A world-first study from Queensland University of Technology’s (QUT) Faculty of Health, has found that people suffering from vision loss due to glaucoma are at a higher risk of having a fall.

It was found that 40% of the 70 older adults with glaucoma who took part in the year-long study had a fall, with 20% experiencing multiple falls over that period.

The key finding was that the strongest risk factor for falls among the glaucoma sufferers was associated with those who had more extensive loss in their lower peripheral vision.

This is significant because it means attention can now be turned to finding ways to help prevent these patients from having falls. While it may sound like common sense that people with impaired vision would experience more falls than those with good vision, this was the first study that identified the particular type of glaucoma sufferer most at risk.

Armed with this knowledge the focus can move onto educating patients so they can better understand the extent of their vision loss and its ramifications on their day-to-day living.

A range of measures has been suggested to help reduce the likelihood of falls. These involve modifying environmental factors, such as removing trip hazards from the home and improving lighting, as well as promoting behavioural change to reduce high-risk activities.

This includes things like exercising in good sunlight rather than at dawn or dusk and taking time when doing highly active activities such as bushwalking. Stairs and steps should be well-lit and outlined with contrasting tape or paint.
so they can be easily seen, and people are best to take time to allow their eyes to adjust when walking from light to dark areas and vice-versa.

Also recommended are activities which maintain and promote balance and strength such as Tai Chi. This is useful advice for not only those with visual impairment but also the older population in general.

Article sourced from New Zealand Optics, February 2012

There are three diseases that are common among aging New Zealanders: cataract, glaucoma and macular degeneration. What the three have in common is that they all affect the eye and can lead to blindness, but when you look into it they are very different to each other, and are distinct diseases: having one of the three doesn’t make you more likely to have the others, but because they are common problems it is not unusual to meet people who have two or even all three problems. In this edition of Eyelights we would like to focus on macular degeneration.

Macular degeneration. This is a problem of the retina. The retina is the delicate tissue at the back of the eye that turns the light into sight. The macula is a spot in the centre of the retina onto which most of the incoming light is focused. The light from things you look directly at is focused onto the macula. The light from objects away from what you are looking at falls on the retina beyond the macula. The macula results in the finest detail in the retina, the macula contains the fovea. The fovea is the central area of your retina where you have the greatest amount of light-sensitive cells.

Macular degeneration can be classified into two main types: DRY (Dry) and WET (Wet). DRY age-related macular degeneration is the most common form of the disease, accounting for about 90% of cases. It is characterized by the presence of drusen (yellow deposits) and small yellowish changes in the macula. WET age-related macular degeneration is less common, but more serious, as it can lead to rapid vision loss. It is characterized by the growth of abnormal blood vessels beneath the retina. These blood vessels can leak fluid and blood into the macula, causing vision loss.

Glaucoma NZ celebrates 10 years with a Glam Gala Event

This year Glaucoma NZ is celebrating 10 incredible years of activities aimed at eliminating blindness from glaucoma. Over this period we have provided extensive nationwide awareness and education programmes for the general public and health professionals involved in glaucoma care, as well as funding research.

As part of the 10th Anniversary activities, we are holding a special event on Saturday, 22nd September to celebrate this achievement and to raise funds to ensure we can continue with this vital work.

Guests at the ‘For Your Eyes Only’ Glam Gala will enjoy an evening of ‘007’ glamour and entertainment with the fabulous Frankie Stevens as Master of Ceremonies, live music, three course dinner and charity auction.

If you would like to support GNZ at this Glam Gala event, please visit www.glaucoma.org.nz to purchase your tickets online, or phone 0800 452 826 for more information. We would love to see you there.

When: Saturday 22nd September
Time: 7.00pm – until late
Where: The Giltrap Audi Showroom, 150 Great North Rd, Grey Lynn, Auckland
Dress: Black Tie / Glamour
MC: Frankie Stevens
Tickets: $225 per person, Table of 10 $2250 (incl. gst)

We are committed to continuing with our nationwide education and awareness programmes, and supporting research into glaucoma in New Zealand. Our ultimate goal of eliminating blindness from glaucoma remains at the core of everything we do.
Lines at the edge of things known to be straight are seen to have kinks in them.

What is happening in WET ARMD is that little nets of abnormal fine blood vessels are growing up through the macula and tenting it up a bit: hence the distortion. The abnormal neovascular nets as they are called can leak and bleed, causing fairly rapid loss of central reading vision. This is why folk with known macular degeneration are given a graph paper called an Amsler grid so that they can check there are no new distortions in their vision.

For those with glaucoma the injection increases the pressure in the eye to about 30-40mmHg. But this spike in pressure lasts for a short period of time and generally is well tolerated. In some patients with advanced glaucoma and WET macular degeneration, steps may be taken to lower the pressure at the time of the injection. Repeated intravitreal injections of AVASTIN have been found to cause an increase in eye pressure between attendances that is not simply a volume effect of the injection. So pressure and glaucoma does need to be considered when people embark on a course of treatment for WET macular degeneration.

Can anything be done to prevent macular degeneration?

The cause of macular degeneration is mainly aging but there are hereditary factors and environmental ones. The environmental factors are blue light exposure and diet. Hats and sunglasses are an essential part of the dress for those worried about getting macular degeneration. The exposure to blue light is an aggregate, so sun protection from an early age is best. It turns out that those with a diet rich in vegetables and fish are at less risk of macular degeneration.

Key eye health nutrients include Lutein and Zeaxanthin found in food such as spinach, peas, corn; Vitamin C – (e.g. oranges, capsicum); Vitamin E (e.g. wheatgerm); Zinc (e.g. oysters, rice bran); Selenium (e.g. Brazil peas, corn); Omega-3 (e.g. salmon, sardines, tuna). There are vitamin and mineral supplements that have shown to add a degree of protection to those at greatest risk, but are not recommended for all. The vitamin and mineral supplementation has been recommended since the publication of the AREDS study. The results have been controversial and a follow-on study called AREDS II is due to report next year. If you are concerned you have macular degeneration then a short examination by your eye-care professional can reassure in most instances.

Amsler Grid

The most common treatment for WET macular degeneration is an injection of an anti-blood vessel drug directly into the eye via a very fine needle. In NZ the drug that is most often used for this is AVASTIN. There are several other drugs available or in the development pipeline. Drugs injected into the eye for WET ARMD slowly disperse and with that dispersal of drug the vascular net becomes active again, symptoms return and further injection is necessary. Patients with macular degeneration may attend the eye clinic for injections several times a year, which is quite a big part of the workload of hospital Eye Departments around the world now. However, it is well worth the effort when set against the prospect of losing reading vision or the ability to drive.

Important Discoveries by Auckland Scientists

Groups of connexin43 molecules form communication portals, called gap junctions, between cells.

This allows harmful products of neuron damage to pass to other neurons, expanding the original injury. Connexin43 is also produced in cells lining blood vessels and the researchers found leakage from blood vessels involved in an eye stroke.

In their study involving rats which had an eye stroke, followed by re-establishment of the blood supply, the researchers injected an experimental connexin43 blocker drug into the abdomen of some.

Blood vessel leakage and loss of astrocytes were less in those given the treatment. Loss of the retina’s light-sensitive cells was dramatically lower, at around 10 per cent, compared with expected losses of around 35 per cent.

This research is unique because it focuses on saving and modulating the environment within which the neuron lives - it does not directly influence the neuron.

It is like saving the environment and making it a better one. This is a new direction for eye research.

The research paper says the findings can be extrapolated to brain strokes, chronic inflammatory diseases and trauma.

It also notes that the retinal cell death that occurs in an eye stroke is implicated in other eye diseases, such as glaucoma and the retinal problems associated with diabetes, both of which can cause blindness.

Although not available clinically at this stage, there are significant promising advances that such a treatment may become available in a few years.

Auckland scientists in the Department of Ophthalmology at the University of Auckland have made important discoveries in the eye, which they hope will lead to the development of the world’s first drugs to prevent blindness after an eye stroke.

The findings also have implications for other conditions, such as stroke in the brain. At the moment, if you get a stroke of the eye, there is no treatment. Clinicians are helpless.

A stroke to the eye results in loss of blood due to a blocked blood vessel which causes damage to neurons - nerve cells - in the retina, the structure at the back of the eye which sends visual signals to the brain as nerve impulses. This damage spreads between neurons.

In their paper in the world’s leading neurology journal, Brain, the Auckland University eye researchers have shown that following an eye stroke, there are increases in the amount of a protein called connexin43 in the astrocyte helper cells of the retina.

Inflammatory diseases and trauma.

Groups of connexin43 molecules form communication portals, called gap junctions, between cells.

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July is Glaucoma Awareness Month

2012 is Glaucoma NZ’s 4th nationwide July Annual Awareness Appeal.

The Appeal is an opportunity to further highlight the risks associated with glaucoma, the importance of early detection, ongoing management and treatment of this disease, as well as raising much needed funds to enable Glaucoma NZ to continue with its free nationwide education and research initiatives.

Be on the look-out for our donation boxes containing specially designed pens and/or lens cleaning cloths for a donation at participating optometrists, ophthalmologists, pharmacies and ASB branches around the country. You can see a list of participants on our website www.glaucoma.org.nz or phone 0800 45 826 (0800 Glaucoma).

Optometrists and ophthalmologists play an important role in preventing blindness from glaucoma through early detection, and ongoing treatment and management of this disease. Many of the participating optometrists and ophthalmologists have taken their support for the July Appeal a step further by choosing to donate $1.00 from each glaucoma eye assessment or eye examination made during the month.

Glaucoma is a significant health issue and an estimated 68,000 New Zealanders over the age of 40 have glaucoma. Half of those people with glaucoma don’t know they have it, as it slowly steals their sight. Glaucoma NZ wants to reach the 34,000 New Zealanders who are as yet undiagnosed with glaucoma and risk going blind. An eye examination could save their sight.

With the population ageing and people living longer, more New Zealanders face the possibility of developing glaucoma.

Research shows one of the things people fear most in life is going blind. It is right up there with cancer and heart disease, probably due to the devastating effect blindness can have on quality of life. Studies have shown sight loss is likely to lead to depression, as well as accidents in the home, sometimes resulting in hospitalisation.

Early detection of glaucoma is vital when it comes to preventing blindness and GNZ urges everyone to be vigilant about their eye health and follow the ‘45 plus 5 Rule’. From the age of 45 have an eye examination for glaucoma every 5 years and then every 3 years from the age of 60.

However, at any age, if you notice changes in your eyesight you should have your eyes examined at that time. For example, if you require hobby glasses, it is a good idea to have your eyes checked by an eye health professional, just in case there is an underlying problem.

It is really important for people to know if glaucoma runs their family, because if it does, your risk increases substantially. Talk to your relatives – ask older family members if they can recall anybody taking eye drops because these may well have been for glaucoma.

You are also at higher risk of getting glaucoma if you are 60 years and over, are short sighted, have high blood pressure, have a past or present use of steroid drugs, or previous eye injury.

Helen Mawn from GNZ handing donation box to optometrist Jyotika Lal and Julia Taylor.

Early detection is the first step to saving your sight. Glaucoma can’t be cured. Once the vision is gone, you can’t get it back. However modern treatments like eye drops can halt its progression and preserve the sight that is left. It important to comply with the treatment given.

The good news is that 98% of those who comply with their prescribed treatment will not go blind.
How are Glaucoma Patients Actually Discovered?

Glaucoma is the leading cause of preventable blindness in New Zealand, often remaining completely symptomless until it develops into an advanced level and irreversible vision loss has occurred. This statement leads us to an important question: How are these patients with their “silent” loss of vision being detected, referred to specialist ophthalmology clinics and hopefully started on vision-saving treatment?

Unfortunately not all people with glaucoma have their disease detected prior to severe vision loss, but there are many successful outcomes where glaucoma has been suspected, the patient has been referred to an ophthalmologist and treatment has started at an early enough stage to preserve sight. The difference between these two groups relates mainly to someone suspecting glaucoma and referring the patient for assessment as early as possible. This referral can be made by any health professional, so while not everyone has an optometrist, nearly everyone has a general practitioner who is able to assess their risk of glaucoma, perform basic examinations and refer if necessary.

Large population studies have estimated that half of all people with glaucoma remain undiagnosed, yet very little research exists on how patients with this symptomless condition are actually discovered. A recent study at the University of Otago aimed to assess how glaucoma patients come to be in clinics and hopefully started on vision-saving treatment. Of the 400 patients, only 114 (28.5%) were referred to the ophthalmology clinic specifically with a suspicion of glaucoma. This means that a surprising 71.5% of patients being seen in the glaucoma clinic were there after being referred by another health professional with an unrelated, separate condition. They were then assessed in the ophthalmology clinic where signs consistent with glaucoma were detected as purely incidental findings. Highlighting the silent or symptomless nature of glaucoma further was the fact that 313 patients (78.3%) had no visual or eye-related complaints at presentation to their referrer.

Nearly half (49.8%) of all patients were referred to clinic by optometrists, with the next two highest contributions coming from the diabetic photo-screening service (where diabetic patients have their eyes photographed and reviewed on a regular basis) and general practitioners. Optometrists were more than three times more likely to make a specific referral with a suspicion of glaucoma than their general practitioner colleagues.

This correlated with the number of investigations carried out by the referrer, with optometrists being more likely to test visual acuity, assess optic nerve appearances and measure intracocular pressure. Obviously, with a relatively symptomless disease, the fewer investigations performed results in a lower likelihood of considering the diagnosis and a less frequent suspicion of glaucoma.

This study suggests a higher prevalence of undiagnosed glaucoma in the community than previously estimated, given that such a high proportion of patients were discovered due to incidental findings when referred with problems not related to glaucoma.

Perhaps more importantly, it also highlights the potential for primary healthcare providers to increase their detection rates.

It follows that if general practitioners (and other referrers) were to perform more basic investigations for glaucoma (optic nerve observation and enquiring about family history), they may be able to increase their rates of glaucoma detection.

Raising public awareness of glaucoma and its risk factors would prompt people to discuss this disease with their general practitioner or optometrist.

If simple initiatives are promoted to increase awareness of the importance of early glaucoma detection, then it should be possible to reduce the eventual burden of glaucoma in New Zealand, the “silent thief of sight”.

Reader’s Story

By Pauline

Initially I was devastated at being diagnosed with glaucoma in 2011. Not me, age 66!

Then I found a few glaucoma eye drops each day would hold the condition at bay – well that was fine, I could handle that.

However my eyes began to react to the drops. They were red, sore, irritated and the eye pressures remained high. My ophthalmologist tried a variety of other drops but still multiple allergies. Nothing seemed to work. In fact my eyes got steadily worse becoming more tender and redder, with a corneal ulcer really sealing the state of intensity for me.

On further consultation it was decided that trabeculectomy surgery would have to be performed – first to the right eye, then the left. I was advised that a trabeculectomy would create a new channel to improve the drainage of fluid from the eye, therefore reducing the pressures. I would need to use sulphur drugs for the next two months leading up to the surgery so my eyes would remain calm during the operations.

The first operation in August went well – it was Rugby World Cup time. My daughter had given my husband and I tickets to the Irish game and I could see clearly – I too was a winner just like the Irish team. I was so pleased then to be going for the next operation. However that was when the fun began. The left eye just would not behave. The pressures rose higher. In all, I had three operations, one procedure, and eight needlings with the stitches having to be removed. My ophthalmologist never gave up – remaining positive and reassuring throughout. “We will get there” she would assure me.

Finally on 20th December my pressures came down. What a wonderful Christmas present. The pressure in both eyes is now stable, sight is good and all pain, blurring and irritation is gone. I cannot thank my ophthalmologist enough for all the care she gave me throughout.

Compliance and persistence are definitely the key words in keeping your glaucoma in check. A grateful patient.

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.
Public Meetings 2012

Glaucoma NZ’s free public meeting programme is well underway with meetings in Tauranga, Dunedin, Rotorua, Hamilton, Christchurch and Invercargill. These meetings are extremely popular and informative so plan to attend when there is one in your area.

Upcoming Meetings:
14th July - Auckland - 10am
Rutherford Room, Alexander Park
Greenlane Rd West, Epsom, Auckland

18th August - Silverdale - 10am
Rotary House, 4 Hibiscus Highway
Silverdale, Auckland

1st September - Henderson - 10am
Lincoln Green Hotel & Conference Centre
159 Lincoln Rd, Henderson, Auckland

15th September - Whangarei - 10am
Caffer Room, Forum North
Rust Avenue, Whangarei

Other meetings are planned for Napier, Lower Hutt, Wanganui, and Palmerston North.

Visit www.glaucoma.org.nz to keep up to date with our Public Meeting Programme.

Glaucoma NZ members will receive personal invitations for meetings in their area.

These meetings are open to any member of the public wanting to know more about glaucoma - invite your family and friends to attend.

We look forward to seeing you there.

For New Readers

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

For your information here are some basic facts about glaucoma:

People of all ages can get glaucoma.

There are different types of glaucoma, but they all involve damage to the optic nerve, the nerve of sight, which is at the back of the eye.

Glaucoma is not curable. If you have glaucoma it must be monitored for the rest of your life.

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

Current treatments for glaucoma aim to lower eye pressure.

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

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

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

Professional Education Programme

Now approved for 10.5 Clinical Diagnostic credits!

Glaucoma New Zealand's 2012 Professional Education Programme is open for enrolments.

This year sees the commencement of a new online web-based course structure:

- The professional education programme is approved by the NZ Optometrist & Dispensing Opticians Board CPD Committee for a maximum of 10.5 Clinical Diagnostic (CD) Credits.

- The programme consists of 7 cases – each with a case history, questions and answers for self-directed learning, followed by an associated web-based examination.

- Successfully passing all 7 cases awards the maximum of 10.5 CD credits.

While mainly directed at optometrists, the Programme is open to any of those in the eye health field, including orthoptists, nurses and technicians.

Up to eighteen hours commitment over the year is involved.

For a full explanatory letter and enrolment options please visit www.glaucoma.org.nz

Cases must be completed prior to 31st September 2012, to attain the relevant credits.

Please send feedback and suggestions for Eyelights to the Editor. Questions for the Public Mail Box are welcomed.
July Annual Awareness Appeal

WE NEED YOUR HELP. Please support us in our mission to eliminate unnecessary blindness from glaucoma in New Zealand. An estimated 68,000 New Zealanders over the age of 40 currently have glaucoma. 50% of those don’t know they have it.

We have reached thousands of New Zealanders with our programmes but there is still much more to be done:

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

It is vital that we continue to maintain and extend our nationwide initiatives but we can’t do it without your help.

Your support is important to us.

THANK YOU for your generosity - every donation counts!

YES! I would like to make a donation to the July Annual Appeal.

☐ $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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