



## Revolutionary new treatment could stop AMD progression

IN A WORLD FIRST, CERA RESEARCHERS ARE TRIALLING A NOVEL LASER THERAPY AIMED AT STOPPING THE PROGRESSION OF THE SIGHT THREATENING DISEASE, AGE-RELATED MACULAR DEGENERATION (AMD).



Head of Macular Research Professor Robyn Guymer said that unlike existing AMD treatments, the laser therapy targets the disease in its early stages, before sight is lost.

“The results have been very promising. In most of the 14 patients who’ve received the treatment we’ve seen signs of improvement in the degenerative state of their retina,” Professor Guymer said.

“What has been quite unexpected in the trials so far is that the treatment is arresting progression not only in the treated eye but, intriguingly, in the other eye as well,” she said.

The treatment involves a specially designed novel laser device that delivers a controlled nanosecond dose of laser energy into the eye.

According to Professor Guymer, the application of laser therapy to the affected eye can eliminate

the yellow deposits, known as ‘drusen,’ which are present in the retinal tissue of people with AMD. In eliminating the drusen, researchers aim to reverse the degenerative process caused by AMD.

**“IF SUCCESSFUL, THE LASER THERAPY WILL BE A MAJOR BREAKTHROUGH IN AMD TREATMENT AND WILL BENEFIT MILLIONS OF PEOPLE WORLD-WIDE”.**

Former opera singer and AMD patient June Sloane (pictured) is one of the first patients to receive the treatment.

June is considered at high risk of losing her vision to AMD because of a family history of the disease and the presence of drusen in her retinal tissue.

Encouraged by the preliminary results of the trial, June is hopeful the treatment will halt the progression of her AMD and her sight will remain intact.

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### Revolutionary new treatment could stop AMD progression continued

“When I was diagnosed with AMD I was already well aware of the devastating impact it can have on a person’s vision,” June said.

“My older sister was diagnosed with dry AMD, which very rapidly developed into the wet form of the disease. Her vision deteriorated quickly. She is now almost blind and living in a residential care facility”.

“My sight is just so valuable. If this procedure stops the disease from progressing I shall be eternally grateful”.

Fifteen per cent of people over 50, or half a million Australians, live with the early stages of AMD.

The study will involve 50 patients with early AMD. The trial is being conducted in partnership with

Ellex Research & Development Pty Ltd and the Royal Victorian Eye and Ear Hospital.

The Victorian Government recently awarded CERA a grant program under Victoria’s Science Agenda to conduct the clinical trial.

## Consortium to address sight crisis in the Asia Pacific

AROUND 100 MILLION PEOPLE IN THE ASIA PACIFIC REGION ARE BLIND OR SUFFER FROM POOR VISION AND IT’S ESTIMATED THAT IN 80 PER CENT OF THESE CASES, VISION LOSS IS PREVENTABLE.



Courtesy of International Centre for Eyecare Education  
Photography: eegends

To address the crisis, CERA has united with eight Australian eye health organisations to form the Vision 2020 Australia Global Consortium.

Head of CERA’s Population Health Unit Professor Jill Keeffe said that in developing countries, blindness is a common problem in all age groups, not just the elderly.

**“EACH YEAR AROUND HALF A MILLION CHILDREN LIVING IN DEVELOPING COUNTRIES BECOME BLIND. TRAGICALLY, ABOUT 60 PER CENT OF THESE CHILDREN WILL DIE WITHIN A YEAR OF LOSING THEIR SIGHT,”**

Professor Keeffe said the Consortium’s key goal – to eliminate avoidable blindness in the region within ten years – is an ambitious but achievable one.

“The group is made up of outstanding eye health organisations and each will play a different role in the delivery of eye health and vision care programs to the region,” Professor Keeffe said

“CERA will investigate the epidemiology of vision loss and blindness, evaluate the success of each project,

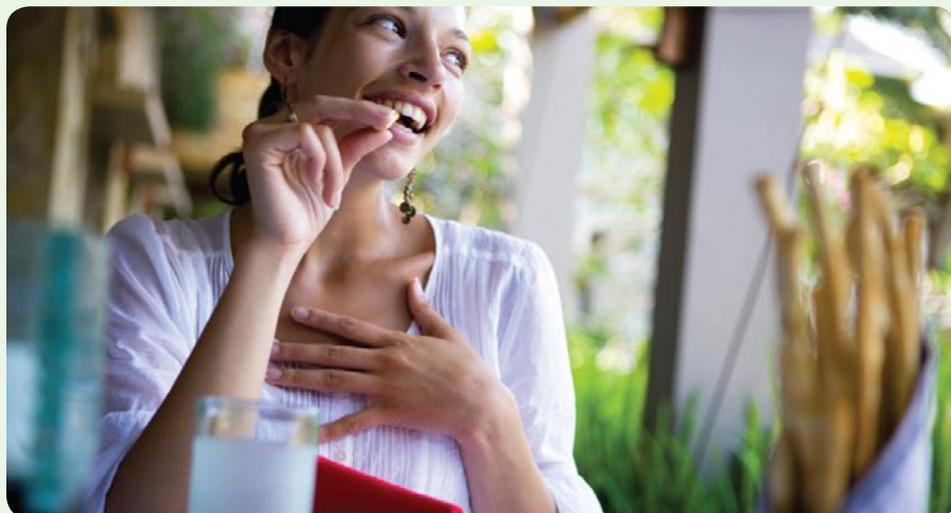
and conduct education and training in countries like Vietnam, Cambodia and the Solomon Islands”.

The Consortium, to be coordinated by Vision 2020 Australia, was formed as part of the Australian Government’s \$45 million dollar commitment towards the prevention of blindness in South East Asia and the Pacific.

Consortium member organisations include CERA, CBM Australia, Foresight, International Centre for Eyecare Education, Royal Australasian College of Surgeons, Royal Institute for Deaf and Blind Children, Fred Hollows Foundation, Royal Australian and New Zealand College of Ophthalmologists (RANZCO) and Vision Australia

For more information on the Vision 2020 Australia Global Consortium visit [www.cera.org.au](http://www.cera.org.au)

# The link between diet and sight



## **PARENTS HAVE LONG TOLD CHILDREN THAT EATING CARROTS WILL HELP THEM TO SEE IN THE DARK. BUT IS THERE ANY TRUTH TO THIS CLAIM AND CAN OUR DIET REALLY AFFECT THE HEALTH OF OUR EYES?**

According to CERA Managing Director Professor Jonathan Crowston, the answer is yes.

“While the jury is still out on carrots, research indicates that diet does play an important role in the prevention of some common eye diseases,” Professor Crowston said.

### **Help prevent diabetes**

Diabetic retinopathy, a complication of diabetes, is the most common cause of blindness in people under the age of 60.

According to Professor Crowston, lifestyle modifications are extremely effective at reducing the risk of developing diabetes.

“Maintaining a healthy weight and keeping blood pressure levels within an acceptable range will significantly decrease your chance of developing the disease”.

For people with diabetes, Professor Crowston recommends an eye test every two years.

“The good news is that vision loss and blindness from diabetic retinopathy can be prevented through proper control of blood glucose levels and blood pressure”

### **Cut back on red meat**

One in seven people over the age of 50 are affected by age-related macular degeneration (AMD).

## **WHILE THERE IS NO CURE FOR AMD, A HEALTHY DIET CAN HELP DELAY THE ONSET OF THE DISEASE.**

“A CERA study showed that people who eat red meat more than ten times a week are nearly 50 per cent more likely to develop AMD than those who eat it less than five times a week,” Professor Crowston said.

“This doesn’t mean that people should eliminate red meat from their diet. The key to a healthy diet is simple – everything in moderation.”

### **The facts on fats**

Studies show that foods high in omega-3 fatty acids such as nuts, olive oil and fish may help to prevent AMD.

“A study conducted by the University of Sydney found that people who ate one serving of fish per week and one to two servings of nuts significantly reduced their risk of AMD,” Professor Crowston said.

There is also evidence to suggest that people who consume a diet high in trans fat – commonly found in margarine, baked goods and fast food – increase their risk of developing advanced AMD.

### **Veg out**

A major US study found that a diet high in vitamins and antioxidants can help prevent AMD.

“The antioxidants, lutein and zeaxanthin, are found in high levels in a healthy macula and people who have high levels of these antioxidants in their blood have less chance of developing AMD than those with low levels,” Professor Crowston said.

Foods rich in these antioxidants include dark leafy green vegetables, beans, parsley, capsicum, tomatoes and sweet potatoes.

Another US study found that eating certain fruits and vegetables, including green collards, kale, carrots and peaches, are associated with a decreased risk of glaucoma.



# World first improves glaucoma diagnosis online



HALF OF ALL PEOPLE WITH GLAUCOMA ARE UNDIAGNOSED, DESPITE 50 PER CENT OF THESE CASES HAVING HAD AN EYE TEST IN THE PAST YEAR.

CERA researchers hope to change this with the world's first interactive online training program aimed at improving glaucoma detection rates.

Glaucoma destroys vision gradually, often with no symptoms or warning. If detected early, the progression of the disease can be slowed with treatment.

Head of CERA's Glaucoma Research Unit Professor Jonathan Crowston said the project tests the optic disc assessment skills of eye health practitioners and highlights the subtle characteristics of glaucoma that are easily missed in routine eye exams.

"Understanding common problems in glaucoma assessment will help us develop better training programs, this will give eye health professionals greater confidence to diagnose glaucoma and refer patients to ophthalmologists," Professor Crowston said.

In the GONE project, eye care professionals are asked to look at 42 online photos of the optic disc in the eye and assess each photo based on nine characteristics and determine the likelihood of Glaucoma. Users are then provided with advice on how to improve their assessment skills.

The study is being conducted in partnership with the Royal Victorian Eye and Ear Hospital. More than 1,200 eye care professionals have registered to participate in the study.

**"IMPROVING DIAGNOSIS RATES WILL ALLOW PATIENTS TO SEEK TREATMENT SOONER AND SIGNIFICANTLY REDUCE THE RATE OF PREVENTABLE VISION LOSS CAUSED BY THE DISEASE".**



## Call for glaucoma patients to join research study

CERA RESEARCHERS ARE SEEKING TO RECRUIT PATIENTS TO A NEW STUDY INTO THE EFFECT GLAUCOMA HAS ON THE BRAIN'S ABILITY TO PROCESS VISION.

The area of the brain dedicated to transmitting visual information from the retina to the brain is known as the visual pathway.

Study Coordinator Heather Connor said researchers will compare the structure and function of the visual pathway in glaucoma patients to that of people with healthy eyesight.

"In analysing the control group we aim to develop an anatomical model of a healthy visual pathway. By determining the differences between the model and the eye of a glaucoma patient, we hope to identify markers for the disease," Ms Connor said.

**"UNDERSTANDING THE LONG-TERM EFFECTS OF GLAUCOMA ON PEOPLE'S VISION AND THE STRUCTURES IN THE BRAIN RESPONSIBLE FOR THAT VISION WILL HELP US IMPROVE THE WAY WE DETECT, MONITOR AND MANAGE THE DISEASE."**

Ms Connor and her team aim to recruit 100 glaucoma patients and 100 people without eye disease to participate in the study.

Study participants will undergo a comprehensive eye examination at the Royal Victorian Eye and Ear Hospital. They will also receive a magnetic resonance imaging (MRI) scan of the head to provide researchers with pictures of the brain's structure and function.

The study is being conducted in partnership with the Brain Research Institute, the Eye and Ear Hospital and the National Vision Research Institute.

For more information or to join the study please contact Heather Connor on 0403 449 909 or [h.connor@pgrad.unimelb.edu.au](mailto:h.connor@pgrad.unimelb.edu.au).