What is Glaucoma?

Glaucoma is an eye disease that causes an increase of pressure in the eye, which leads to optic nerve damage, resulting in gradual loss of peripheral vision. There are several types of glaucoma, but the most common, open-angle glaucoma, does not cause any pain or symptoms. For this reason, glaucoma is known as the sneak thief of sight as often the disease has progressed quite far before it is diagnosed.

Glaucoma can affect anyone, so it’s important to be screened regularly by your eye care provider. There are a number of risk factors that can increase your chances of developing glaucoma such as:

- If you have a family history of glaucoma
- If you are African American or Latino
- If you are over the age of 45
- If you are a smoker
- You have diabetes
- You have suffered a previous traumatic eye injury

**FAST FACTS**

- Glaucoma is not curable but must be managed with eye drops and/or surgery to control eye pressure.
- Glaucoma is the second leading cause of blindness in the world.
- It is estimated that over 2.2 million Americans have glaucoma but only half of those know they have it.
- In terms of Social Security benefits, lost income tax revenues and health care expenditures, the cost to the United States government for glaucoma is estimated to be over $1.5 billion annually.
OUR MISSION: TO GIVE PEOPLE BACK THE USE OF THEIR EYES

Glaucoma Vision Simulator & Early Detection

Happenings

GOLF OUTING
June 4, 2013
Cornea Classic Golf Outing—Please mark your calendar! Call us now at 317-814-2993 to ensure you receive the brochure when it’s printed. Many levels of sponsorship opportunities available!

LUNCHEON
September 16, 2013
The date for the 2013 luncheon has already been reserved at The Sanctuary in Zionsville! Please mark your calendars! Nancy Noel (www.nanoel.com) will serve as honorary chair. If you would like to be contacted when we gather the planning committee, please let us know!

OPTOMETRIST SEMINAR
November 9, 2013
The Focus on Education seminar will be held at the Ritz Charles in Carmel, Indiana. Offering 7 hours of CE to attending optometrists while hearing from contemporary experts on today’s topics.

Foundation Staff

Executive Director
Marianne O. Price, Ph.D.

Development Director
Jessica Dingley

Research Coordinators
Clorissa Quillin
Kelly Fairchild
Lauren Gunderson
Jalee Miller

Normal Vision

Vision with Glaucoma

The two images above depict what your vision would look like with glaucoma. In order to prevent vision loss from occurring, early detection is key. This is why it is important to schedule regular visits with your eye care provider to be screened. There are several ways to detect glaucoma during an eye exam. Encourage your friends and family to be screened, too!

Visual Field Test—during this test, patients click a remote when they see a light flicker in different areas of their vision. This helps determine if there has been any loss of peripheral (side) vision.

Dilated Eye Exam—this will allow your eye doctor to see if there has been damage to your optic nerve, an indicator of glaucoma.

Tonometry—this test gauges your intraocular pressure to ensure it’s at a safe level like making sure your tires are not over-inflated.

Welcome Dr. Sunita Chaurasia!

The Foundation is pleased to welcome Dr. Sunita Chaurasia for a one year research fellowship sponsored by her institution, the L. V. Prasad Eye Institute in Hyderabad, India.

Dr. Chaurasia will assist with data collection and analysis of our cornea transplant outcomes. She will also help analyze and report our corneal crosslinking outcomes in keratoconus patients.

Dr. Chaurasia looks forward to sharing her knowledge of how challenging eye problems are treated in India and to learning advanced surgical techniques from Dr. Price.

Focus on Education

Seminar draws more than 220 Optometrists to Carmel!

On November 17th, more than 220 optometrists attended Focus on Education, the Foundation’s annual seminar which offers continuing education credits to optometrists. For more than 20 years, the Foundation has offered the seminar which draws from surrounding states, as well. Dr. Kathy Kelley of Price Vision Group lines up engaging speakers on a variety of contemporary topics to ensure the attendees are updated on the latest surgical techniques and treatments available to patients.

The event serves the Foundation’s mission to provide education to the eye care community, in addition to the many patients seeking information and advice each year. This year, the meeting will be held on November 9, 2013.
How We’re Making an Impact with your Support

Breaking Research News by Marianne O. Price, Ph.D.

Many cornea transplant patients can also have problems with glaucoma, so we are working both to minimize the risk of developing glaucoma after a transplant and to improve transplant survival in patients with pre-existing glaucoma.

Minimizing the risk of glaucoma after a transplant

Cornea transplant recipients use corticosteroid eye drops to help prevent the body from recognizing and rejecting the donor tissue. An unfortunate side effect is that corticosteroid eye drops can increase the pressure in the eye. This is called steroid-responsive glaucoma, and we have found that it develops in about one in three transplant recipients within the first year after surgery.

We have helped pioneer a new transplant technique, called DMEK, that greatly reduces the risk of graft rejection, and we believe DMEK may allow us to safely cut back on corticosteroid eye drop use and reduce unwanted side effects. To test this idea, almost 200 of our DMEK patients have agreed to be randomized to standard corticosteroid eye drops or to lower strength eye drops for one year. During that time we are carefully checking for any signs of rejection or for increased pressure in the eye that could lead to glaucoma damage.

Usually we recommend that cornea transplant recipients use corticosteroid eye drops indefinitely, but the risk of rejection seems to be so low with DMEK that we are now offering DMEK patients a choice. They can either keep using the corticosteroid eye drops or stop using them at one year. We continue to examine them regularly to check for any signs of rejection or glaucoma. So far, reduced corticosteroid use after DMEK looks very promising!

Improving cornea transplant outcomes for glaucoma patients

Eye drops to reduce the pressure in the eye are the first line of treatment for patients with glaucoma. We found that older full thickness cornea transplants failed more rapidly in patients who used glaucoma eye drops, because the corneal surface was disrupted and the preservatives in the eye drops are irritating. We’ve been very pleased to find that our newer, minimally invasive DSEK and DMEK transplants have excellent survival even in patients who use glaucoma eye drops. When eye drops are not sufficient, surgery may be needed to reduce the pressure in the eye enough to prevent irreversible damage to the nerve that sends information from the eye to the brain. However, glaucoma surgery may cause the cornea to become cloudy, requiring a cornea transplant to restore vision. Unfortunately, transplant survival is poor after glaucoma surgery, so we are working to figure out why. We have identified important changes in the fluid inside the eye after glaucoma surgery, and we are looking for ways to counteract the negative effect on the cornea.

Thank you for your support, which allows us to continue finding better ways to restore and maintain the gift of vision! We have published these findings about transplants and glaucoma in medical journals to help all doctors and patients.

Welcome New Intern

Jalee Miller, our new research intern, joins us from Marian University in Indianapolis. She’s currently a junior studying biology with aspirations to attend medical school.

Since starting at the Foundation, Jalee says, “I consider myself fortunate to be a part of such a wonderful organization that gives people back the use of their eyes. I think my experience here in assisting with vision research will be of great value when I begin my medical studies.”
Ask Your Doctor
By Dr. Francis Price, Jr.

Q: I had a cornea transplant two months ago and have had issues with fluctuating eye pressure. My father had glaucoma and I saw what a challenge it was for him to manage his disease. Will I develop glaucoma if this pressure issue continues?

A: It is not unusual to see the pressure temporarily go up right after transplant or cataract surgery. That is one of the reasons there are examinations after surgery—so any increased pressure can be treated if necessary. If the pressure in the eye does continue to be elevated, or as more commonly happens, it becomes elevated weeks or months after transplant surgery as a result of the continued use of anti-rejection drops (corticosteroids), then the pressure can be treated one of two ways. One way is to decrease or stop the corticosteroid drops, which usually allows the pressure to go down in 2 to 4 weeks. The other way is to use different glaucoma drops to lower the pressure until the corticosteroids can be decreased. In cases where the corticosteroid drops cannot be decreased, then there is a risk of developing glaucoma.

Thank you for your continued interest! All donations to the Foundation are tax-deductible and support our sight-restoring research.