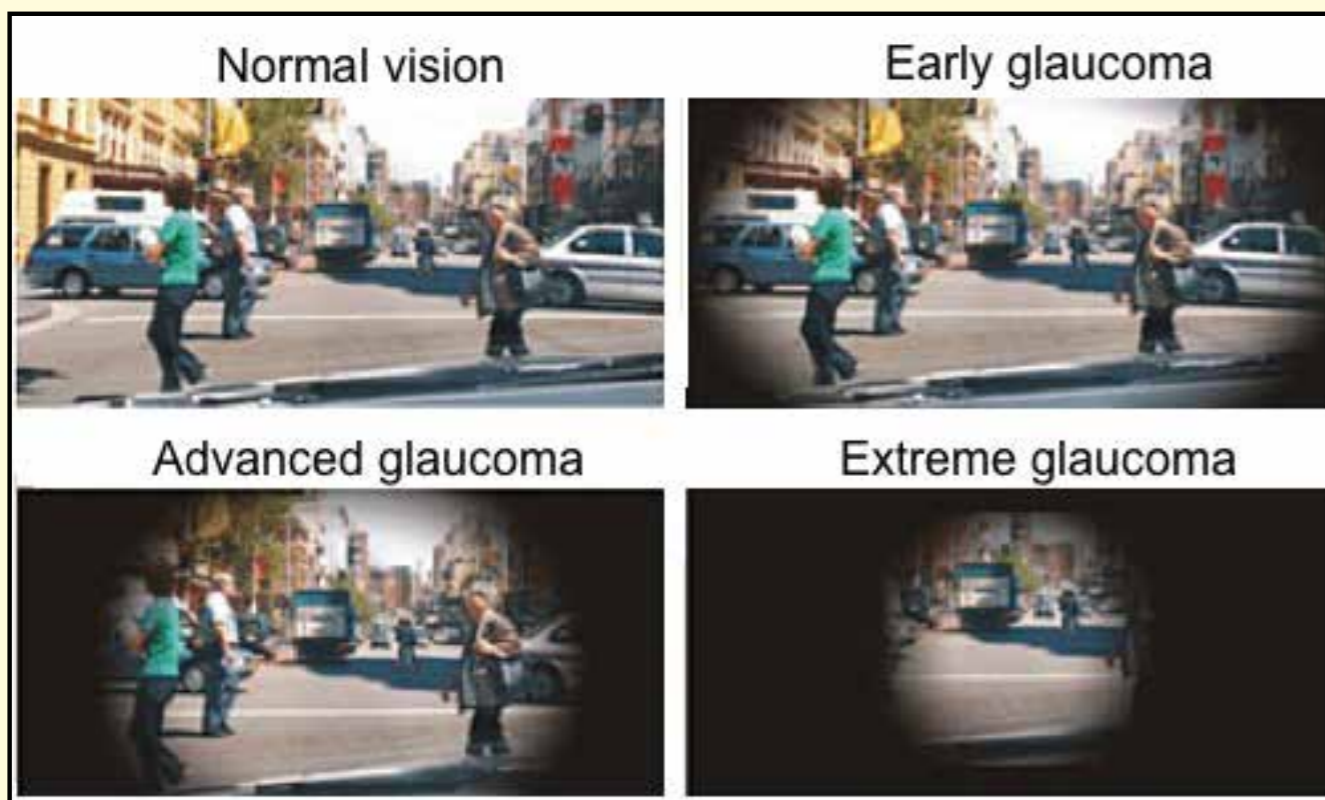


Figure 1: Photo demonstrating increasing loss of side vision with glaucoma – typically when it reaches the advanced stage it would be unsafe to drive.

(central vision) of 6/12 or better, measured using a vision chart and a binocular horizontal visual field of 140 degrees (your field of view with both eyes open). There should be no significant visual field defect encroaching within 20 degrees of the point of fixation. This is assessed using a computerised visual field machine. Someone who is borderline will be

referred to the NZTA for further assessment and they may still be able to drive under certain conditions or special circumstances. There is a special visual field test called the Estermann test which is designed to test peripheral vision with both eyes open. If there is any question regarding a person meeting the driving criteria, this is the test that is done.



Glaucoma NZ 2015 CHRISTMAS CARDS Now available

See order form insert, or go to

www.glaucoma.org.nz

to purchase online, or

Phone: 0800 452 826 for more information.

Limited edition - don't miss out!

Glaucoma Special Interest Group (SIG)



SIG July Meeting participants – Ginny Harwood (GNZ), Dr Stephen Best, Dr Alex Buller, Dr Brian Kent-Smith, Dr Hussain Patel, Dr Dean Conger, Dr Sonya Bennett, Dr Jo Koppens, Dr Mike Merriman, Dr Jessie Gale.

Absent from photo but regular attendees of SIG meetings – Dr Nina Ashraff, Dr Dean Corbett, Prof Helen Danesh-Meyer, Dr Mark Donaldson, Dr Justin Mora, and Dr Jim Stewart.

Have you ever wondered what happens after your ophthalmologist states that your particular case is unusual, atypical, interesting or special? It is often a prompt to suggest that perhaps another opinion might be helpful! Perhaps you might have even asked if your case could be presented or discussed anonymously with a group of glaucoma doctors.

We are very fortunate that a group of ophthalmologists from around New Zealand, who have devoted additional training time in glaucoma, meet in Auckland to discuss such cases. As a group they gain that additional information and gather the collective experience from treating other patients with similarities to your special case. The SIG meets twice a year usually after clinic times on a Friday afternoon and is open to all ophthalmologists who have a special interest in glaucoma management.

The SIG meetings are generously sponsored by Alcon, one of the major international pharmaceutical companies with a focus in Ophthalmology and Eye Health, with Glaucoma NZ providing administrative support.

The format is for each ophthalmologist to present an “interesting case history” in order to stimulate lively debate and discussion. Each case is outlined giving the background clinical history, examination findings and the relevant investigations including photos of the optic nerve heads, visual field analyses and computerised imaging. Many case histories remind clinicians of similar cases they have dealt with and this information/experience is passed on, so the treating clinician can go back to the patient with the “group second opinion”. This is an excellent way to learn more about just how tricky some glaucoma conditions can be to manage, and make a valuable contribution to the ongoing Continuous Professional Development that all clinicians are required to fulfil in order to maintain medical registration.

The meeting is followed by dinner and many conversations around the table relate to the clinical dilemmas we deal with each day.

The SIG meetings provide an ideal forum for stimulating discussions about the ongoing management of glaucoma, and the group are grateful to Alcon and GNZ for their continued support.

July 2015 Glaucoma Annual Awareness Appeal

A BIG (Beat Invisible Glaucoma) thank you!

Glaucoma NZ extends a **BIG thank you** to all those who supported the 2015 July Annual Awareness Appeal.

It has been extremely encouraging to have so many regular participants willing to help out once again and also some new faces and places joining in. Optometrists and ophthalmologists responded by taking donation boxes to display at their practices, as well as some making a donation from eye and/or glaucoma examinations undertaken during July. The ongoing support of pharmacies and ASB Bank branches nationwide continues to have a significant impact on raising awareness and funds. This year we also welcomed a large number of new businesses and organisations adding to the overall reach of our Glaucoma Awareness Appeal.

A large amount of media exposure was generated resulting in prime time television and radio interviews, as well as articles and promotions appearing in a variety of national magazines and newspapers. We are also very grateful for the ongoing generosity of GNZ's ambassador Sir Richard Hadlee and his wife Lady Dianne Hadlee who featured in the New Zealand Woman's Weekly sharing their story in support of the cause.

To view the television interview and read the full NZWW article with Richard and Dianne Hadlee visit <http://www.glaucoma.org.nz/GNZ-News/Whats-Happening.asp>

Our sincere thanks to GNZ members Dr Maria

Crawford - Invercargill clinical psychologist, Wellington Hospital nurse, Jenny Kendall and Auckland newsreader and artist Michael Hodge who publicly shared their glaucoma stories.

GNZ's 0800 line was busy with enquiries from the public wanting to know more about glaucoma and early detection. Many of these people were subsequently advised to visit their local optometrist for an eye examination, or reminded of the importance of taking their eye drops and getting their prescriptions filled before running out of drops.

The Appeal overall has been a great success, lifting the awareness of glaucoma and boosting funds.

Again, Glaucoma NZ appreciates all your efforts during the 2015 July Annual Awareness Appeal and your continued support throughout the year working towards eliminating blindness from glaucoma.

To GNZ members we cannot thank you enough for your response to our "funds shortfall" alert and subsequent call for your help in raising additional funds. We are not out of the woods yet but with your support progress has been made. Raising funds for Glaucoma NZ to continue with its sight saving work does remain a major focus.

Donations can be made via our website www.glaucoma.org.nz or by completing the coupon on the back page of Eyelights.



For New Readers

To those of you who have joined Glaucoma NZ since the last issue of Eyelights, we welcome you!

For your information here are some basic facts about glaucoma:

People of all ages can get glaucoma. There are different types of glaucoma, but they all involve damage to the optic nerve, the nerve of sight, which is at the back of the eye. Glaucoma is not curable. If you have glaucoma it must be monitored for the rest of your life. A family history of glaucoma means you are at much greater risk of developing

glaucoma. Current treatments for glaucoma aim to lower eye pressure.

Medication in eye drops can have side effects on other parts of your body. Tell your eye specialist if you notice any change in your general well-being since you started the eye drops.

If you have glaucoma tell your relatives, especially those close relatives like sisters, brothers and adult children. They have an increased risk of developing glaucoma so advise them to have an eye examination.

Glaucoma NZ is a registered charitable trust which receives no government funding. We rely solely on donations, sponsorship, grants and fundraising. All the information available to you from Glaucoma NZ is free.

Reader's Story

by Geoff Parr

Smart Phones & Eye Pressures



I have now had glaucoma for decades. The biggest challenge I have faced over the years is remembering to take my eye drops. For me that currently means applying two types of drops in the morning, and then one of them again at night time.

The morning ones are relatively easy to remember to apply, as I have developed a routine of taking them as I prepare breakfast. Historically I suggest that I would have applied the morning drops 99.9% of the time when they were due. However the success rate, on the evening ones, was not so flash.

I am self-employed and as such I arrive home from work at a different time every day. Part of being self-employed is not knowing when the working day will end, as you often have to prepare for an early start for the next day; get a quote out before the day ends; make a few quick phone calls, and then there's dinner to cook etc. With all of these distractions and lack of routine

going on, I must admit that I did often forget to take the evening drops. As a result of this my pressures were not where they should have been, and were also a little bit unstable from check up to check up. However this all changed when I was finally pressured into getting a smart phone.

The phone I have has a fairly fancy alarm clock built into it. I have set it up so that it plays a specific alarm at 5.30pm every day, to remind me to take my drops. When the alarm goes off I can do one of two things. I can turn it off, or I can set it to snooze.

When I set it to snooze it will remain silent for ten minutes and then go off again. I can repeat this snooze process as often as I like, until I turn the alarm off for the day. The very important rule I follow is that "I don't turn the alarm off for the day, until I have taken my evening drops". If I am not at home when the alarm goes off, I just keep pushing the snooze button until such a time that I am standing in front of my eye drops. Since I have had the phone and religiously followed my "Rule," I am now taking my evening drops 99.9% of the time. My pressures are now where they should be and are stable.

My smart phone has been an invaluable tool, to help me care for my eyes.

Contributions to Eyelights

We would like to thank the following people for contributing to our 2015 Eyelights publication

October edition:	Dr Stephen Best	Professor Helen Danesh-Meyer
	Dr Mark Donaldson	Dr Sam Kain
	Dr Hussain Patel	Assoc. Professor Gordon Sanderson



Eye on Research

Your eye is like a bicycle tyre. It needs to be kept inflated in order to work properly. This is the role of the mechanism that generates your intraocular pressure.

Of course we all know that when this mechanism goes awry, it can result in raised intraocular pressure which we know as glaucoma.

However, with all the best treatment and all the best care, the pressure occasionally gets out of control; this is called absolute glaucoma.

One of the consequences of absolute glaucoma is a condition known as Phthisis Bulbi. What it means is if the pressure becomes very high it can cause the part of the eye that produces the aqueous (fluid in eye) to die.

This can result in the eye starting to shrink, often becoming painful and unsightly at the same time. It may even necessitate removal of the eye for cosmetic reasons.

Researchers at the Fraunhofer Research Institution for Microsystems and Modular Solid State Technologies are developing an implant that once inserted into the eye, could regulate fluids and eye pressure without the

need for unpleasant procedures.

The entire system uses a microscopic, silicon micro-membrane pump that measures just 7 x 7 x 1 mm.

Combined with a sensor-based control, a battery and a telemetry module for relaying data, the system can produce up to 30 micro litres of fluid per second.

In doing so, it can keep the intraocular pressure high enough to prevent Phthisis Bulbi. Fraunhofer says the fluid levels can be set by an ophthalmologist on an outpatient basis with much more precision than traditional treatments.

Because the fluid would be maintained at healthy levels, the research team is hopeful that the system would stop the progression of the disease and possibly preserve the patient's eyesight, or at least their eye.

When it comes to glaucoma, the pump could also drain intraocular fluid if the pressure builds up.

This would be done using the normal channels for aqueous drainage from the eye.

At present, the researchers are developing a functional model to demonstrate the system's feasibility in the laboratory.

Eventually, they hope to build a version that incorporates an implantable sensor to allow the regulation of fluids to be automated.

Let's hope they do.

Make a lasting gift

Including a gift to Glaucoma New Zealand in your Will is a powerful way to make a positive difference to the outcomes of those with glaucoma and their families, far beyond your lifetime.

For more information and to download a Bequest Form that you can discuss with your solicitor, please visit www.glaucoma.org.nz.

Alternatively phone our office **0800 452 826**, or email info@glaucoma.org.nz.

Clinicians Research Based

Natural Support for Eye Health and Vision

Clinicians, (a wholly owned subsidiary of Douglas Pharmaceuticals – Silver Sponsor of Glaucoma NZ) has extended its range of products for Ophthalmic use.

VisionCare with Lutein

Specialised combination to support macular health. Lutein and Zeaxanthin may help protect the retina.

OptiSight

Specialised formula to support vision. Gingko supports blood flow and optic nerve health.

VisionFood

For general support of good eye health bilberry may help protect against blue light damage.

These products are available at all good pharmacies and health stores nationwide.

For Eye Care Professionals, we are pleased to offer information and visits by representatives. If you have any questions or comments please feel free to contact the technical team at apple@nhlab.co.nz or 0800 622 533.

Always read the label and use as directed. If symptoms persist see your healthcare professional.



Public Mail Box

I have glaucoma, and when I drive at night, I really have a tough time with the glare from oncoming headlights. Do you know of any ways to reduce this glare?

Glaucoma can cause a number of vision problems, such as loss of contrast sensitivity, problems with glare, and light sensitivity. Miotics, such as pilocarpine, a class of glaucoma medications that constricts the pupil to increase fluid flow, can contribute to problems with glare as well.

Halogen lights, such as car headlights and fluorescent light fixtures, can sometimes cause uncomfortable glare. Some people with glaucoma also notice glare in stores with fluorescent lighting. However, cataracts are a more common cause of glare and it would be important for your eye doctor to differentiate between these two causes.

The best types of tinted lenses to block out glare from fluorescent lights are yellow, amber and brown. The darker the shade, the more glare will be blocked. However, everyone must experiment to see what works best under different circumstances. On a bright day, try using brown lenses for your glasses. For overcast days or at night, you can try using the lighter tints of yellow and amber.

You don't have to buy different pairs of glasses to take advantage of tinted lenses. There are tinted lenses that you can attach to your regular glasses and flip up and down, or lenses that drop behind your usual glasses and have side shields. Ask your eye care professional for more information about tinted lenses.

The key issue is to trust your judgment. If you are having trouble seeing at night, do not drive at night. Stay safe by adjusting your schedule so that you do most of your travel during the day. If you must go out at night, ask a friend or family member to be the driver.

Christmas Appeal

WE NEED YOUR HELP to continue our vital work of saving sight. Please support our efforts to eliminate unnecessary blindness from glaucoma.

Without additional funding the full delivery of our programmes and initiatives will be in jeopardy.

An estimated 91,000 New Zealanders over the age of 40 currently have glaucoma. 50% of these people don't know they have it.

For 14 years we have reached thousands of New Zealanders with our nationwide programmes but there is still much more to be done.

Public Meetings	Workplace/Community Seminars
Educational Resources	0800 Advisory Service
Eyelight Publication	Health Professionals Education Programme
Research	Advocacy

Your support is important to us – we can't do it alone.

THANK YOU for your continued generosity - every donation counts!

YES! I would like to make a donation to the Christmas Appeal

\$300 \$100 \$50 \$20
 \$_____ (other)

Name _____

Address _____

Postcode _____

Phone No _____ Email _____

I enclose my cheque made payable to Glaucoma NZ

Please debit my credit card Visa Mastercard

Name on Card _____

Card No _____ / _____ / _____

Expiry Date ____ / ____ Signature _____

Donations of \$5.00 or more are tax deductible and will be receipted.

YES! I would like to receive more information about:

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 I have already included Glaucoma NZ in my Will

The Trustees of Glaucoma NZ

Professor Helen Danesh-Meyer
(Chairperson)

Dr Mark Donaldson

Dr Sam Kain

Associate Professor Gordon Sanderson
(Deputy Chairperson)

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