

## Lifestyle Factors that may affect glaucoma

Reducing intra-ocular pressure (IOP) with drops, laser or surgery is the only treatment approach that has been definitively proven to slow the progression of glaucoma. The following lifestyle factors may increase or decrease the risk of glaucoma progression in patients with glaucoma.

### Aerobic exercise lowers IOP

Aerobic exercise (walking, jogging or cycling) lowers IOP, even after 5 minutes. This reduction is greater with longer duration and higher intensity exercise. Exercise may have more IOP lowering effect in individuals with glaucoma. This reduction of IOP with exercise is additive to the effect of glaucoma drops.

Once regular exercise is established (for at least 3 months), this IOP lowering effect continues for up to 3 weeks after cessation of exercise. Physically fit individuals have a lower baseline IOP, and get much less additional lowering of IOP with exercise. Marathon runners have the lowest intraocular pressure, as a group.

There is one group that should be cautious: in individuals with pigment dispersion syndrome or pigmentary glaucoma, pigment dispersion during aerobic exercise may lead to increased IOP

Note: aerobic exercise differs from weight lifting, which may increase IOP.



### Yoga

Head-down yoga positions have been associated with significant increases in intraocular pressure in some people (particularly inverted positions) and could lead to worsening of glaucoma.

### Fruit and Vegetables

Antioxidants and nitrates may reduce glaucoma risk and are found in fruits and vegetables. It is best to eat plenty of fruits and vegetables, especially those that are rich in

Vitamins A and C, carotenes and nitrates. These include green leafy vegetables, carrots, cruciferous vegetables (e.g. broccoli, cauliflower and cabbage), berries, citrus fruits and peaches.

### Excessive water drinking

A significant rise in IOP may occur after drinking a high volume of water (1 litre) over a short time period (5 – 15 minutes). Glaucoma patients should avoid ingesting large volumes of fluid rapidly.

### Coffee

Caffeinated coffee is known to elevate IOP. It seems safer to ingest caffeine in moderation – no more than two cups of coffee a day.

### Eyelights insights:

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## Tea

Caffeine levels in tea are low and there is no additional risk from consuming tea. In fact, tea drinkers (one cup per day) may have lower rates of glaucoma compared with non-tea drinkers. Tea contains flavonoids that may reduce glaucoma risk by improving blood flow to the optic nerve.

## Alcohol

Alcohol may lower IOP initially, but daily alcohol causes a slight elevation in IOP. We recommend moderation.

## Omega-3 acids

Omega-3 fatty acids, found in oily fish (eg. salmon) and chia seeds, have been shown to lower the risk of glaucoma.

## Cholesterol

### Medical lowering of cholesterol

Use of a cholesterol lowering medication (statin or non-statin) for more than 24 months has been shown to reduce the risk of glaucoma in some studies.



## High blood pressure

Untreated systemic hypertension is associated with glaucoma. This is not

a direct association, rather indirect, possibly due to high blood pressure damaging the blood vessels to the optic nerve over time. It is recommended that high blood pressure be treated.

Note: High blood pressure is not correlated with high eye pressure.

## Low blood pressure

Some glaucoma patients have progressive visual field loss despite adequately controlled IOP. One possible cause is excessive lowering of blood pressure, in patients on BP medications who may be over-medicated. 24-hour blood pressure monitoring can detect this

## High body mass index (BMI) and obesity

Being overweight is associated with high IOP, but there is conflicting evidence about the association with glaucoma. A high BMI is associated with sleep apnoea (see below).

## Sleep apnoea

Sleep apnoea syndrome (SAS) is associated with glaucoma. SAS is the repetitive collapse of the airway during sleep. Due to the poor quality of sleep, patients have chronic fatigue, daytime sleepiness and reduced cognitive function. People are more at risk for SAS if they are male, obese, snore, drink excessive alcohol, and smoke.

## Neck Ties

If you wear closed collars (with ties for example) be careful not to have them too tight as this increases pressure in the veins of your head

and neck and can subsequently lead to increased IOP.

## Playing wind instruments

IOP can almost double within 20 seconds when playing a wind instrument (e.g. trumpet), but returns to baseline almost immediately.

## Swimming goggles

The wearing of small well-fitting swimming goggles increases your IOP. Larger goggles appear to be safer.



## Summary

Several lifestyle factors affect IOP and glaucoma, but there is limited evidence to confirm whether these changes influence glaucoma progression. However, there is significant evidence that these lifestyle changes are good for general health, and they seem unlikely to cause more glaucomatous damage. Hence, with the current information available, we recommend that individuals consider them.

# Headset Offers New Hope In Glaucoma Progression

**US researchers will test the diagnostic capability of NGoggle, a wearable headset developed to detect the presence and progression of glaucoma.**

Duke University researchers, funded by the National Eye Institute, will study the effectiveness of the brain-based device alongside the conventional diagnostic method of Standard Automated Perimetry (SAP), which is used to monitor disease progression.

SAP requires patients to click a button when lights are randomly shown in their peripheral vision. However, according to the researchers behind the device, the time it takes SAP to conclusively detect progression of the disease is considered a major drawback.

“There are tremendous difficulties in

bringing patients to be tested in-clinic several times a year. In the meantime, the opportunity for treatment to preserve vision diminishes considerably,” said Dr Felipe Medeiros, NGoggle co-founder and a Professor of Ophthalmology at Duke University School of Medicine.

Medeiros’ research team will compare SAP alongside the NGoggle device, which is designed to objectively assess peripheral vision loss without requiring subjective input from the patient. The device gauges brain activity in response to signals received from the eyes, with diminished activity potentially indicating functional loss from glaucoma.

The virtual reality goggles are integrated with a wireless electroencephalography system; a series of electrodes attached to the scalp to measure brain activity. According to the developers of the

device, within a few minutes the NGoggle algorithm captures and analyses data to report how each eye communicates with the brain across the patient’s field of vision.

“The possibilities are endless for making it an engaging experience, which would go a long way toward ensuring that people use it and receive the treatment they need,” Medeiros said.

The study is designed to validate the diagnostic accuracy and reproducibility of the device.

The results will be included in an application to the US Food and Drug Administration to bring the device to market.

*This article is republished courtesy of Insightnews.com.au.*







# LIGHT UP GLAUCOMA

GLAUCOMA AWARENESS APPEAL 1 – 31 JULY 2019

## Help us shine a light on the problem

Glaucoma NZ's Annual Awareness Appeal – Light Up Glaucoma - is here and we would like to invite you to help us raise a record number of funds and increase awareness.

Approximately 115,000 New Zealanders suffer from glaucoma but only 50% know they have it. That's 57,500 of our fellow kiwis who could be losing their sight without knowing it.

The campaign emphasises how important it is for people to get their eyes examined. Glaucoma NZ is raising awareness about the condition and generating funds for invaluable initiatives such as:

- our nationwide community awareness programmes

- public meetings to share important information on glaucoma and treatment options
- free glaucoma resources
- our Eyelights newsletter (that goes out to over 8000 Glaucoma NZ members and their families)
- 0800 Support Line
- Support Groups

**As a valued member of GNZ, there are two ways that you can help:**

Create a fundraiser that saves sight  
-Join us in our mission to raise vital funds towards our mission to eliminate blindness from glaucoma by creating your own fundraiser.

We will cheer you on as you organise your fundraising event or activity and provide you with the support you need. No matter how big or small, it will make a huge difference to being able to continue

our services. For ideas and support please contact us on [info@glaucoma.org.nz](mailto:info@glaucoma.org.nz)

**Order donation boxes of biscuits to raise funds**

- Ask your local retail stores, workplace or retirement village if they would be willing to display one or more of our donation boxes offering NEW GNZ appeal gingerbread biscuits for \$3 each. Call 0800 452 826 or email [info@glaucoma.org.nz](mailto:info@glaucoma.org.nz)



## Facing the facts of glaucoma in New Zealand:

- 2% are affected and only half know they have it
- 75% have an awareness of glaucoma
- 41% still do not know that glaucoma has no symptoms in the early stages
- 47% don't know glaucoma is an avoidable blindness
- 20% of those with glaucoma suffer from blindness
- 5% of those with glaucoma suffer from visual impairment



Glaucoma has no symptoms in the early stages.

We are truly grateful to our loyal supporters of optometrists, ophthalmologists, pharmacists and other organisations around the country.

We need to make glaucoma a highly visible disease so that we can eliminate unnecessary blindness from glaucoma. We can only do this if we partner together.

*Thank you to our appeal sponsors and supporters!*



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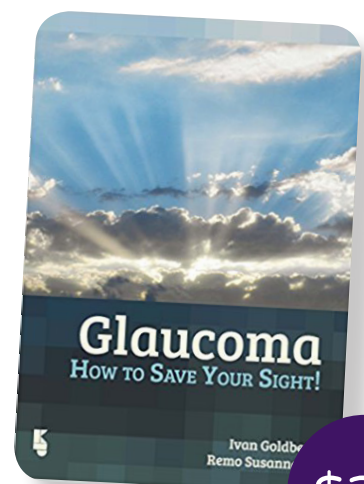
## Glaucoma: How to Save Your Sight

Purchasing the newly released 'Glaucoma: How to save your sight' book will be a valuable resource for yourself and your friends and family in further understanding glaucoma. Also 50% of the book sale price will

go to help Glaucoma New Zealand continue their sight saving work.

To purchase your copy please go to [www.glaucoma.org.nz/booksale](http://www.glaucoma.org.nz/booksale). Alternatively you can call us on 0800 452 826 or email us at [info@glaucoma.org.nz](mailto:info@glaucoma.org.nz)

"With this book we wish to enlighten our readers with quality information to minimise visual disability from glaucoma,"  
Professor Ivan Goldberg.



\*additional cost of \$5 for postage and courier

**\$27\***

## Eyedrop Changes

You may have noticed that some of your packaging has changed with the following three eye drops. Due to the many phone calls we have had, we wanted to confirm that no changes to the product have changed, just the packaging. If you are concerned please talk to your eye specialist or local pharmacist.



## New Identification Card Launched

Hospitality New Zealand has launched the new Kiwi Access Card, which will replace the current 18+ card. The new card was developed after feedback found that a wide range of people found it difficult to gain access to everyday goods and services (like opening a bank account), because they didn't have a drivers licence. It gives people without access to a valid passport or driver licence, including seniors and those with disabilities, a reliable proof of identity.

The design of the Kiwi Access Card has been updated with new



features including embossing, micro text, and also braille.

Applications for the new Kiwi Access Card can be made via NZ Post. The Kiwi Access Card costs \$55 including GST. You will need a passport sized photo or one can be taken at an extra cost at the post office, proof of address, and photo ID.

For more information, go to the Kiwi Access website at [kiwiaccess.co.nz](http://kiwiaccess.co.nz) or phone 04 381 9937.

## 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.





# Support Groups

A special thank you to all our volunteers who give up their valuable time to run our support groups. We invite you to attend our next support group meetings.

Location	Date	Time	Address
Hamilton	Sat 6-July	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
	Sat 3-Aug	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
	Sat 7-Sep	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
	Sat 5-Oct	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
	Sat 2-Nov	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
	Sat 7-Dec	10 - 11.30am	Celebrating Age Centre, 30 Victoria Street, Hamilton
Christchurch	Sat 13-Jul	10 - 11.30am	St Francis Hall, 168 Stanmore Road, Richmond, Chch
	Sat 10-Aug	10 - 11.30am	Beckenham South Library, 66 Colombo Street, Chch
	Sat 14-Sep	10 - 11.30am	St Francis Hall, 168 Stanmore Road, Richmond, Chch
	Sat 12-Oct	10 - 11.30am	Café Edge, Cnr Trafalgar St and Edgeware Road, St Albans
	Sat 9-Nov	10 - 11.30am	St Francis Hall, 168 Stanmore Road, Richmond, Chch
Auckland Nth	Sat 20-Jul	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
	Sat 17-Aug	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
	Sat 14-Sep	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
	Sat 19-Oct	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
	Sat 16-Nov	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
	Sat 14-Dec	10 - 11.30am	Glenfield Community Centre, Cnr Bentley Ave & Glenfield Rd
New Plymouth	Sat 20-Jul	10 - 11.30am	Muffin Break, 11 Gill Street, Centre City Mall
	Thur 15-Aug	6 - 7.30pm	Citizens Advice Bureau, (Next to YMCA), 32 Leach Street
	Sat 21-Sep	10 - 11.30am	Muffin Break, 11 Gill Street, Centre City Mall
	Thur 17-Oct	6 - 7.30pm	Citizens Advice Bureau, (Next to YMCA), 32 Leach Street
	Sat 23-Nov	10 - 11.30am	Muffin Break, 11 Gill Street, Centre City Mall
	Thur 12-Dec	6 - 7.30pm	Citizens Advice Bureau, (Next to YMCA), 32 Leach Street
Auckland Ctrl	Sat 27-Jul	2 - 3.30pm	Grey Lynn Community Centre, 510 Richmond Road, Grey Lynn
	Sat 31-Aug	2 - 3.30pm	Grey Lynn Community Centre, 510 Richmond Road, Grey Lynn
	Sat 28-Sep	2 - 3.30pm	Grey Lynn Community Centre, 510 Richmond Road, Grey Lynn
	Sat 26-Oct	2 - 3.30pm	Grey Lynn Community Centre, 510 Richmond Road, Grey Lynn
	Sat 30-Nov	2 - 3.30pm	Grey Lynn Community Centre, 510 Richmond Road, Grey Lynn
Timaru	Sat 13-Jul	10 - 11.30am	Caroline Bay Lounge, 1 Virtue Avenue, Timaru
	Sat 10-Aug	10 - 11.30am	Caroline Bay Lounge, 1 Virtue Avenue, Timaru
	Sat 14-Sep	10 - 11.30am	Caroline Bay Lounge, 1 Virtue Avenue, Timaru
	Sat 12-Oct	10 - 11.30am	Caroline Bay Lounge, 1 Virtue Avenue, Timaru
	Sat 16-Nov	10 - 11.30am	Caroline Bay Lounge, 1 Virtue Avenue, Timaru

We have received feedback that the groups have provided “a place to ask questions in a non-judgemental environment” and “I learn more about glaucoma and get to hear from others who are experiencing the same challenges of living with this eye disease”. For any queries please contact us at [info@glaucoma.org.nz](mailto:info@glaucoma.org.nz) or call us on 0800 452 826.

**YES! I would like to help Glaucoma NZ save sight**

Title ☐ Mr ☐ Mrs ☐ Ms ☐ Miss ☐ Other

First Name \_\_\_\_\_

Last Name \_\_\_\_\_

Name to appear on tax receipt  
\_\_\_\_\_

Street Address \_\_\_\_\_

Suburb \_\_\_\_\_

City \_\_\_\_\_ Postcode \_\_\_\_\_

Email \_\_\_\_\_

Phone (home) \_\_\_\_\_

Phone (mobile) \_\_\_\_\_

☐ **YES! I would like to become a regular donor**

**I would like to give a gift (choose one)**

☐ Single ☐ Weekly ☐ Monthly ☐ Annually

Amount ☐ \$200 ☐ \$150 ☐ \$100 ☐ \$50 or \$ \_\_\_\_\_

**I would like to pay by (choose one)**

☐ Cheque enclosed

☐ Credit Card VISA / Mastercard (circle one)

Card Number \_\_\_\_\_

Cardholders name \_\_\_\_\_

Amount \$ \_\_\_\_\_ Expiry Date \_\_\_\_\_ / \_\_\_\_\_

Signature \_\_\_\_\_

☐ I will give by direct Credit to:

Bank Act: 12-3013-0180964-00 REF: Name

**I would like to receive more information about:**

☐ Donating on a regular basis by Automatic Payment

For online donations visit [www.glaucoma.org.nz](http://www.glaucoma.org.nz)

**Please complete this form and return to:**

GLAUCOMA NZ  
Department of Ophthalmology  
The University of Auckland  
Private Bag 92019  
Auckland 1142, New Zealand  
Donations over \$5 are tax deductible.

## How your donation helps

**\$20** Will ensure three people receive initial support and information packs to assist them to answer their glaucoma concerns.

**\$50** Helps staff the Glaucoma New Zealand telephone support service (0800 452 826) for a month, to answer calls for information, and emotional support.

**\$75** Funds two support groups for a month.

**\$100** Assists to increase community glaucoma awareness and the need for regular optic nerve checks.

Glaucoma NZ is a registered charitable trust and receives no government funding. We rely solely on donations, sponsorship, grants and fundraising. All the information available and provided to over 8000 members of Glaucoma New Zealand and the general public is free.

**Contact us to find out more on**  
**[info@glaucoma.org.nz](mailto:info@glaucoma.org.nz) or**  
**call 0800 452 826**

**To donate on-line visit [www.glaucoma.org.nz](http://www.glaucoma.org.nz)**

Content in 'Eyelights' is intended to help readers understand glaucoma. Every effort is made to ensure the accuracy of this information. This information is not a substitute for the advice and recommendations of health professionals. Always consult a health professional prior to any decision regarding your eyes or other health concerns.

