

[Recently@Retina](#) is a monthly electronic newsletter with updates about the latest news at the Retina Foundation of the Southwest. We aim to keep you informed of our efforts to meet our ongoing mission, preventing and restoring vision loss through innovative research and treatment. [Haga clic aquí para ver en español.](#)

## “SECOND SIGHT” FOR RP

**PATIENTS** The Retina Foundation of the Southwest is participating in a multi-center clinical trial of the Argus II Retinal Prosthesis System, produced by Second Sight® Medical Products. The implant is designed to provide a low level simulation of vision for patients with retinitis pigmentosa. All participants in the Argus II clinical trial are completely blind due to advanced progression of the disease. Yet, earlier studies of the device’s predecessor (Argus™ 16) prove that patients using the prosthesis are able to detect when lights are on or off, describe an object’s motion, count discreet items, as well as locate and differentiate basic objects. The Argus II is the highest electrode count for such a device anywhere in the world.



After having the prosthesis implanted over 18 months ago, Larry Hanson, a pioneering patient in the Argus II study, has since seen “trees, buildings, whitecaps on the water, icebergs, glaciers, Mount McKinley, fireworks on the Fourth of July, and Christmas lights. For him, total blindness may be a condition of his past as he moves forward with a new “view” on the future. [Read more](#) about Hanson’s story on our website. Learn more about the device’s complex system at [www.2-sight.com](http://www.2-sight.com).

## PEDIATRIC LAB GOES THE “DISTANCE”

The researchers in the Morchower Pediatric Eye Research Lab at the Retina Foundation of the Southwest are passionately committed to improving treatment options for patients. Yet, they have learned that there is a strong need to monitor a patient’s condition to determine how soon and if treatment is necessary.

[Strabismus](#), a misalignment of the eyes that is often referred to as crossed eyes, has been a focus for the Pediatric lab for many years; and they have recently developed a more effective and inexpensive tool to monitor strabismus in patients, particularly in children as young as four years of age. The test is called

the **Distance Randot Test**<sup>®</sup>. The Test is particularly important because there are no other tests available to monitor distance stereoacuity in exotropic patients, which is critical for recommending treatment on an individual case basis. Stereo tests are used to measure a patient's depth perception. If tested at a distance, researchers believe the new Test can be used to monitor certain forms of strabismus more sensitively due to the high occurrence of misalignment when the patient looks at a distant object. Our researchers hope the newest version of the Distance Randot Test will make it possible for our research studies to expand to multiple testing sites.



*Esotropia*



*Exotropia*

“We wanted to develop an inexpensive, book format distance stereoacuity test that could be used with children as young as 3 years of age,” said Dr. Eileen Birch, Director of the Pediatric Lab. “This will allow us the opportunity to conduct multi-center studies of the natural history of intermittent exotropia and of treatments for this condition.” [Click here](#) to learn more about the Distance Randot test and how it works.

**2010 RACING FOR SIGHT CHAIRS SELECTED** Deacon and Lynne Marek will be chairing the 13<sup>th</sup> Annual Racing for Sight in 2010. Deacon is a current member of the Retina Foundation’s Board of Directors. He and Lynne have been long-time supporters of the Foundation and passionately committed to our cause. They supported the 2008 and 2009 Racing for Sight as “*Show*” Sponsors and look forward to serving in a new role for the upcoming year. “After our successes over the last few years, Deacon and Lynne have a real challenge ahead of them, but from what I know we are in very good hands,” said Dr. David Birch, RFSW Chief Scientific Officer.

**EYESIGHT HIGHLIGHT:** The Retina Foundation is making a tremendous effort to discover ways to treat retinitis pigmentosa. Read about this rare eye disorder and what our researchers are doing now.

## Retinitis Pigmentosa

<b>RETINITIS PIGMENTOSA</b>	
<b>DESCRIPTION</b>	Retinitis pigmentosa (RP) is a group of inherited retinal disorders characterized by gradual death of vital photoreceptor cells responsible for sight.

<b>WHO IS AFFECTED?</b>	It is estimated that approximately 100,000 people in the U.S. have RP and it is usually diagnosed in adolescents and young adults.
<b>RISK FACTORS</b>	RP is almost always an inherited disease. Therefore, a defective gene passed down from one or both parents is known to be the leading cause of this form of retinal degeneration.
<b>SYMPTOMS</b>	Patients typically experience a loss in peripheral and night vision first due to the gradual loss of rod cells. Eventually, their central vision and perception of color is affected due to the loss of cone cells in the macula that is located in the center of the retina. Ultimately, the progressive death of these cells leads to blindness later in life.
<b>TREATMENT</b>	There is no known cure for RP. Studies show that one “treatment” is nutritional supplementation with vitamin A palmitate. It is important to note that vitamin A palmitate will not cure RP and doses higher than 25,000 IU per day may be toxic and can cause liver disease. Patients may also undergo low vision rehabilitation through the use of various low vision aids to maximize the use of their remaining vision.

*\* Any products and/or services mentioned in Recently@Retina are presented as a source of information and should not be misinterpreted as a recommendation of the Foundation.*

#### Current RFSW Research Studies on Retinitis Pigmentosa:

- **CNTF Neuroprotection Study:** In the study, all patients received an implant—either a high or low dose in one eye and a sham treatment in the control eye. After 12 months, the implant produced a significant increase in retinal thickness relative to the amount of dose received. It is the researchers’ hope that the biologic effect observed in this study will slow down the disease in the treated eye or even produce improvement as time progresses. [Click here](#) to view full report.
  
- **Retinal Prosthesis Study:** The Retina Foundation of the Southwest is conducting a clinical trial of the Argus II Retinal Prosthesis, designed and manufactured by Second Sight Medical Products. The device consists of a

tiny camera and transmitter mounted in sunglasses, an implanted receiver, and an electrode-studded array that is secured to the back of the eye. Images are captured by a camera on the glasses and transmitted to the brain through a very complex processing system to allow the brain to perceive patterns of light corresponding to the captured images. RFSW has a few “pioneering” patients who are monitored weekly in this very early stage of the trial. [Click here](#) to learn more.

- **DHA Study:** Researchers at the Retina Foundation are conducting a Phase II Clinical Trial to investigate the effectiveness and safety of high dose docosahexaenoic acid (DHA) in early-stage X-linked retinitis pigmentosa. This trial is a collaborative venture between Retina Foundation researchers and retinal specialists at Texas Retina Associates. The project is funded, in part by the U.S. Food and Drug Administration, Martek Biosciences, and the Foundation Fighting Blindness. [Click here](#) to read more.



*Racing for Sight Photo – normal vision  
View with Retinitis Pigmentosa.*



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