

# Eyelights

The Newsletter of **GLAUCOMA NZ**  
TO SAVE SIGHT

## Message from the Chairman

As Christmas approaches it is timely to look ask, what has Glaucoma NZ achieved this year?

Membership of Glaucoma NZ has continued to grow at a rapid rate. An amazing 1232 new members have joined so far this year, and Eyelights now goes out to nearly 4000 people. So if you have glaucoma you're certainly not alone!

Public information meetings have been organised across the country, involving 14 different eye specialists as speakers and many volunteers from Lions Clubs. We are thankful for their support.

Our special awareness campaign this year was based around the theme 'Don't Lose Sight of Your Family'. Through postcards we drew attention to the increased risk of developing glaucoma if a relative has glaucoma. Hopefully you have been encouraging your family members to understand this and to have their own eyes examined.



Our prime aim, to reduce blindness from glaucoma, motivates us to know a lot more about glaucoma in our community. Quality research is essential to this task. So it is my pleasure to announce a research grant for 2007 to Dr Andrea Vincent, an eye specialist with expertise in genetics, who will commence a study into glaucoma genetics in New Zealand. This has never been done before. Dr Vincent gained the highest ranked application for eye research funds in NZ this year. Glaucoma NZ seeks sponsors and bequests for further research into glaucoma in NZ.

I want to take this opportunity to thank our sponsors, Pfizer, Visique, Allergan and Alcon, who have chosen to support this important cause. I also thank the many amongst you who have sent in donations during the year. Growth in membership has brought along with it dramatic increases in the cost of printing and postage, and your donations make a real difference. I invite you to support Glaucoma NZ by purchasing a ticket in the enclosed raffle. It's for the very best of causes – preventing loss of precious sight.

I wish you all the best for a very happy Christmas season and a lovely summer.

Dr Ken Tarr, Chairman

Volume 3, Issue 4

November 2006

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## Mr Gordon Sanderson MNZM



We have pleasure in informing our readers that Mr Gordon Sanderson, a trustee of Glaucoma NZ, has been awarded the New Zealand Order of Merit (MNZM) in recognition for services to the visually impaired.

Gordon holds the position of Senior Lecturer, Otago University, and works in the Dunedin Eye Department where he is very involved in teaching students and trainee eye specialists as well as undertaking research and providing services to patient care. He is widely acclaimed by many eye specialists in New Zealand for his contribution to their early training in the specialty.

The award acknowledges the major contribution Gordon has made in services to people with visual impairments. Gordon was Chairman of the Royal Foundation of the Blind for many years, where he directed important changes to establish a solid foundation for its future care of the visually impaired in our community. Gordon has also had a long-term interest in the development of Low Vision Services in New Zealand. Originally trained as an optometrist in the UK, Gordon provides an important link between Glaucoma NZ and optometry. Optometrists play a pivotal role in the early detection of glaucoma and their continuing education in this role is an ongoing activity of Glaucoma NZ.

Congratulations, Gordon Sanderson MNZM, and thank you for providing your expertise to Glaucoma NZ.

## Focus on Research

### Glaucoma Research at the University of Otago

Professor Anthony Molteno came to Dunedin in 1976 with experience in use of a device, the Molteno implant, to relieve the eye pressure in difficult glaucoma eyes. The Otago Glaucoma Surgery Outcome Study tracks the long-term outcomes of patients who had either a trabeculectomy (923 cases) or a Molteno implant inserted (802 cases) at Dunedin Hospital since 1976. The study is conducted by Professor Molteno at the University of Otago Dunedin School of Medicine and funded by the Healthcare Otago Charitable Trust.

Information from the database has fuelled a series of publications with the longest and most complete follow-up of any such studies in the world. Prof Molteno and his colleagues have

shown that the current surgical techniques for inserting Molteno implants are very effective in reducing eye pressure to normal in most types of glaucoma. In addition the implants are safer than previously as the complication of an eye with too low a pressure is now less common. The outcome is less certain when the eye has very advanced glaucoma, or has had many previous operations, active chronic uveitis and eyes with neovascular glaucoma in which the underlying vascular disease is not amenable to treatment.

A current focus of research is the cytological and immunohistochemical study of draining blebs that surround the successful implant. This research has shown that the success in reducing eye pressure depends on the aqueous, the eye fluid, being drained, inducing two opposing responses.

One response is the early inflammation required to heal the tissues after surgery and to lay down collagen. Excess collagen leads to inadequate aqueous absorption and a high eye pressure; a failure. Insufficient collagen leads to excess drainage and a too soft eye. A second fibro-degenerative response, which inhibits the fibro-proliferative response, breaks down collagen and maintains a 'draining bleb'.

The balance between these two processes of activation of cells with collagen production and death of cells by apoptosis regulates the thickness and permeability of the bleb capsule around an implant. The normal life cycle of bleb capsules includes continual inner surface degeneration and external surface renewal.

The long-term results of 289 glaucoma drainage operations, trabeculectomy, were first reported in 1999 and showed that the eye pressure was well controlled. However visual acuities and visual fields declined steadily at a rate indicating that the probability of each eye still having useful vision when the patient dies is approximately 0.6. A further study of an expanded and extended group of the long-term outcomes of 841 trabeculectomies is currently underway.

Glaucoma Fellows enhance the research team and have recently published on the outcomes of the Molteno implant insertion for traumatic glaucoma, juvenile glaucoma, neovascular glaucoma and the value of systemic medication for a threatened trabeculectomy bleb failure.

The current Glaucoma Fellow is studying the histopathology of the Molteno implant bleb in eyes that have had silicone oil induced glaucoma and the reproducibility of optical coherence tomography (OCT) in eyes with advanced disc damage.

**Further information is available at:**

<http://dnmeds.otago.ac.nz/departments/mss/ophthalmology/index.html>

Professor Molteno received, in the 2006 New Year's honours, the award of "Officer of the New Zealand Order of Merit" for services to ophthalmology and people with glaucoma. (See Eyelights Feb 2006.)

If you are interested in supporting glaucoma research in NZ through donation or bequest, Glaucoma NZ provides a legally binding and professionally independent mechanism for distribution of funds. Please contact Glaucoma NZ.

## Say it with Flowers

### Glaucoma Awareness in Derbyshire

On her recent travels in the UK, Sheila Booyesen spotted this unusual contribution towards glaucoma awareness and sent us the photo.

In the Peak District there is a very old custom of "dressing" wells as a way of giving thanks for water. Springs and wells are decorated with pictures made from living things. A wooden board is soaked in the well water, filled with clay and then the picture "coloured in" with cones, petals or flowers. Dressing a well can take a team of people up to seven days to complete and it will only last about a week before the clay dries and cracks and the flowers fade.

This lovely example was spotted by Sheila in the village of Belper.

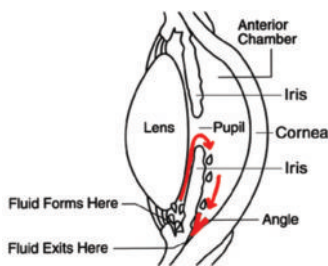


## Angle Closure Glaucoma- Questions and Answers

Continuing our series about the different types of glaucoma, we focus this time on Angle Closure Glaucoma and Acute Angle Closure Glaucoma.

### What is Angle Closure Glaucoma?

In Angle Closure Glaucoma pressure in the eye is high because fluid is being obstructed from successfully draining away. The fluid inside the front of the eye cannot reach the angle of the eye where the drainage system of the eye is located, because the angle is blocked or “closed” by part of the iris, the coloured part of the eye. This is like putting a stopper over the drain of a sink. The build up of fluid inside the eye results in increased pressure.



### What is the difference between Angle Closure Glaucoma and Acute Angle Closure Glaucoma?

There are various types and grades of ACG, of which Acute Angle Closure Glaucoma is the most extreme. An episode of Acute Angle Closure Glaucoma is sudden and severe. It results in a sudden increase in pressure and is a medical emergency. The eye can become very painful and red. Symptoms include headache or severe pain around the eye or eyes. If the pressure rises high enough, the pain may become so intense that it can cause nausea and vomiting. The cornea swells and clouds, and the patient may see haloes around lights and experience blurred vision. Permanent loss of vision or blindness may result.

### What other kinds of Angle Closure Glaucoma are there?

With Intermittent Angle Closure people have a series of minor attacks when the angle becomes partially or intermittently blocked.

In Chronic Angle Closure the closure of the drainage system occurs gradually. Symptoms do not occur until the angle is almost completely closed over. People with Narrow Angles are at risk of developing ACG. There are also a number of types of Secondary Angle Closure Glaucoma where the angle is blocked as a result of other eye disease such as in poorly controlled diabetics, those who have had a central Retinal Vein Occlusion, or after types of complicated surgery.

### What kinds of treatment are available?

Treatment commonly involves a laser procedure known as Laser Peripheral Iridotomy (PI). With the laser a small opening is made in the iris allowing fluid to pass directly to the anterior chamber, releasing the build up of pressure behind the iris. PI is completed in the ophthalmologist’s rooms and requires no sedation. Other treatments include eye drops, oral medication, and medication given intravenously.

### What is gonioscopy?

The angle is inside the eye, located between the iris and the cornea. This part of the eye is very difficult to see. Your ophthalmologist is able to examine the angle through gonioscopy, using a “gonio lens” which looks like a cross between a small egg cup and a thimble.



### My doctor says I have “narrow angles”. Remembering my geometry from school days, does this mean I have “Acute Angle” Closure Glaucoma?

No. In the term ‘Acute Angle Closure Glaucoma’, ‘acute’ is being used to mean manifesting suddenly and with intense severity.

*Continued.....*

**I have just been diagnosed with Angle Closure Glaucoma. My eye specialist has recommended laser peripheral iridotomy straight away. My friend has glaucoma but she has needed nothing more than eye drops for many years. Shouldn't I be on drops first?**

Your friend is likely to have a completely different type of glaucoma. Your doctor has weighed up the best options for your particular case. A peripheral iridotomy is the best treatment for eyes with the risk of Acute Angle Closure Glaucoma. It prevents the possibility of an acute attack of angle closure, which is

not only horribly painful, but leaves the eye with long term problems. Peripheral Iridotomy is an extraordinarily safe procedure.

**Who is at risk of developing Angle Closure Glaucoma?**

People at a higher risk of developing Angle Closure Glaucoma include those who are far-sighted, elderly, of Asian descent or who have a family history of this condition.

For an overview of types of glaucoma refer to Eyelights May 2006. For questions and answers about Primary Open Angle Glaucoma refer to Eyelights August 2006.

## Glaucoma Quiz

Test yourself on your knowledge of glaucoma. Answers on Page 6.

**TRUE/FALSE Statements**

- |    |   |   |   |
|----|---|---|---|
| 1  | Glaucoma is a disease that affects the eyes and no other part of the body .....     | T | F |
| 2  | Most glaucoma is painful.....   | T | F |
| 3  | Raised eye pressure can cause glaucoma .....  | T | F |
| 4  | Glaucoma affects central vision before side vision .....                            | T | F |
| 5  | Vision loss in glaucoma usually occurs very quickly .....                           | T | F |
| 6  | Glaucoma can be cured .....   | T | F |
| 7  | The most common treatment for glaucoma is surgery .....                             | T | F |
| 8  | Lost eyesight from glaucoma can be restored .....                                   | T | F |
| 9  | Most people with glaucoma go blind .....  | T | F |
| 10 | Treatment for glaucoma is life long .....   | T | F |
| 11 | Regular checkups are not necessary for glaucoma patients .....                      | T | F |
| 12 | Glaucoma can run in families .....  | T | F |
| 13 | Glaucoma is more common as you get older .....                                      | T | F |
| 14 | Most people will have symptoms that warn them their glaucoma is getting worse ..... | T | F |
| 15 | Stress can make glaucoma worse .....  | T | F |
| 16 | A healthy diet slows the progression of glaucoma .....                              | T | F |
| 17 | Using a computer will make glaucoma worse .....                                     | T | F |
| 18 | Fluorescent lights will make glaucoma worse .....                                   | T | F |
| 19 | Eye drops can have serious effects that affect other parts of the body .....        | T | F |
| 20 | Watering eyes indicate that there is a build-up of fluid inside the eyes .....      | T | F |
| 21 | A lot of reading may make glaucoma worse .....                                      | T | F |
| 22 | Lowering the eye pressure is a treatment that slows the worsening of glaucoma ..... | T | F |

## Knowledge of Glaucoma - Survey Findings

Patients with a good knowledge and understanding of glaucoma have shown better compliance with treatment. Misconceptions about glaucoma may result in either unnecessarily heightened anxiety levels or conversely, lack of insight into potentially blinding outcomes.

A study was conducted to assess the level of glaucoma knowledge in patients with established glaucoma, those referred to an ophthalmologist for their first glaucoma assessment and the general population. The study also aimed to identify any commonly held misconceptions regarding glaucoma.

408 participants were given a self-administered true/false questionnaire containing 22 questions assessing glaucoma knowledge. The questionnaire appears on Page 5.

Established glaucoma patients scored a median of 17/22, marginally but significantly, better than new patients (median 16/22). Both of these groups scored significantly better than the control population who had a median of 13/22. Significant **misconceptions** held by participants include:

- 80% of all participants thought that topical medications could not have systemic side-effects
- 48% of established glaucoma patients felt that they would have symptoms warning them of disease progression

- One third of new patients considered blindness to be a common outcome of having glaucoma

Other poorly understood facts by all groups include that epiphora (watering eyes) is not associated with a build up of pressure inside the eye, and that stress is not known to be related to glaucoma.

It is important that the misconceptions are clarified. Specifically, the established glaucoma patient should be aware that some topical medications may have potential systemic side-effects and that they will not have symptoms warning them of disease progression. Newly referred patients need to be reassured that the majority of patients with glaucoma will not go blind, that their treatment and management is life-long and while glaucoma can be controlled it is not 'curable'. Both groups need to be advised that significant changes of lifestyle will not influence the course of their disease.

A better understanding of the signs/symptoms, management and prognosis of glaucoma will ease anxiety and allow better adjustment to the disease amongst patients.

### Answers to Questionnaire:

1 T	2 F	3 T	4 F	5 F	6 F
7 F	8 F	9 F	10 T	11 F	12 T
13 T	14 F	15 F	16 F	17 F	18 F
19 T	20 F	21 F	22 T		

## How Never to Run Out of Eye Drops

All too often patients on glaucoma medications run out of supplies before the next visit to their eye specialist. The patient then waits until that next visit to replenish their medications. This is less than ideal for two very good reasons.

Firstly, without continued medication the eye pressure will quickly rise. Fluctuations in eye pressure are considered harmful to the susceptible optic nerve. Secondly, your eye specialist wants to know what the eye

pressure is WITH the treatment prescribed. Only then can a pattern of eye pressure be established to decide whether the eye drops are sufficiently effective or whether a change in medication is in your best interests. That important decision relies on you taking your eye drops right up to your visit to your eye specialist. (Occasionally your eye specialist will advise you otherwise.)

### How can you receive a repeat of your eye drops on the day that you run out?

1. Phone your eye specialist, explain that you need another prescription urgently and please fax it to your pharmacist. Your eye drops can then be dispensed to you by your pharmacist. Some pharmacists provide a

delivery service in their area and may even offer to contact your eye specialist for you. Your eye specialist, by law, must post a proper prescription to the pharmacist. But you have your eye drops!

2. Arrange to collect the prescription from your eye specialist.
3. Arrange to pick up the prescription from your general practitioner. Usually your GP is kept informed of any change to your eye medications.

However, the preferable course of action is to call your eye specialist well in advance to request a repeat prescription, allowing time for delays and postal delivery.

## The Ophthalmic Nurse and Glaucoma



Glaucoma is a major eye health problem in our community, which leads to large numbers of patients attending our public hospital eye departments.

In 2004 a Glaucoma Nurse Specialist role was introduced as an alternative way to manage patients with glaucoma in Auckland. Patients referred with glaucoma were triaged to the Nurse Specialist Clinic or the consultant clinic depending on the type of problem identified. This process has reduced the waiting lists and waiting times for an appointment in the Eye Department. The Nurse Specialist Clinic is now well established 2 ½ years later. New patients and follow-up patients are seen by the Nurse Specialist in collaboration with medical staff.

Although this clinic was established in response to growing waitlists, nurses have also been utilised in the care of stable glaucoma patients who require lifelong care with follow-up appointments. This has been

achieved using a combination of assessment skills and technical support that is now more widely available. Collaboration and consultation with medical colleagues are important components for the success of this management option.

A major part of the ophthalmic nurses' role is in education. A patient who understands his or her condition, the nature of the treatment and the reason for it, is more likely to follow the treatment regime. This is very important to maintain control of glaucoma and to prevent progression.

The growing demand for glaucoma care has created an opportunity for ophthalmic nurses to develop advanced assessment and diagnostic skills to help manage the workload. Nurses provide an alternative model of care that often extends beyond the boundaries of the clinical setting with the provision of ongoing advice and reassurance. It is to be hoped that Glaucoma Nurse Specialist Clinics such as the one which has proved so successful in Auckland, will be developed throughout NZ's public hospital system.

# YES, I would like to help

I would like to become a member of Glaucoma NZ at no cost

I would like to donate \$\_\_\_\_\_

I enclose my cheque for \$\_\_\_\_\_ made payable to Glaucoma NZ,  
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Card No \_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_    Expiry \_\_\_\_/\_\_\_\_    Signature \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Phone No \_\_\_\_\_

Donations of \$5.00 or more are tax deductible

## Forthcoming Meetings

### November 25 Te Puke

10am    St John Ambulance Hall, Jocelyn St, Te Puke

### December 9 Whakatane

10am    Disabilities Resource Centre, 143 King St, Kopeopeo

## Contact Us with Your Questions & Comments

Heather Hyland is Glaucoma NZ's Administrative Manager and Editor of Eyelights. She would welcome feedback.

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### Moving House?

Don't forget to include Glaucoma NZ when you are doing your change of address cards. Remember, we have no way of knowing your new address if you don't tell us!

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