



RBIT

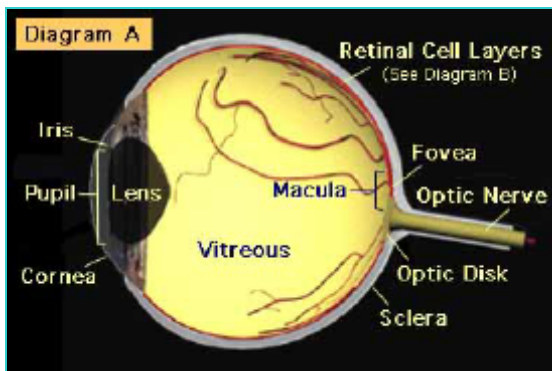
Australian Ophthalmic Nurses Association, Vic Branch

“The Victorian Branch of the Australian Ophthalmic Nurses Association aims to provide and communicate current information from a variety of clinical aspects, including nursing, medical, and allied health professionals.”



RETINAL IMPLANT & TRANSPLANTS

Researchers have been testing microelectronic retinal implants as a method of restoring vision in patients rendered blind by degenerative diseases of the retina such as retinitis pigmentosa and macular degeneration. Tests of electrical stimulation of the retinal surface have demonstrated that such stimulation may induce light sensation. These studies have shown that retinal neurons are preserved after death of photoreceptors in retinitis pigmentosa.



KEY EVENTS FOR 2006

- AONAVIC Conference 7th October
- International Ophthalmic Nurses Conference 7th -8th April, London
- Ophthalmic Nurses Conference, 5th -7th May Auckland, NZ
- AONA NSW June 2006
- AONA Qld August 2006

DHA and the Retina

During gestation our eyes (retina) and

brain accumulate a special omega-3 oil called docosahexaenoic acid (DHA). Preterm babies accumulate less DHA because of their short gestation. The amount of DHA preterm babies receive in breast milk and formula is lower than what they would have received had they been carried the full 9-month gestation period. We wondered if preterm infants vision would improve if they received more DHA. [Cont't pg3](#)

WHAT IS AN ALLERGIC REACTION?

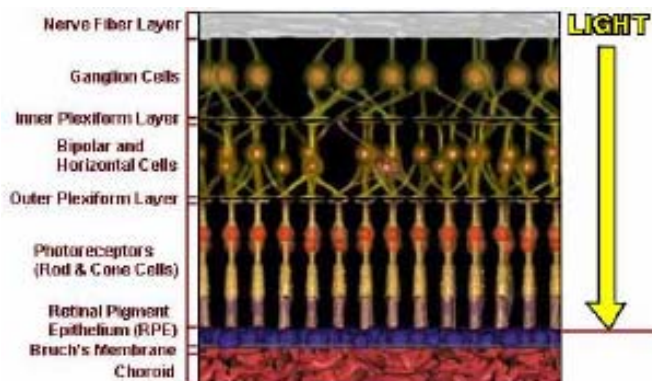
A hypersensitive response, or allergic “reaction,” is the result of how three factors interact with the body: [cont p4](#)

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Retinal Transplants, Retinal Implants cont

Two types of retinal implant systems are under development: (i) *epi-retinal implants*, designed to communicate directly with the ganglion and bipolar cells; and (ii) *sub-retinal implants*, designed to replace photoreceptors in the retina. Both types of implants are intended to restore some vision through electrical stimulation of functional neurons in the retina. Retinal implants require an intact optic nerve pathway to allow them to function. Both systems translate incoming light, whether from a camera or the environment, to electrical stimulation of the functional neurons in the retina.



Epi-retinal implants are positioned on the surface of the retina and receive light signals from external camera systems. An electronic chip camera mounted in the frame of special glasses captures images and transmits the images via electrical impulses to a second chip, which is implanted in the retina. Epi-retinal implant systems may include other components such as image processing electronics, a telemetry system to provide power and data to the implanted subsystems, implanted electronics for signal decoding and stimulus generation, and an electrode array to deliver the electrical charge to the retina.

Sub-retinal implants are positioned behind the retina and receive light directly from the environment. In this approach, light is converted into electrical signals that stimulate remnant cell layers of the retina.

<http://www.aetna.com/cpb/data/CPBA0713.html>

What is a retinal transplant?

A retinal transplant is a graft of "good" retinal tissue onto a non-working retina. The retinal transplant tissue might originate from another human, perhaps just deceased, or an aborted

fetus. Less likely origins of the tissue to be transplanted are human retina tissue which has proliferated in culture; or retina tissue from another animal species.

In order for a retinal transplant to work, several technologies, which do not yet exist have to be developed:

1. The cells in the transplant must stay alive long time, preferably for the life of the recipient.
2. Those cells must have, and maintain, the light-sensing activities of normal, healthy retina cells.
3. Those cells must transmit electric or electrochemical signals to the brain, which the brain can interpret as the experience of vision.

Research, both clinical and theoretical, is continuing into all of these areas.

http://www.avclinic.com/treatment_options_for_armd.htm

DHA and the Retina cont

To investigate this further, we conducted a trial that compared the development of vision in two groups of preterm infants. The first (control) group received the amount of DHA usually present in breast milk and infant formula. The second group (treatment group) received an increased amount of DHA; similar to what they would have received during gestation. Our trial is unique as it included breast-fed and formula fed infants. The amount of DHA in breast milk was increased by supplementing breastfeeding mothers with capsules containing DHA. The formula content was adjusted by adding oil, as it was prepared. Infants received their special milk diets from a few days after birth through to the date they would have reached their expected birth date. At 2 and 4 months of age their vision was tested.

We were successful in increasing the level of DHA in breast milk and infants blood of the treatment group. Vision was measured in 124 infants at 2 months and 127 infants at 4 months and we found differences in vision at 2 and 4 months of age.

http://www.health.adelaide.edu.au/yia2005/abstracts/entrant_ls.html

WHAT IS AN ALLERGIC REACTION?^{cont}

1. **The allergen** — Allergens include pollen, mold, dust mites, certain foods, latex, animal dander, and others.
2. **Mast cells** — Although mast cells are found throughout the body, most reside in connective tissues such as those of the skin, tongue, the lining of the nose and intestinal tract, the lungs, and upper airways.
3. **Immunoglobulin E (IgE)** — IgE is an allergy antibody, a type of protein made by the immune system to recognize and fight specific body "invaders." IgE coats the surface of the mast cells in tissues.

The first time an allergy-prone person is exposed to an allergen (such as pollen), large amounts of the corresponding IgE antibodies (for example, pollen IgE antibodies) are produced. The IgE antibodies cause the mast cells to release inflammatory chemicals that cause swelling of tissues, as well as histamine and several other chemicals that cause itching, engorgement of blood vessels, increased secretions, and bronchospasm muscles that. Some of these chemicals attract white blood cells known as eosinophils. The eosinophils add more inflammatory chemicals.

If the allergen is in the air, the allergic reaction will occur in the eyes, nose and lungs. If the allergen is ingested, the allergic reaction will occur in the mouth, stomach, and intestines. Sometimes enough inflammatory chemicals are released to cause a reaction throughout the body, such as hives, decreased blood pressure, shock, or loss of consciousness. This severe type of reaction is called anaphylaxis and may be life-threatening.

<http://www.nlm.nih.gov/medlineplus/allergy.html>

TREATMENTS

Antihistamine eye drops, such as azelastine (Optivar), ketotifen (Zaditor), or olopatadine (Patanol), are used to relieve symptoms like itchy or watery eyes. Other eye drops containing anti-inflammatory agents, such as ketorolac (Acular), or corticosteroid eye drops, such as loteprednol (Alrex, Lotemax) may also decrease swelling and irritation. Non-prescription eye drops that are used for allergies and hay fever are also available. These eye drops contain decongestants (phenylephrine, naphazoline, or tetrahydrozoline) and/or antihistamines (pheniramine or antazoline). Some examples include Clear Eyes ACR, Naphcon-A, Visine Allergy Relief, Opcon-A.

<http://www.emedicinehealth.com/articles/74832-9.asp>

INTERNATIONAL CONFERENCES

Ophthalmic Nurses Conference "The Reality of Clinical Practice"

Auckland, New Zealand

5th – 7th May 2006

in conjunction with RANZCO

Contact:

Carol Slight – cslight@adhb.govt.nz

Adrienne Strickland –

astrickland@adhb.govt.nz

Registration fee \$nz400 Early bird – 31.03.06

\$nz475 Late registration – after 31.03.06

includes:

registration, conference materials, lunch, refreshments, combined conference dinner.

Convener: The Conference Company

Ph. 09 360 1240, email: ranzco@tcc.co.nz

www.tcc.co.nz/ranzco/nzbranch

International Ophthalmic Nurses Association

"Celebrating Ophthalmic Nursing"

Golden jubilee meeting

7th – 8th April 2006

London,

Contact:

Christine Barlow – cabarlow@blueyonder.co.uk

Post Registration Nursing Course in Ophthalmology 2006

"Fundamental Aspects of Ophthalmology for Nurses"

Sydney Eye Hospital, commencing July 2006

Contact cheryl.moore@sesiahs.health.nsw.gov.au

ph. 02 9382 7409

Thank You to the RVEEH for their continued support
for the newsletter

From the President.....

Well the committee is busy preparing for our **conference this year on the 7th October.** Plans are underway for some exciting events on the day, venues being viewed, technical facilities being worked out, reviewing your comments from last conference. A flyer will be available shortly with a call for abstracts. Any members who have some spare time would be most welcomed by the committee – even if just for the conference. We have fun as well as getting things organised. Many of the committee are so expert at doing this I am sure we could start a new career in event organising.....all in all a team of multi-talented people !!!!!!!

We also have lots of **networking** planned between branches to give you the latest information from all over Australia. I am travelling to the NZ conference in May to link up with ophthalmic colleagues there and will have some news and updates on the developments in other states and across the Tasman, more information on the BLONDE educational grant program and other issues that are occurring nationally.

If you have checked out **our website** of late you will have noticed that it has not been updated for a while. We have been working on a new website and in the next few weeks our new site should be up and running with lots of information on news & events, professional development, news items, employment opportunities plus links to other organisations and AONA branches. As I write this it is in the final stages & will go to the committee for final approval at the next meeting prior to going live. So sorry for the lapse in the website over the last little while but it will be back on line again soon better than ever. Many thanks to Pat for her creative expertise, for the pictures and working with website design personnel from RMIT.

I hope you enjoy our new look newsletter and website and continue to notify us of events of interest. Please feel free to contact any of our committee and any offers of assistance would greatly be appreciated.

Look forward to seeing you at **your conference** on **7th October in Melbourne.**
Mark your diaries

In the meantime enjoy the Commonwealth games, keep up the good work and remember the association is what you make it.

Pam Armstrong

President
AONA.(Victorian branch)

www.aonavic.com.au

coming soon

Links to :

- Education – courses, pharmacy sites
- Calendar of events – conferences and meetings
- Interstate and International Ophthalmic groups
- Professional opportunities – if you have any vacancies contact us for free advertising on the website

Contact pat.usher@eyeandear.org.au

Employment Opportunity

Associate Nurse Unit Manager (YU4)

**An opportunity exists in our
Outpatients Department
for a self-motivated registered nurse with
aspirations to move into a management role**

The Eye and Ear Hospital recognizes the key criteria for high performing staff are ambition and commitment. Therefore, while Ophthalmic & ENT experience would be an advantage, it is not essential as training and support will be provided to the appointed ANUM to ensure a successful transition into the role.

Major key to your success will be your ability to effectively work within a supportive team that cares for over 120,000 patients per year.

Position description & application details available at www.eyeandear.org.au, or phone Georgette Georges on 9929 8443 to further discuss the role.

Applications to jobs@eyeandear.org.au
close Friday 24th March