

Australia's first World Glaucoma Congress to host free screenings

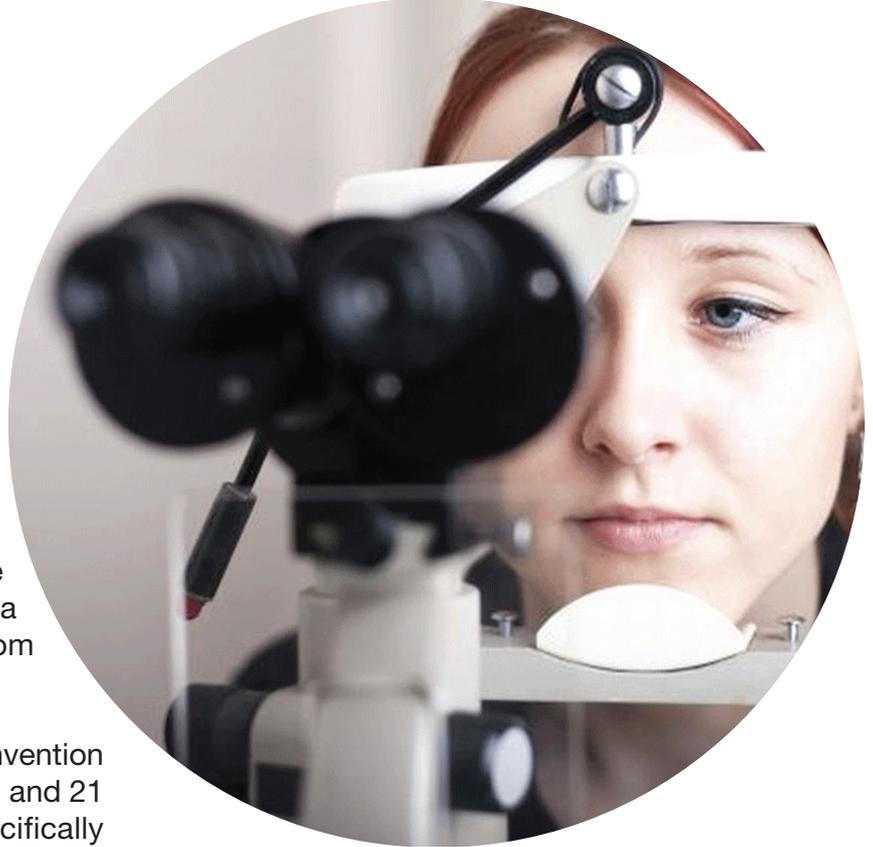
Relatives of glaucoma patients will have access to a free risk screening clinic and leading specialists at this year's World Glaucoma Congress, the first time the event has been held in Australia.

The eighth edition of the world's premiere glaucoma meeting, will also include a symposium where patients can hear from leaders in research and clinical practice.

The event will be held at the Melbourne Convention and Exhibition Centre between March 27–30, and 21 symposiums, as well as a session specifically designed for glaucoma patients. The free risk screening clinic is designed to promote the importance of regular eye tests for relatives of glaucoma patients, who are 10x more likely to develop the disease.

Glaucoma Australia CEO Ms Annie Gibbins said the patient symposium would involve some of Australia's leading glaucoma specialists discussing the latest lab-based research, clinical advances and options for improved quality of life.

"We're very excited that the World Glaucoma Congress will be coming to Australia this year for the first time. If you are in Melbourne and you have glaucoma we encourage you to attend this invaluable event," she said.



Dr Hamish Dunn, chair of the Glaucoma Australia Expert Medical Advisory Panel, said detecting glaucoma in people before they lost their vision remains a significant challenge.

"We invite all people with glaucoma to bring their relatives, especially their siblings, to this free screening event. This clinic will utilise cutting edge portable technologies to assess your risk of glaucoma," he said.

"Although vision loss from glaucoma is currently irreversible, there have been significant advances in the science and management of glaucoma in recent years, resulting in an increasing capacity to stop it in its tracks."

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In this Issue

- Australia's first World Glaucoma Congress to host free risk screenings
- Glaucoma Australia Patient Symposium
- Indian doctors find meditation helps treat glaucoma
- Allergan supports Glaucoma Australia with 3-year sponsorship
- Australian tech could end need for daily eye drops
- Road to recovery: Eye drop use after eye surgery
- In The News: George & Matilda, IBM Collaborate on AI for Glaucoma
- Award winning apps help the visually impaired lead more independent lives

Welcome to 2019!

I hope you all enjoyed the holiday season and feel relaxed and refreshed for the year ahead.

Over the past 12 months Glaucoma Australia have worked diligently to strengthen our relationship with Optometry as this is the primary place of eye health testing. Considering 90% of vision loss is preventable or treatable, early detection and intervention is critical in our mission to eliminate glaucoma blindness. Optometry are now referring new glaucoma suspects to Glaucoma Australia enabling our educators to support patients when making their first Ophthalmology appointment and be there to answer questions when first diagnosed.

Over 2000 referrals were received in 2018 and we look forward to these referrals increasing exponentially over the year ahead.

World Glaucoma Week 10-16 March allows us to increase opportunities to promote our 'glaucoma runs in families' message which encourages people aged 40 and over to get their eyes tested every 2 years. Large scale public glaucoma screening events will also be carried out nationally by all of the peak optometry providers with risk awareness messages being shared with those 150,000 people currently unaware of their diagnosis.

On the 27th March Glaucoma Australia are thrilled to be hosting a free Patient Symposium during the 8th World Glaucoma Congress in Melbourne. This event attracts thousands of ophthalmologists from around the world and patients are invited to hear from world experts and bring their family members along for a free glaucoma risk screen.



Thank you for your ongoing support, we are extremely thankful for your collective contributions.

Annie Gibbins
CEO

8th World Glaucoma Congress 27 March 2019



You and your family are invited to the Glaucoma Australia Patient Symposium at the 8th World Glaucoma Congress in Melbourne. Proudly hosted by Glaucoma Australia and supported by the World Glaucoma Association.

DATE: Wednesday 27 March 2019
LOCATION: Melbourne Convention and Exhibition Centre (MCEC)
COST: FREE

8:30AM - 9:30AM Glaucoma Risk Screening Clinic
Family members are encouraged to attend a free glaucoma risk screening clinic utilising the latest mobile detection technologies.

9:45 AM - 10:45 AM Glaucoma Australia Patient Symposium
Delegates will hear from some of Australia's leading glaucoma specialists about the latest lab based glaucoma research and clinical advances as well as strategies for improved quality of life.
Speakers include:

- Opening address - Clin Prof Ivan Goldberg AM
- Lab based research - Clin A/Prof Paul Healey
- Clinical advances - Dr Simon Skalicky
- What having glaucoma means - A Patient Perspective
- Glaucoma Australia patient support - Mrs Annie Gibbins, CEO Glaucoma Australia
- Aids and apps to assist patients - Vision Australia
- What can you do to get involved - Mr Ron Spithill OAM, President Glaucoma Australia

Register Now! Visit www.glaucoma.org.au/events or call 1800 500 880

Indian doctors find meditation helps treat glaucoma

Meditation can help lower eye pressure in glaucoma sufferers, according to an Indian study claiming to have revealed the most comprehensive link between the two.

The All India Institute of Medical Sciences (AIIMS) and Integral Health Clinic study was recently published in the Journal of Glaucoma – the official journal of The World Glaucoma Association.

The condition is the leading cause of irreversible blindness in India, affecting more than 12 million people. Lowering intraocular pressure (IOP) is the only proven therapy through eye drops, laser therapy or surgery, but for many Indians these can be costly and cause side effects.

The study involved 90 glaucoma patients who were randomly divided into two groups, according to the Times of India.

While continuing to take glaucoma medication, one group performed meditation and breathing exercises (pranayama) for an hour each morning for 21 days under a trained yoga instructor. The second group continued their medication schedule without meditation.

After three weeks the researchers tested the meditation group and discovered a significant reduction in intraocular pressure, with mean pressure falling from 19 mmHg to 13 mmHg (25% IOP reduction seen in 75% patients).

There were also changes in gene expression that positively affected health of the retinal ganglion cells and

optic nerve, which would potentially protect the eye from future damage and blindness.

“This is the first study in the world which offers robust scientific evidence for lowering of eye pressure with meditation by targeting the brain and improving both the eye condition as well as general health of the patients,” AIIMS Department of Physiology professor-in-charge of Integral Health Clinic Dr Raj Kumar Yadav said.



Researchers found the patients who underwent meditation therapy also had major changes in stress hormones, seeing a decrease in cortisol and increase in beta-endorphins, leading to an improvement in wellbeing.

“We know that glaucoma patients have high levels of anxiety and stress as they suffer from a potentially blinding disorder. We also are aware of the fact that stress leads to elevation of blood pressure but seldom think about its impact on eye pressure,” Yadav said.

The researchers said this technique of meditation could be easily learnt and practised by all glaucoma sufferers, including elderly and bed-ridden patients, and can significantly alleviate the suffering of glaucoma patients and reduce the need for medicine. However, they stressed “patients must not stop using glaucoma medications and must regularly follow up and get their eye check-up done at least once a year by a qualified eye specialist.”

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Allergan supports Glaucoma Australia with 3-year sponsorship

Funds to go towards education, early detection and support services in glaucoma.

Allergan Australia and Glaucoma Australia are pleased to announce a platinum sponsorship agreement that represents funding support of AU\$300,000 for our charity over a three year period. The focus for the partnership will be on early detection and treatment adherence to help prevent irreversible blindness and

boosting education and support available to existing patients.

“As Platinum Partners, the significant support Allergan is providing will increase our capacity to provide a higher level of tailored education and support to patients referred to us. Together, we aim to save sight by improving early detection and treatment adherence,” said Annie Gibbins, CEO of Glaucoma Australia.



A clinical-stage Australian biotechnology company, PolyActiva, has recruited patients into its Phase I clinical trial for a new ocular implant that could improve the daily lives of millions of glaucoma patients.

PolyActiva has used its proprietary polymer prodrug technology to develop ocular implants that, when placed in the eye, provide sustained treatment over a six-month period, compared to current glaucoma treatment where patients often need to administer eye drops daily. The revolutionary technology could in the future mean millions of people with open-angle glaucoma no longer need to use daily eye drops.

The potential of removing the reliance on the patient to remember to use eye drops, and the associated difficulty in administering them from the paradigm of glaucoma treatment, is being heralded as major potential health breakthrough by ophthalmologists. Several studies have demonstrated that up to 46 percent of patients have been found not to remember to use their drops or administer them poorly¹. Failure to adhere to treatment can lead to faster progression of glaucoma, one of the most common causes of blindness.

“This product is designed to make the lives of glaucoma sufferers easier by removing the need for daily drop

administration and thus improving treatment management,” says PolyActiva CEO Dr Russell Tait. “The implant is designed to deliver treatment for six months after which it will disappear without further intervention. We’re excited about starting our first clinical study and look forward to seeing how our lead candidate performs.”

PolyActiva’s first clinical candidate is designed to provide a constant daily therapeutic dose of latanoprost free acid for at least 26 weeks, which is the active ingredient of a commonly prescribed glaucoma eye-drop (Xalatan®).

The clinical trial will assess the safety and tolerance of the implant when administered to glaucoma patients. The implant is also designed to biodegrade within 90 days after the treatment period and is capable of being administered in an ophthalmologist’s office under a slit-lamp using a custom-designed administration device. One of the lead investigators, renowned ophthalmologist and cataract surgeon, Dr Nathan Kerr says, “PolyActiva’s treatment approach offers significant potential benefits for patients, addressing adherence and improving treatment of this disease. The bespoke administration device is simple to use and intuitive to operate.”

The Phase I clinical trial is being conducted under the Therapeutic Goods Administration Clinical Trial Notification (CTN) scheme at the Royal Victorian Eye and Ear Hospital in Melbourne, Australia, through the Centre of Eye Research Australia (CERA). The Phase I clinical trial will see seven glaucoma patients enrolled to evaluate the safety and tolerability of its PA5108 ocular implant, with initial results expected in Q1 2019.

1. Laura E. Dreer, Christopher Girkin and Steven L. Mansberger. *Determinants of Medication Adherence to Topical Glaucoma Therapy. J Glaucoma. 2012 Apr; 21(4): 234–240.*



Written by Jan Howlett, Orthoptist Educator

Most people with glaucoma are able to manage their condition successfully with the use of eye drops, and at times laser treatment. However your ophthalmologist may recommend surgery if eye drops and laser have not had the desired effect.

Glaucoma surgical procedures include:

Minimally Invasive Glaucoma Surgery (MIGS)

- iStent Inject
- Hydrus
- Xen Gel Glaucoma Implant

Incisional Surgery

- Trabeculectomy
- Glaucoma Drainage Devices

ALL eye surgery no matter how minor or invasive, increases the risk of infection in the eye and can also cause swelling or inflammation at and around the site of the surgery. This is unrelated to the surgeon’s precision. All eye surgeries involve an incision or puncture entry point through which to operate and it is this entry point where a potential infection may occur.

Eye drops are therefore prescribed by the operating surgeon to help reduce the risk of infection and inflammation of the eye. These usually include:

- An antibiotic drop to fight the risk of infection.
- A drop to limit the degree of inflammation or swelling around the site of surgery.
- A drop to reduce the risk of elevated eye pressures post-operation may or may not be given. You may also be prescribed oral medications to reduce the eye pressure if needed.
- Lubricating eye drops to keep the eye comfortable post-surgery. Preservative-free versions of lubricating drops may cause less irritation.

Immediately after surgery is an important time for recovery. Following your surgeon’s instructions and post-op treatment regime is vital to ensure a successful recovery.

Important tips to remember:

1. Use ALL prescribed post-operative eye drops as indicated by your specialist in the post-operative instructions.
2. Do NOT instil drops that have already been opened into you newly operated eye as this increases the risk of infection.

So remember: Only instil eye drops from new unopened bottles into a newly operated eye from day one.

3. At your first post-op appointment with your specialist ALWAYS check whether:
 - a. You should continue using your usual glaucoma eye drops post-op? If so remember do NOT use the opened bottles.

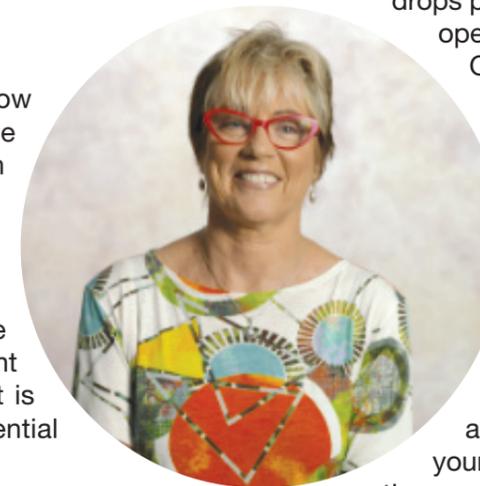
OR

- b. You should stop using your usual glaucoma eye drops until your next post-operative appointment with your specialist.

4. Always wash your hands before instilling your eye drops and NEVER touch the eye surface with the bottle tip. Use a clean tissue to wipe eyes and not a handkerchief.

5. Your first post-operative appointment time is usually indicated in your post-operative instructions. If this is not the case, ring your specialists practice immediately when you return home from surgery and organise one.

6. Take all your prescribed drops with you to every appointment.
7. Some steroid anti-inflammatory eye drops can increase the eye pressure. Your surgeon will prescribe eye drops that are safe for you.
8. Signs and symptoms to look out for and when to contact your surgeon:
 - a. Increased redness, pain or discharge of the eyes.
 - b. Blurry vision that is getting worse.
 - c. Headaches or feeling of pressure behind the eyes.
 - d. Increased burning, stinging or itchy eyes or skin around eyes with use of eye drops.
 - e. Any unexpected symptoms you experience.



In The News: George & Matilda, IBM Collaborate on AI for Glaucoma

George and Matilda Eyecare and IBM Research Australia will work together to determine how retinal fundus photos, optical coherence tomography (OCT) images, and AI algorithms can be used to inform and potentially help guide practitioners in detecting glaucoma.

According to the World Health Organisation, glaucoma is the leading cause of irreversible blindness worldwide. The profound visual loss and blindness caused by glaucoma is usually preventable with early detection, diagnosis and management. Despite available health care, 50 per cent of all patients with glaucoma are still undiagnosed, and many progress to profound blindness.¹

Retinal imaging, such as retinal fundus photography and OCT can help diagnose early signs of many sight threatening eye diseases and as such, are fast becoming essential tools to help clinicians diagnose and manage eye disease in eye care practices.

Using retinal photos and OCT images, IBM Research Australia scientists and George and Matilda Eyecare

optometrists will train and validate AI algorithms – such as deep learning neural networks – and use the resulting image analytics models to look at the relationship between several characteristics of the optic nerve in determining instances of glaucoma. Teams will aim to determine the correlation between glaucoma severity and higher eye pressure readings (intraocular pressure), higher cup to disc ratios, and the thinning and thickness of certain retinal layers (the retinal nerve fibre layer and ganglion cell layer).

In previously published work, scientists from IBM Research Australia were able to teach AI algorithms to detect the level of diabetic retinopathy² to a very high degree of accuracy from looking at retinal photos alone.³

References

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2. www.cera.org.au/wp-content/uploads/2015/11/OutOfSightReport.pdf
3. www.ibm.com/blogs/research/2017/04/spotting-diabetic-retinopathy/

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Award winning apps help the visually impaired lead more independent lives



The ViaOpta suite of apps developed by Novartis have been designed specifically for people living with low vision. The four featured apps are ViaOpta DAILY, ViaOpta NAV, ViaOpta SIM and ViaOpta HELLO.

ViaOpta DAILY is designed as a personal assistant to help people with low vision with their everyday activities.

ViaOpta NAV offers an experience that can be life changing if you are living with low vision by helping you to increase your mobility and regain independence.

ViaOpta SIMULATOR has been designed specifically for patients, health care professionals and caretakers. The app provides a first person look at what it is like to live with visual impairment.

ViaOpta HELLO is a facial recognition app that uses the camera on a smartphone or tablet to help blind and visually impaired people identify objects and people.

The apps are available for free download from Apple iOS and Android (Google Play) stores on your mobile devices.

ViaOpta apps have won prestigious awards for the ways they are helping the visually impaired lead more independent lives.

Volunteer Corner

Glaucoma Australia is fortunate to have the support of a wonderful group of dedicated volunteers. Every Christmas we have a special lunch to say thank you.



Many Thanks

Many thanks to the companies, clubs and organisations who provided financial and other support to Glaucoma Australia:

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- Marcus Quinlivan OAM

Gold

- Carr Family Trust

Silver

- Novartis

Bronze

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- Orthoptics Australia
- RANZCO
- Vision Australia
- Vision 2020 Australia

In Memorium

We acknowledge with gratitude gifts, from family and friends, in loving memory of Manuel Xenikakis

Bequests

The estate of the Late Barbara Joy Chappell
 The estate of the Late John Clifford Baker
 The estate of the Late Margarita Grunberg
 The estate of the Late Beryl Floyd

Questions and Answers

Dr Simon Skalicky is a Glaucoma and Cataract Specialist based in Melbourne. He works in private practice at Eye Surgery Associates, Melbourne, as well as at the Royal Victorian Eye and Ear Hospital and Royal Melbourne Hospitals. Dr Skalicky is a Clinical Senior Lecturer at the Universities of Sydney and Melbourne, and a Councillor and Chair of the Ophthalmology Liaison Committee for Glaucoma Australia. He is an Editorial Board member for the Journal of Glaucoma, and an Associate Advisory Board and Scientific Committee member for the World Glaucoma Association.

Q. What do my eye drops actually do?

A. Eye drops used in the treatment of glaucoma work by reducing the intraocular pressure (IOP) within your eyes. There are several classes of drops, which have different mechanisms of action. Prostaglandins, such as latanoprost, travoprost and bimatoprost reduce IOP by increasing drainage outflow from the eye. Other drop classes reduce the formation of fluid within the eye – such as beta blockers (eg timolol), alpha agonists (eg brimonidine, apraclonidine) and carbonic anhydrase inhibitors (eg dorzolamide, brinzolamide).

Q. I was told to use my eye drops every day and to make sure I did it at the same time each day. Why is that important?

A. The eye drops only work when they are being used – if you stop using them the eye pressure will increase again. Hence it is important to use them every day, otherwise the IOP will fluctuate. There is some evidence to suggest that fluctuations in IOP may be as harmful to the optic nerve as high IOP.

Using the drops at the same time each day prevents day-to-day fluctuations in 24 hour IOP pattern, however is not as important as using the drops every day. Getting into a fixed daily routine generally helps patients to remember to use the drops each day. If, on the occasional day, you are a little late with using the drops, it is better to use the drops late than not at all.

Q. Why are there different preservatives in my eye drops and in some cases none at all?

A. Eye drops used in the treatment of glaucoma typically come in bottles that last approximately 1 month and are then discarded. Preservatives in the solutions are important in preventing bacteria building up in the bottles after opening. The most common preservative, benzalkonium chloride, is very good at preventing bacterial growth, but can be harmful to the surface of the eye. Hence in recent years some eye drops have been formulated with other, potentially gentler preservatives

that seem to be just as effective at preventing bacterial growth. Still other eye drops have been formulated with no preservatives at all – these may be the gentlest form of glaucoma drops and may be suitable for sore, irritated eyes. The preservative-free eye drops are designed for single usage – they come in very small, clear plastic dispensers designed to be discarded after each drop administration – hence are only ever used on opening, when the solution is still sterile.

Q. The information says to discard my eye drop bottle 28 days after opening. I always have some left, why can't I keep using it until it is empty?

A. On average, the preservatives in bottles of glaucoma medications are designed to safely prevent bacterial growth for 28 days. Hence using the bottle longer than is recommended by the manufacturer can potentially lead to solution degradation, less effective active ingredients and dangerous build-up of bacteria that can lead to infection of the surface of the eye.

Q. I use a product that comes in single use containers. Do I have to throw it out after one use if it holds more than I need for the day?

A. Single use containers generally have preservative free medication formulations within them. These are designed to be used once and then immediately discarded. If kept for a period after being opened, bacteria and other harmful micro-organisms could potentially grow in the solutions to dangerous levels. If reused after this period the micro-organisms in the solution could lead to a harmful infection of the surface of the eye.

Q. Do I need to keep my drops cool?

A. It is recommended to store eye drops refrigerated before opening the bottle. Once opened, the bottle can be kept at or below 25 degrees (room temperature), ensuring it is out of direct sunlight and not in a hot environment for prolonged periods, to avoid medication degradation.

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If you have a question for one of our educators please call 1800 500 880 or email glaucoma@glaucoma.org.au.