

Eyelights



The Newsletter of Glaucoma NZ
Volume 7 | Issue 3 | October 2010

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Promising NZ wound care treatment may ultimately benefit glaucoma patients



A drug co-invented by a University of Auckland researcher is one step closer to entering the wound-healing market. Testing of the drug NEXAGON® is demonstrating startling results in tissue repair and the results of a phase 2 clinical trial on chronic venous leg ulcers have been described as “extremely exciting” and “very impressive” by leading specialist wound healing physicians in the United States. The drug is being developed by CoDa Therapeutics Inc., a company with dual operations in NZ and the US. NEXAGON® works by blocking the mechanisms that impair wound healing and has application in a number of therapeutic areas including chronic and other slow-to-heal wounds.

The concept for a blocking therapy was developed by Professors David Becker from University College London and Colin Green from the University of Auckland. Having completed initial clinical trials in New Zealand and the United States CoDa Therapeutics is now moving towards Phase 3 trials which could see NEXAGON® available as a medicine in late 2013 or early 2014 according to Mr Brad Duft who is President and CEO of the company. He says the development of NEXAGON® is a great endorsement of

Continued over page...

the innovative and important research coming out of New Zealand.

The active ingredient in NEXAGON®, which has been shown to work across a wide variety of tissues, is a natural, unmodified antisense oligonucleotide that down-regulates a key gap junction protein to dampen inflammatory responses and enhance healing.

For glaucoma patients the benefits may lie in trabeculectomies where an excessive inflammatory response can lead to scarring and flap failure. Dr Narme Deva has recently completed an MD project with Professor Helen Danesh-Meyer and Professor Green at the University of Auckland and demonstrated that NEXAGON significantly reduced scar tissue formation in a glaucoma model. Professor Danesh-Meyer says NEXAGON has exciting potential for the replacement of mitomycin-C which decreases

the production of fibroblasts and scar tissue but is in short supply worldwide.

The other current treatment is 5-fluorouracil which is less effective. Two glaucoma patients have been treated under “compassionate use” status where both had failed to respond to repeat treatments of current therapies, resulting in flap closure and sustained high intraocular pressure. With just two doses of NEXAGON both patients have settled blebs and now retain low intraocular pressure. The two professors are hopeful that NEXAGON might ultimately replace mitomycin-C for many ocular procedures and certainly appears to have promise for glaucoma patients requiring surgical interventions.

For further information on NEXAGON see www.codatherapeutics.com

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:

There are different types of glaucoma, but they all involve damage to the optic nerve, 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.

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.

People of all ages can get glaucoma.



A family history of glaucoma means you are at much greater risk of developing glaucoma.

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.

Note from the Editor

The last edition of Eyelights featured an article on driving, ‘To Drive or not to Drive’.

To clarify one of the points raised on visual acuity, here is the information provided by the NZ Transport Agency:

The standard of visual acuity required is 6/12 using both eyes together, with or without correcting lenses. When the vision in the worse eye is less than 6/18 but better than 6/60 corrected, the applicant should be classified as having sub-standard vision in one eye.

Thanks to those who contacted us requesting further clarification. **Ed**

July 2010 Annual Awareness Appeal

Glaucoma NZ would like to extend a big thank you to all those who supported our July Annual Awareness Appeal.

Participants this year numbered over 370. Joining optometrists and ophthalmologists there was a large increase in the number of pharmacies, along with the support of ASB branches nationwide and NZ Buses who displayed our new awareness poster in buses around Auckland. ASB also had digital signage of the poster together with static display in their branches.

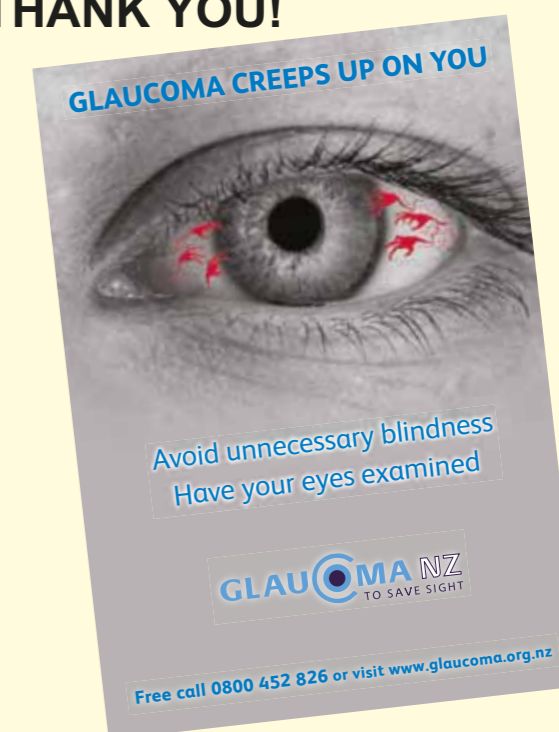
A large amount of media exposure was generated from the joint efforts of Glaucoma NZ and supporting participants with articles appearing in a variety of national magazines and newspapers, together with local papers. A number of businesses also took the opportunity to place articles into their own practice newsletters further promoting awareness of glaucoma and Glaucoma NZ.

In response to the increased media, GNZ’s 0800 advisory line was very busy with calls from members of the public wanting to know more about glaucoma. A large number of these callers were subsequently advised to have their eyes examined.

The Appeal overall has been a great success, lifting the awareness of glaucoma to a new level with a call to action and boosting funds.

Again, Glaucoma NZ appreciates all your efforts during the 2010 July Annual Awareness Appeal and your continued support throughout the year working towards eliminating blindness from glaucoma.

THANK YOU!



Pharmacy Today publication - July 2010

Encourage patients to be glaucoma aware

At 90-years-old Jean Tronson is in good health, fiercely independent and enjoys driving herself around town.

However, a few years ago Mrs Tronson had to undergo a cataract operation to correct her vision so she could continue driving.

During this time, her optometrist found she had glaucoma in her left eye. "I wouldn't have known I had glaucoma if it wasn't for the cataract operation, it's not something you notice," Mrs Tronson says.

Unfortunately, around half of people with glaucoma in New Zealand don't even know they have it. It is estimated 68,000 New Zealanders over the age of 40 have glaucoma, the number one cause of preventable blindness.

July is glaucoma awareness month and Glaucoma New Zealand, the charitable trust set up to eliminate blindness from glaucoma, is calling on pharmacists to encourage their customers to get checked.

Helen Danesh-Meyer, chair of Glaucoma New Zealand, says people should follow the "45 plus 5" rule – a glaucoma eye examination every five years from the age of 45, and then every three years from the age of 60.

Mrs Tronson's pharmacist Lorraine Fletcher sees about 20 glaucoma patients each week at her Mt Eden Pharmacy.

Mrs Fletcher says the relationship between a pharmacist and glaucoma patient is very important because there are numerous issues glaucoma patients face.

"The eye drop bottles are so tiny and some of



Jean Tronson and Lorraine Fletcher

our patients have trouble opening them because they have arthritis.

"There is also an issue of running out each month because the containers are so small and some of the liquid gets spilt."

Mrs Fletcher asks her patients to demonstrate how they would put the drops in, so she can correct them to help avoid spilling.

She says Glaucoma New Zealand eye drops card will help many patients as it is simple to understand.

For independent patients such as Mrs Tronson, travelling to the pharmacy to pick up her prescription each month is not a hassle.

However, there have occasionally been times where she has been caught short, and the pharmacy has delivered her medicine.

"We deliver eye drops and other medicines to patients in assisted living or retirement centres," Mrs Fletcher says.

Taupo Times, July 16 2010

By Caitlin Madden

John's glaucoma detected in time

Regular checks key to reducing blindness

"I couldn't see what tree my golf balls went into" said John Reid

Cricket legend John Reid, plays golf, though not in wet or cold weather, takes care of his vegetable garden, walks his dog, reads, helps out at the local hospice and is writing and researching for his fourth book.

But things may have been made much more difficult if he did not get on to his glaucoma early. About four years ago John discovered he had glaucoma in his right eye, calling it "something that creeps up on you".

"You don't notice it at all until it's too late", he said.



John Reid

This month is Glaucoma Awareness Month and John said having eye exams regularly when you "get to a ripe old age" is the key.

Glaucoma is a group of eye diseases in which the pressure inside the eye causes damage

to the nerve of sight (optic nerve), leading to vision loss – or even blindness.

It is estimated that about 68,000 New Zealanders over the age of 40 have glaucoma and as many as half of those don't know they have it.

He said what tipped him off that something was wrong was when he was out playing golf.

"I couldn't see what tree my balls went into," he laughed. That got me thinking.

Every night John puts drops into his eye and said doing this religiously is very important.

Vision loss from glaucoma is irreversible therefore glaucoma needs to be treated to prevent potential loss of vision before symptoms develop. Glaucoma treatment is aimed at lowering the pressure in the eye. This will not restore lost vision; only halt progression and preserve the sight that remains.

A sportsman for most of his life, eyesight is very important to John and he said the specialist he goes to is very helpful.

"I'm getting a lot of help from the optometrists and things. They're keen to make sure you keep going."

John captained the New Zealand Cricket team for 34 test matches between 1956 and 1965, became an International Cricket Council match referee and was awarded an OBE in 1962. He is writing his fourth book.

Glaucoma NZ urges everyone to have an eye examination for glaucoma by the age of 45, every five years after that until the age of 60, and three yearly after 60.

If everyone did this, most glaucoma would be detected early, treatment commenced and the rate of blindness would drop dramatically.

Readers Story Contributions

If you would like to share your glaucoma story with readers, we would love to hear from you. Please email, post or fax your story to Glaucoma NZ, attention Eyelights Editor.

Life Style Adjustments may reduce the risk of glaucoma

Currently, lowering the intraocular pressure is the only management that is shown to slow the progression of glaucoma.

Is there anything that we can do that **may** help glaucoma?

Possible modifiable risk factors: Aerobic exercise lowers Intraocular Pressure (IOP)

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

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.

Interestingly, this reduction with exercise is additive to the effect of any glaucoma drops.

Exercise also lowers blood pressure.

It must be remembered that in pigment dispersion, aerobic exercise may increase IOP when pigment is dispersed.

NB: aerobic exercise differs from weight lifting and yoga, which may increase IOP.



Antioxidants

One study showed that foods with antioxidant properties may reduce the risk of glaucoma. These foods include:

- green collards and kales once/month
- two servings of carrots/week
- canned or dried peaches each week

A balanced diet with five fruits and vegetables a day, trying to include the above, is recommended.



Cholesterol

- Dietary
A diet high in omega-6 and possibly omega-3 oils may reduce the risk of glaucoma.
- 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.

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.

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.

Smoking

Current smoking is possibly related to glaucoma risk. No study has found an association between glaucoma and **past** history of smoking.

Excessive water drinking

A significant rise in IOP may occur after drinking a high volume of water (500mL to 1L) over a short time period (15minutes). 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 2 cups of coffee a day.

Alcohol

Alcohol may lower IOP initially, but daily alcohol causes a slight elevation in IOP. Moderation is recommended.

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 is treated.

NB: 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.

Increasing intraorbital pressure – playing wind instruments

IOP can almost double within 20 seconds when playing a wind instrument, but returns to baseline almost immediately.

Yoga

The inverted position in yoga has been associated with significant increases in intraocular pressure in some people and could lead to worsening of glaucoma.

Summary

Several lifestyle factors affect IOP, but there are no studies confirming 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, these lifestyle changes are recommended.

Modifiable Risk Factors

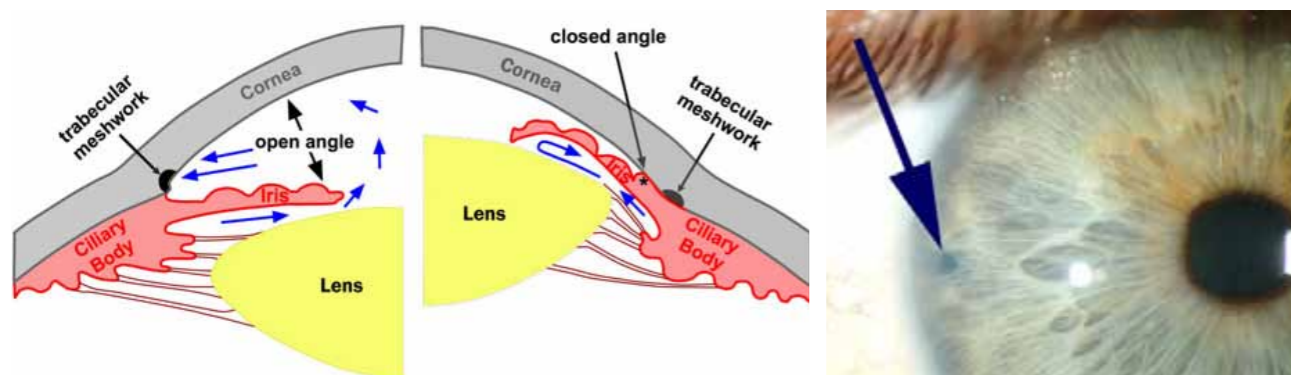
1. Exercise regularly = MOST IMPORTANT
2. Eat FIVE fruits / vegetables per day (especially carrots, greens and peaches)
3. Omega-6 +/- omega-3 are good
4. Lower your cholesterol
5. Keep weight in healthy range
6. If you snore, exclude sleep apnoea
7. Stop smoking
8. Do not drink over 200ml in 15 minutes
9. Reduce coffee intake
10. Drink alcohol in moderation
11. Maintain a healthy blood pressure
12. Avoid:
 - Lifting heavy weights
 - Playing wind instruments
 - Head-down yoga positions

Laser Peripheral Iridotomy (PI)

Why is PI necessary?

Laser peripheral iridotomy (PI) is performed usually for patients with narrow angles or angle closure glaucoma (ACG).

Fluid in the eye is made in the ciliary body, which lies behind the iris. The fluid primarily escapes the eye by flowing between the lens and iris of the eye, draining into a meshwork, which is located in a space known as 'the angle' of the eye in the anterior chamber.



Laser Peripheral Iridotomy

If a forwardly bowed iris obstructs the flow of fluid to the drainage angle, the patient is said to have narrow angles. This condition may predispose one to an episode of ACG.

How does laser peripheral iridotomy work?

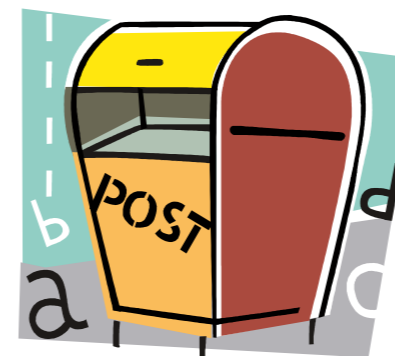
Laser peripheral iridotomy uses a laser beam to make a small hole in the iris, the coloured part of the eye. The hole allows the fluid that is trapped behind the iris to drain more freely into the trabecular meshwork (the drainage pathway) of the eye. This typically results in resolution of the forwardly bowed iris and thereby an opening up of the angle of the eye.

What is involved in performing a PI?

The PI is completed in the office. Prior to the procedure, the pupil is often constricted with an eye drop medication known as pilocarpine. The procedure itself is completed with the patient seated at the laser, and requires no sedation. Usually, a special contact lens is placed on the eye after topical anesthetic drops are applied. The laser procedure takes a few minutes. In general, only a few very brief episodes of slight discomfort are associated with this procedure. After the procedure, your eye surgeon may recommend anti-inflammatory eye drop medications for the next few days. A follow-up visit will be scheduled.

What are the potential complications?

PI is an extraordinarily safe procedure. Complications, fortunately, are very rare. These potential complications include bleeding in the eye, inflammation in the eye, and transient pressure elevations. These complications are usually self-limiting and mild and do not result in permanent damage. Very rarely, bothersome double vision may result.



Public Mail Box

What's the difference between a glaucoma suspect and being diagnosed as having glaucoma?

Once upon a time, in the days when you went to a doctor only when you were sick, it was easy to diagnose glaucoma. There was high eye pressure and a damaged optic nerve. Treatment was started but very often it was started too late. Medicine has moved on. Emphasis is now on attending the doctor when we are well and taking medication to prevent disease - tablets for high blood pressure, tablets for raised cholesterol, aspirin to prevent strokes. Not only do people get preventative medication from the doctor they also spend their own money to get tablets from health shops to ward off even more bad stuff that happens as we age.

So, what about glaucoma, which can be diagnosed in the early stage. This is good because the treatments are very effective at slowing down the damage glaucoma causes. The early diagnosis uses a number of sophisticated tests that see some people being treated because they are 'at-risk' of glaucoma. Often the ophthalmologist hasn't got enough information to diagnose glaucoma but can assign a high probability (and this may be all that is required to start treatment).

This is why there is a need for a category called 'glaucoma suspect'. This is a 'might-be' category. Some patients might not want to go on eye drops for a chance. It makes them feel they are diseased. Fair enough.

Other patients eyes might look like glaucoma in every respect except the pressure is not high or some other part of the jigsaw is missing. These 'glaucoma suspects' are watched and if changes occur such as the visual field worsens or the optic nerve shrinks, then there is the diagnosis. The patient moves from being a 'suspect', to having glaucoma, and treatment then commences. Many 'suspects' will not have glaucoma - in other words they will not worsen with time in any measurable way - so they don't need treatment. The 'glaucoma suspect' category provides a way of managing the uncertainties of glaucoma diagnosis in a positive way.

Is refractive LASIK surgery safe for glaucoma patients?

If there are good reasons for a glaucoma patient to undergo laser vision correction, this can now be performed without any risk of making glaucoma worse, even in advanced glaucoma patients.

LASIK laser vision correction involves the use of an instrument to create a thin corneal flap. LASIK surgery has become safer for glaucoma patients with the introduction of a blade-free femtosecond laser to create the LASIK corneal flap because the femtosecond laser causes less IOP elevation, and it only lasts for 30seconds. This IOP rise is equated to what patients cause themselves during a good eye-rub!

So, in summary, modern refractive surgery can be performed without any risk of making glaucoma worse, but it is important that the patient informs their refractive surgeon about their glaucoma so that the safest vision correction procedure can be planned.

Moving House?

Don't forget to advise Glaucoma NZ of your new address.

Please send feedback and suggestions for Eyclights to the Editor.
Questions for the Public Mailbox are welcomed.

Cataracts & Glaucoma

A cataract is a clouding of the eye's natural lens, allowing less light to pass through and blurring vision. **It is not a skin that grows over the eye which is a commonly held belief.**



It is very common for glaucoma and cataracts to co-exist. In both conditions the risk increases with age. In addition, there is a risk of developing cataracts or having them progress after glaucoma surgery. And cataracts, when advanced, can trigger angle-closure glaucoma in susceptible individuals. But while vision loss from glaucoma is still irreversible, loss of vision due to cataracts can usually be reversed by surgically removing the lens and implanting a clear artificial replacement intraocular lens.

When a cataract causes reduced or poor vision, with blurring, glare and dimming of sight that interferes with everyday life, it is usually time for surgical intervention.

If the patient in need of cataract surgery also has glaucoma, the doctor must balance many factors to determine when and how aggressively the glaucoma and cataract should be treated. Surgical options are: cataract surgery alone; surgeries for the two conditions performed at different times (i.e. staged surgery usually involving a trabeculectomy followed by cataract surgery); and combined cataract/glaucoma surgery.

Cataract surgery alone is a reasonable option when there is a significant cataract, the

glaucoma is well controlled with one type of medication that is well tolerated, there is little or no glaucoma damage, and there is unlikely to be further visual field loss if a post-operative IOP spike occurs. In some cases, removing the cataract can result in a lower IOP. Sadly, this is not an easily predictable outcome and one cannot count on having a lowered IOP as a result of routine cataract surgery.

If a patient's glaucoma and cataract both require surgical treatment, the doctor must decide how to approach these co-existing needs. Among the factors the doctor considers are:

- Amount of visual field and optic nerve damage.
- Number of glaucoma medications a patient is taking before surgery.
- Whether glaucoma surgery has already been performed in the eye.
- Eye pressure before surgery.
- Desired eye pressure after surgery.
- Tolerance for specific glaucoma medications.

Staged surgeries are often used if the patient has advanced cataract and glaucoma that is severe or very poorly controlled by medication alone.

Combined surgery can be well suited for patients whose glaucoma control requires two or more medications, patients with uncontrolled glaucoma that is mild to moderate, patients whose optic nerves are unable to tolerate post-operative IOP spikes and patients unable to tolerate two separate surgeries.

There are also special situations that can impact cataract surgery. Patients with exfoliation glaucoma often have cataracts and it is best to perform the cataract removal earlier rather than later. Another surgical challenge is when patients have small pupils that do not dilate well. The key is that each situation must be assessed individually. As with any surgical procedure, the patient should discuss the risks and benefits of these surgeries with the doctor.

Suggested ways you could help Glaucoma NZ help you:

- Continuing your most welcome and appreciated donations.
- Arrange a community fundraising event in your area.
- Contact us to arrange for a glaucoma educator to speak at your club/organisation or workplace.
- Purchase an Entertainment Book.
- Suggest to your work colleagues that they hold a special day or event to support our charity.
- Think of us when preparing or updating your Will.
- Tell everyone about Glaucoma NZ and its services.

Public Meetings

Glaucoma NZ holds free public meetings nationwide. These meetings are an invaluable way of raising awareness of this potentially blinding disease and convey key messages to those with glaucoma and those with an interest in glaucoma.

Over the last 12 months 1,500 people have attended these meetings, which are hosted by a GNZ representative and presented by an ophthalmologist. The meetings consist of an in-depth hour long presentation followed by question and answer time and refreshments.

To date in 2010 meetings have been held in Whakatane, Taupo, West Auckland, Wanganui, Rotorua, Central Auckland, Pukekohe, Hamilton, Dunedin, Lower Hutt, Tauranga and Auckland's North Shore.

These meetings are open to any member of the public.

For details of future meetings, please visit www.glaucoma.org.nz

GNZ members will receive a personal invitation to meetings in their area.

OUT & ABOUT



River Nile Linens is supporting Glaucoma NZ with its specially designed Egyptian Eye embroidery sheet sets.

For every set of these 100% Egyptian cotton sheets purchased from October to December, River Nile Linens will donate 10% to Glaucoma NZ.

For more information and to purchase your very own Egyptian Eye quality bed linen please visit www.rivernilelinens.co.nz or phone 09 425 7497.



Christmas Research Appeal Finding a Cure

PLEASE support us in our efforts to fund research into new and improved treatments for the 68,000 New Zealanders living with glaucoma.

Ongoing research and development play a vital role in the treatment of glaucoma and ultimately finding a cure. Our goal is to raise \$50,000 each year to specifically dedicate to worthwhile New Zealand based research projects.

Please help us invest in a future without blindness from glaucoma.

THANK YOU – every donation counts!



YES! I would like to make a donation.

\$200 \$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:

Donating on a regular basis by Automatic Payment

Leaving a bequest in my Will to Glaucoma NZ

I have already included Glaucoma NZ in my Will

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