Eyelights

The Newsletter of Glaucoma NZ
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Inside:

Introducing Glaucoma NZ's New Chair

The following are some thoughts from the new Chair of Glaucoma NZ, Prof. Helen Danesh-Meyer:

Why are you so passionate about glaucoma and Glaucoma NZ?

Glaucoma is the silent thief of sight. It destroys the lives of tens of thousands of New Zealanders. Most of these people never knew their lives would be devastated by blindness. It is estimated that half those with glaucoma are unaware they have the disease – so in New Zealand, that means there are currently about 34,000 undiagnosed people who could be helped right now if only they knew they had glaucoma in the first place.

What is the biggest challenge ahead?

The tragedy is that the majority of blindness from glaucoma can be averted with early diagnosis and management. One of our biggest challenges is to reach as many of those 34,000 undiagnosed New Zealanders as possible each year to help prevent them going blind. Our mission is to eliminate blindness from glaucoma in New Zealand by providing education, public awareness and research into glaucoma. GNZ is in a strong position to achieve this.

Since its inception in 2002, what has GNZ achieved in line with its mission statement?

GNZ has gone from strength to strength through the generous support of our patient base, sponsors, and eye care professional colleagues. GNZ has perhaps the most well–developed educational programmes of any charity of its kind. Its general Community Education provides free information via public seminars, information booklets, newsletters, and a website. Seventy-nine free public seminars have been held to date, from Whangarei to Invercargill, and every patient with glaucoma receives a free information pack and regular newsletters to keep them up to date with the latest on glaucoma. We consider it important that membership to GNZ is free, to encourage people to join and stay as informed as possible.

Continued over page...

We are also very proud of our web-based Professional Education Programme for optometrists, and based on its success, a programme for general practitioners was launched last year.

To sustain the momentum, where to from here?

The three pillars of preventing blindness from glaucoma are: early diagnosis, commitment of patients to their treatment, and providing treatments that minimally interfere with a patient's life-style. Achieving these requires a multi-disciplinary approach. GNZ will be focussing on increasing collaboration with all professionals involved in eye care: optometrists, general practitioners, pharmacists and nurses. We plan to work closely with optometry on projects that will encourage the early diagnosis of glaucoma. We need to work with government so that early diagnosis through screening is an accessible and affordable option for all New Zealanders. Education is the key to the successful management of any chronic disease - including glaucoma. GNZ is committed to strengthening its educational programmes for patients and eye-care professionals.

That's a big programme – do you have the resources to achieve it?

It is ambitious, but as a young charity, we have already shown what can be achieved in a short time. However, to help progress to the next level GNZ is thrilled to have recently appointed Helen Mawn as our new Executive Manager. Helen comes to us from The New Zealand Breast Cancer Foundation, where, as Executive Director, she was instrumental in building its current successful profile. We realise these are troubling economic times, but with our solid reputation, enthusiasm and energy, we are determined to achieve even more. Funding will be crucial, as it is the life-blood of any charity. So we will need to further develop our sponsorship and support base, and hope the public and professionals alike will all rally behind GNZ.

Good governance is also vitally important for any charity, and you would like to pay tribute to two very special GNZ Founding Trustees –

Yes, this year the Founding Chair, Ken Tarr, has resigned after 7 years of tireless and complete commitment. There is no doubt that GNZ would not be in the position it is today without his leadership. Our Trustee, John Bishop, after 7 years of service on the Board has also retired. His expertise and sound judgement has guided GNZ through its financial development and has been absolutely invaluable to the organisation. The contribution of both Ken and John as Founding Trustees has helped form the strong foundation that GNZ has developed. GNZ has evolved into an organisation that makes a real impact on the lives of its members, and we can all be very proud of that. GNZ would also like to thank Heather Hyland who served as our Manager for three years for all her hard work.

Public Meetings 2009

We have a new power point presentation for 2009 which was very well received in the first of this year's meetings in Tauranga and Hamilton.

Keep an eye on our website -

www.glaucoma.org.nz

for details of future meetings around the country to which Glaucoma NZ members will also receive personal invitations.

About Helen Danesh-Meyer

Helen Danesh-Meyer is the Sir William and Lady Stevenson Professor of Ophthalmology and the Founding Managing Trustee of GNZ.

Helen attended the University of Otago Medical School graduating in 1991 and undertook her ophthalmology training in Dunedin, Christchurch and Auckland. She subsequently did her sub-speciality training in glaucoma at Wills Eye Hospital in Philadelphia and embarked on her research career.

Helen divides her professional activities almost equally between patient care activities and research/teaching. She has published more than 100 scientific articles including a textbook and several chapters. She is presently co-authoring a second textbook, Glaucomatous Optic Neuropathy, to be published by Oxford University Press.

Helen is also co-editor of the Clinical Challenges Section of an international journal, Survey of Ophthalmology, and serves as Neuro-ophthalmology Section Editor of two journals - Clinical and Experimental Ophthalmology and the Journal of Clinical Neuroscience. She also serves as Chairman of the Save Sight Society Research Committee, and is a member of the scientific research board of the Ophthalmic Research Institute of Australia.

New Executive Manager for GNZ

Glaucoma NZ is very pleased to announce the appointment of Helen Mawn as its new Executive Manager.

Helen comes to us with many years experience and proven results in the not for profit sector. For the past nine years she has held the role of Executive Director of The New Zealand Breast Cancer Foundation - growing the Foundation from a ‘one-man-band’ with a second hand computer to one of the most successful, high profile and respected charities in New Zealand.

Helen is looking forward to using her strategic expertise to help Glaucoma NZ move forward in terms of its charitable objectives and the funding initiatives required to achieve this. Her focus for 2009 will be building a solid platform for the future to ensure that the activities of GNZ continue to grow and it has sufficient resources in place to deliver.

Working with current sponsors and supporters, as well as encouraging new interest is also extremely important to Helen.

“I also look forward to establishing a permanent annual Glaucoma Awareness Appeal on the calendar,” says Helen

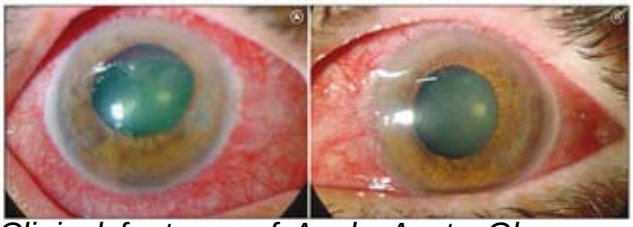
GLAUCOMA NZ
TO SAVE SIGHT

Acute Angle Closure Glaucoma

The most common form of glaucoma in New Zealand is open angle glaucoma which has no symptoms and progresses relatively slowly. However, the leading type of glaucoma world-wide is acute glaucoma which has a completely different clinical picture.

What is acute angle closure glaucoma? (closed angle glaucoma)

In acute glaucoma the pressure in the eye rises rapidly because the internal fluid drainage system in the eye suddenly becomes blocked. This is because the periphery of the iris and the front of the eye (cornea) come into contact so that fluid is not able to reach the tiny drainage channels in the angle between them. This results in an abrupt rise in the pressure within the eye to a dangerously high level.



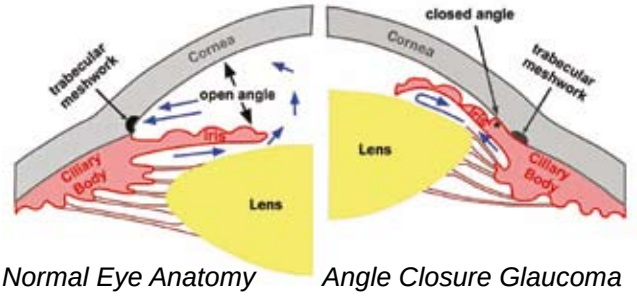
Clinical features of Angle Acute Glaucoma Crisis: red eye, cloudy cornea, dilated pupil

Risk Factors for acute angle closure glaucoma include:

1. Far-sightedness (or long-sighted)
2. Asian descent
3. Increased Age
4. Females

What are the symptoms of acute glaucoma?

The sudden increase in eye pressure can be very painful. The affected eye becomes red, the sight deteriorates and may even black out. There may also be nausea and vomiting. In the early stages people may see misty rainbow coloured rings around white lights. For some day before an acute attack, milder symptoms may occur called sub-acute angle closure glaucoma.



Normal Eye Anatomy *Angle Closure Glaucoma*

Why does Acute Glaucoma occur?

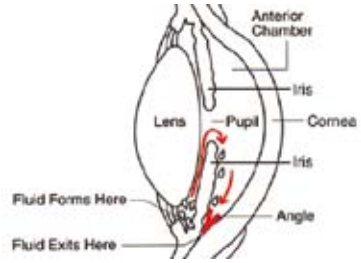
The condition tends to occur in the evening or dark conditions which induces the pupil to dilate. When the pupil is mid dilated in a smaller eye the fluid can become trapped behind the pupil resulting in a sudden rise in pressure. Certain drugs which affect the pupil, for example, Tricyclic antidepressants and certain antispasmodic drugs can induce an angle closure attack in susceptible individuals. The condition is much more common in the elderly population. The reason for this is that the crystalline lens continues to grow throughout life and in a smaller eye this results in the front compartment of the eye becoming more crowded as the lens increases in size. It is for this reason that sometimes cataract surgery can improve the drainage of fluid out of the eye.

Is acute glaucoma always severe?

Sometimes people have a series of mild attacks, often in the evening. Vision may seem "misty" with coloured rings seen around white lights and there may be some discomfort in the eye. If you think that you are having mild attacks you should contact your doctor without delay. In routine examinations the structure of the eye may make the examiner suspect a risk of acute glaucoma and advise further tests.

What is the treatment?

Treatment is an emergency as the high pressure in the eye can result in complete loss of vision within 24-48 hours. If you have an acute attack you will need to go into hospital immediately so that the pain and the pressure in the eye can be relieved. Drugs will be given which both reduce the production of aqueous liquid in the eye and improve its drainage.



Normal drainage pathway of fluid out of eye

An acute attack, if treated early, can usually be brought under control in a few hours. The definitive treatment requires a minor laser procedure known as a laser peripheral iridotomy that makes a small hole in the outer border of the iris to relieve the obstruction, allowing the fluid to drain away. This is performed under topical anaesthetic and is not associated with significant discomfort.

Usually the surgeon will also advise you to have the same treatment on the other eye, because there is a high risk that it will develop the same problem.

Can acute glaucoma be cured?

If diagnosed without delay and treated promptly and effectively there may be almost complete and permanent recovery of vision. Delay may cause loss of sight in the affected eye. Occasionally the eye pressure may remain raised and treatment is required as for chronic glaucoma.

Can acute glaucoma be prevented?

Some people may have very mild or no symptoms of acute glaucoma but when their eyes are examined their angles may be very narrow. In cases like this an ophthalmologist may recommend having surgery to prevent an acute attack. If you have had an acute glaucoma attack in one eye then usually the laser surgery will be performed on the other eye to avoid problems in the future.

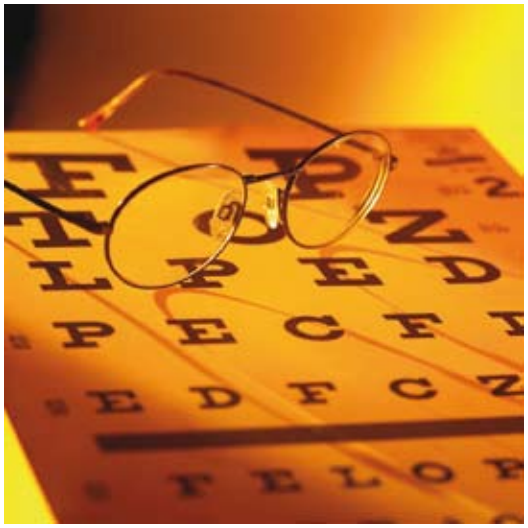
If Acute Glaucoma is Left Untreated

This condition if untreated will inevitably result in complete loss of vision.

Volunteer Needed!

We are looking for a computer literate volunteer to help out at Glaucoma NZ's office situated in Grafton, Auckland. You would need to be able to allocate one day a week and be available to work approximately 3-5 hours on that day.

If you are interested in helping us out, we would love to hear from you.
Please contact: Helen Mawn, phone 09 373 8779 or email h.mawn@auckland.ac.nz



Some Common Glaucoma Questions Answered:

Q. How serious a problem is glaucoma in New Zealand?

A. It is very serious. It's estimated that approximately 68,000 New Zealanders over the age of 40 currently have glaucoma, and by 2031 it's predicted that could reach about 76,000. Sadly, in New Zealand, as in other western countries, as many as half those with glaucoma won't actually know they have it.

Q. How can anyone tell if they have glaucoma?

A. Often you can't tell until it's too late. Glaucoma damage occurs progressively over a long period of time. By the time symptoms, like the loss of side vision, are noticed more than two thirds of the nerve fibres have died. That's why early detection, via regular eye checks, is so important.

Q. Why is the '45 plus 5' Glaucoma Eye Examination so important?

A. Glaucoma NZ urges everyone to have an eye examination by the age of 45, every 5 years after that until the age of 60, and three yearly after 60. If everyone did this, most glaucoma would be picked up early enough to be successfully treated and the rate of blindness would drop dramatically.

Q. If my parents and/or grandparents had glaucoma, what are my chances of getting it?

A. Not everyone with a family history of glaucoma will get it but your risk increases 5-10 fold. If you have a brother or sister with glaucoma, the risk is even higher. That is why it is even more important for anyone in this group to have their eyes checked.

Q. Can I go straight to an optometrist for an eye examination/glaucoma check, or do I need a GP's referral?

A. Yes, you can contact an optometrist directly for an appointment. A consultation, eye examination and glaucoma check will take about 45 minutes.

Q. How does New Zealand's treatment of glaucoma rate with other western countries?

A. Access to highly trained optometrists and specialists is very good in New Zealand, as is access to the latest drugs and surgery techniques. Outcomes here match the best in the world. But results could be better if only more people followed the '45 plus 5' rule.

How Does Glaucoma Affect Daily Life?

Glaucoma is often referred to as the “silent thief of sight,” because most types typically cause no pain and produce no symptoms. For this reason, glaucoma often progresses undetected until the optic nerve already has been irreversibly damaged, with varying degrees of permanent vision loss. However, even though people with glaucoma may not complain of symptoms when they are tested or evaluated, compared to others without glaucoma they have been shown to have some limitations in their visual activities.

A number of studies have looked at glaucoma related health issues. Interestingly, many of the causes of poor health in people with glaucoma are not related to visual impairment itself, but rather the consequences of poor vision. For example, patients with advanced glaucoma have increased rates of depression, hip fractures, and the need for home health care.

Driving may be affected in patients with even moderate glaucoma with on-road performance being compromised. A study that compared glaucoma patients driving with an instructor and a certified occupational therapist found 6 times the rate of critical interventions (such as the instructor’s taking control of the steering or brake to prevent an accident) in drivers with modest glaucomatous field defects than in age-matched controls.

Another study attempting to assess the impact of glaucoma on performance under “real world” documented slower walking speed and an increased number of bumps by persons with glaucomatous visual field defects in both eyes when tested on an obstacle course. Even very practical day to day activities were affected by modest glaucoma such as matching socks, dialing a telephone, and recognition of facial expressions.

Four important questions that have been shown to be predictors of glaucoma disability include:

1. Do you have trouble following a line of print or finding the next line?
2. Do you bump into things?
3. Have you had to give up any activities because of your vision?
4. Do you notice any variation in colour richness from time to time?

In the long term, the life expectancy of the individual is the main factor when considering whether treatment is needed. In young glaucomatous patients the main goal must be to maintain life-long vision which means it is important to treat glaucoma and minimise deterioration of blind spots.

Reader's Story

My Life With Glaucoma – how I slipped through the net

John is a recently retired 67 year old who has lost the sight in his right eye due to glaucoma. The good news is the vision in his left eye still allows him to drive, read, garden, do plenty of maintenance jobs around the house, and enjoy his grandchildren.*

But his story is a cautionary one:

From the age of four I wore glasses because I was shortsighted. I grew up in the UK and my National Health glasses were small and round, with wires that looped around the back of my ears. But this didn't stop me from playing soccer or going fishing with my father. And over the years I've enjoyed playing tennis, golf and snooker.

I emigrated to New Zealand in my early thirties and began a 40-year career in a busy engineering workshop as a specialist tool maker. Looking after my eyes was important so I kept up my two-yearly eye checks.

I was still in my early thirties when I experienced the first classic signs of glaucoma – although I had no idea what it was then!

**Name changed*

At one of my eye check-ups the optometrist sold me a pair of sun sensitive spectacles and while playing golf one day I noticed it was like looking through a mist, and sometimes there was a spectrum of colours, like a rainbow, at the side of my vision.

This continued, and I thought it might have something to do with my new sun sensitive spectacles, so I went back to my normal lenses.

However, the strange mist and rainbow colours continued so I went back to my optometrist for another eye test.

He was left scratching his head after my examination, but thought things were OK. However, to be on the safe side, he suggested I see a specialist.

Off I went to the specialist, who after a thorough examination told me, "It's a bit of iritis, and it'll be gone in 6 months."

Over the next 6 months things didn't improve; instead they got worse. I was playing snooker with a friend one day and when I looked at the white ball, the ball I was trying to pot, disappeared. And at work when I was polishing a mould, I couldn't see a thing. For a short time, I came off the job.

By this time I was getting a bit 'testy' so made a list of all the things I'd noticed and phoned the specialist for an appointment. It was 3 weeks before I could see him.

After another examination he calmly told me I had glaucoma. As I've mentioned, I'd never even heard of the word! He then carried out a field vision test and went into a state of shock, asking if I'd ever been involved in an accident of any sort. "No" I replied, and he said that was very unusual. Eye drops were prescribed, and while waiting to collect my prescription, I read the small pamphlet on glaucoma the specialist had given me. That's when my own shock set in, knowing I'd done everything right, only to learn that glaucoma wasn't fixable!

Life went on until one day in my early forties, after donating blood, I noticed a further loss of vision in my right eye. The specialist said I needed a trabeculectomy, but during the pre-op examination the eye surgeon said, “I’m sorry to tell you this, but you have a detached retina.” My detached retina was fixed up the next day.

A year later the pressure in my right eye was such that I had the trabeculectomy, but by then I’d lost most of the useful vision in that eye. My left eye is still fine, having undergone a successful trabeculectomy on that 3 years ago.

I now only need drops for a bit of dry eye, and with glasses I can drive, and read even the smallest of print.

If I’ve learnt anything, it’s to ask more questions if you’re not sure about something. Be like a dog with a bone, and don’t be afraid to ask for a second opinion, while being careful not to turn into a hypochondriac!

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.

Glaucoma in Animals

Glaucoma is the most common cause of blindness in cats and dogs**.** Glaucoma in pets is more painful than glaucoma in humans. It is more likely to present as the angle closure type of glaucoma. This discomfort can result in lethargy, less desire to play, irritability, or decreased appetite. It is important for the owner to recognize these signs, as dogs and cats lack the ability to verbalize their pain.

Primary Glaucoma is an inherited condition. Primary glaucoma occurs in many breeds, especially Cocker Spaniels, Basset Hounds, Chow Chows, Shar-Peis, Poodles, Labrador Retrievers, and Arctic Circle breed dogs (Huskies, Elkhounds, etc).

The usual presentation is a dog with a blind, painful, red eye with a blue or cloudy cornea. Unfortunately glaucoma can look like a simple *“conjunctivitis”,* so if your pet has any of these signs please call your veterinarian. Early detection of glaucoma may be difficult because in animals these subtle vision problems are very hard to detect. Unfortunately many of the cases of glaucoma we see are well advanced by the time of the first visit.

Leading New Zealand Light Turns 70

You can visit any Department of Ophthalmology in the world and mention the name of Anthony Molteno and the staff will fall to their knees and immediately start worshipping you. With a little bit of allowance for academic hyperbole it isn't far from the truth. Professor Molteno is one of the leading authorities on glaucoma in the world and we are extremely fortunate to have him living and working in New Zealand. He made his name with the eponymous Molteno implant which is used in operations for advanced and intractable glaucoma. It is said that imitation is the most sincere form of flattery; since he produced his original device in South Africa in the early 1970s there are now many such devices available on the market. However most of the studies indicate that the original Molteno implant or more correctly the modified Molteno, is still among the best. If you ever get a chance to discuss the development of this device with Anthony Molteno you will find him a very modest man who downplays his role and the significance of his work. He will entertain you for hours with descriptions of some of his early experiments, such as; using polythene tube from the inside of ball point pens which were heated and drawn into a fine calibre tube prior to being implanted in animal eyes. I have actually helped him make and sterilise some of his early implants on his kitchen table at home, much to his wife Tess' disgust.

The beauty of his procedure is that once the operation has been performed most people require very little ongoing attention and it is usually effective within days or weeks of the original surgery. As you would expect Professor Molteno is in high demand both as an international speaker and as an author on the topic. He has written many journal articles and chapters in glaucoma textbooks and he is constantly being lured off to important conferences in different parts of the world.

He probably turns down as many offers as he accepts, as he is a devoted family man with many grandchildren who resents being away from home for too long. In the early days before Molteno implants became widely available, patients would be flown from all over the world to have the operation performed in Dunedin. Many of these were children suffering from congenital glaucoma.

It is impossible to calculate the number of eyes that Professor Molteno and his operation have saved from blindness, but it would number in the tens of thousands.

Anthony Molteno recently celebrated his 70th birthday. He continues to be a highly productive and active member of staff of the University of Otago and Dunedin hospital. In 1998 he received the Goldmann medal for his contribution to glaucoma, being only the second ever recipient of this medal in the world. In 2006 he was honoured with the New Zealand Order of Merit. Both these accolades do acknowledge to some extent the enormous contribution he has made through his work and research, but the man himself would no doubt agree that the greatest accolade of all is the number of people his operation has saved from blindness.

Public Mail Box

How do hay fever treatments interact with Glaucoma treatments? And what is safe to use?

Hay fever sufferers sneeze lots and may also have itchy red eyes. Usually this happens as seasons change but some sufferers get the symptoms year around. Hay fever is a type of allergy and the mainstay of treatment is either systemic antihistamine, or topical antihistamine: nasal spray or eye drops. There are few side-effects from antihistamine treatment and these will not interfere with glaucoma treatment. Steroid treatment or prophylaxis is also offered for hay fever sufferers, oral steroids rarely in very severe active cases. Topical steroids are often used especially nasal spray. Topical steroids are not used for the eye without very good cause and careful monitoring is required on account of the risk of causing the intraocular pressure to rise. It is impossible to conceive that an ophthalmologist would give ocular steroids casually to anyone, least of all someone with glaucoma. However we are aware of patients presenting with high IOP for whom the origin of the IOP elevation turns out to be nasal steroids. Also it is reported that systemic steroids may elevate the IOP although this is rare. There is a branch of medicine, which deals with allergy, and it is possible to desensitize patients to the environmental triggers once these are determined. This is the role of the immunologist. For those with glaucoma who may have a steroid requirement for allergy, consultation with an immunologist may be useful.

Also what happens when you need to take steroid treatments for other medical conditions, but have Glaucoma?

Cases of IOP elevation in patients taking systemic steroid are mercifully very uncommon. Systemic steroids are important medicines with known complications and are not prescribed for trivial indications. In the case of a patient on treatment for glaucoma who is commenced on systemic steroid treatment it is important that the patient's ophthalmologist is made aware of the illness and steroid treatment at the time of their next visit. Usually ophthalmologists will ask at routine glaucoma follow ups how things are, and if there have been any important health changes.

The most potent way of increasing the intraocular pressure in glaucoma patients sensitive to steroids is for the steroid to come directly into the eye, by either steroid eye drops, careless application of steroid creams to the skin or via nasal or inhaled steroids.

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PLEASE join us in the fight against glaucoma. We need your support to continue our work raising awareness of glaucoma, providing free nationwide public seminars, educational resources as well as supporting vital research.

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