

A Quarterly Publication  
of The Eye Institute of  
The Pennsylvania College  
of Optometry



# Eyesight

Summer 2008

## Vision and Learning:

- Children often try to overcompensate for focusing problems, leading to discomfort
- Problems with visual perceptual skills may include poor reading understanding
- Vision therapy techniques may include glasses, specialized instruments and an advanced computer system
- Visual therapy techniques can help improve visual processing or visual perceptual skills

## Good Vision Essential to Classroom Learning

Most people believe “good vision is the ability to see small letters on a chart.” Although there is some truth to this, **good vision** also encompasses these three components:

- The ability to see small detail (clarity)
- The ability to read or use the eyes for long periods of time without fatigue (comfort)
- The ability to analyze and interpret visual input (processing skills)

Even though your child sees clearly, he/she may experience uncomfortable vision or not understand incoming information—leading to focusing or perceptual issues.

### Signs of Eye Teaming, Focusing and Tracking Problems:

- Child complains of eyestrain and headaches
- Child complains of words moving on pages
- Eyes tired at the end of the day

- Must use finger or guide to keep place when reading
- Skips lines and words
- Poor reading understanding
- Short attention span

### Signs of Visual Processing Problems:

- Reverses letters and numbers
- Poor reading understanding
- Poor recall of visually presented material
- Trouble with spelling and sight vocabulary
- Sloppy writing skills; erases a lot
- Trouble copying from the blackboard to paper
- Can respond verbally, but not in writing

- Seems to know material but does poorly on written tests

Good vision is an essential component of learning and academic success. As you prepare your children to return to school in the fall, in addition to buying new clothes and school supplies, make sure your child’s vision will also support success in the classroom.

If your child has any of the above signs, call 215-276-6111 to make an appointment today for a full eye exam with one of the expert pediatric doctors at The Eye Institute.

## Inside this issue:

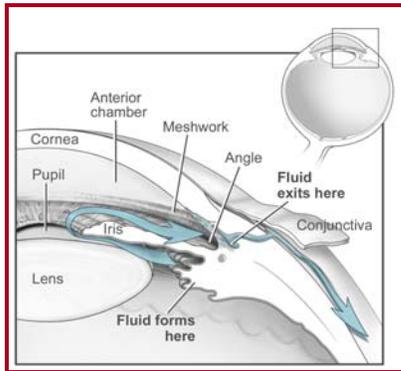
- Glaucoma Can Silently Lead to Blindness** 2
- Spotlight On...G. Richard Bennett, MS, OD, FAAO** 3
- Know Your Numbers for Good Health and Vision** 4
- When, Why and How Often Should I Have My Eyes Examined?** 5
- L.J. Smith and Eye Protection** 6



*To improve their visual abilities, Christopher Rudy, Jannellys Delacruz and Caroline Antony (from left to right) practice visual therapy skills, with the help of optometry interns.*

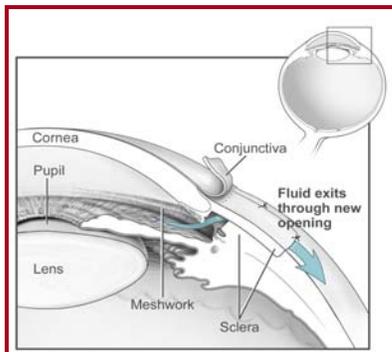
## Glaucoma Can Silently Lead to Blindness

Glaucoma is one of the most common eye diseases in the United States and worldwide. If you know facts about glaucoma, you can help yourself decrease the vision-threatening potential of the disease.



Eye with Glaucoma

***“At first, there are no symptoms associated with glaucoma. As a result, it’s often been characterized as a ‘silent disease.’”***



Eye after Glaucoma Surgery

### **What is Glaucoma?**

Glaucoma is a group of diseases that can damage the eye’s optic nerve. This may result in vision loss and ultimately blindness if left untreated. Glaucoma occurs when normal fluid pressure inside the eye (intraocular pressure) rises. Although there are various forms of glaucoma, nearly 90% of patients with this disease have primary open-angle glaucoma.

### **Who Can Get Glaucoma?**

Over two million people in the United States have glaucoma. While anyone can be susceptible to developing this disease, some populations are much more likely to have glaucoma.

### **Who is at Risk for Glaucoma?**

- Individuals with a family history of glaucoma
- Older adults
- African Americans are three times more likely than Caucasians to have glaucoma
- African Americans experience blindness from this disease four times more than other races

In addition to these risk factors, a comprehensive eye examination with dilating drops can reveal other possible risk factors, such as elevated eye pressure and abnormal optic nerve appearance.

### **What are the Symptoms for Glaucoma?**

At first, there are no symptoms associated with glaucoma. As a result, it’s often been characterized as a “silent disease.”

Most of the time, with glaucoma patients, the eye appears normal and the individual experiences no pain. Vision remains unaffected until much later in the disease.

If glaucoma remains undiagnosed or untreated, peripheral (side) vision is affected first. Over time, the patient’s central (straight ahead) vision will also decrease, eventually leading to no vision at all.

### **How Do You Detect Glaucoma?**

Since most patients with glaucoma have no symptoms, the disease

can only be detected by having routine eye examinations. The eye exam must include eye pressure checks and the use of eye drops to dilate a patient’s pupil in order to examine the back of the eye.

### **How is Glaucoma Treated?**

When first diagnosed, glaucoma is most often treated with eye drops to lower intraocular pressure (IOP). The drops act to reduce fluid production in the eye or help drain fluid from the eye. These drops may need to be taken several times a day. At times, more than one type of drop is required to control the eye pressure. If the eye pressure cannot be adequately controlled with eye drops, laser or surgical treatments may be necessary.

**\*\*See page five for the American Optometric Association’s recommendations on when and how often to have your eyes examined.\*\***



## Spotlight On...

### G. Richard Bennett, MS, OD, FAAO



#### TEI's Glauc Doc:

*Dr. Bennett has been diagnosing and treating glaucoma for nearly 30 years.*

***“We discovered that measuring corneal thickness is an important predictor for the development of glaucoma.”***

*Dr. G. Richard Bennett  
Glaucoma Service Director,  
TEI*

For the past 28 years, G. Richard Bennett, OD has been perfecting his technique of caring for his patients' eyes. His initial interest in optometry was sparked as a teenager. “It was fascinating to me,” Dr. Bennett said about visiting his family optometrist.

He completed his Doctor of Optometry Degree from the Pennsylvania College of Optometry in 1978. After finishing his residency at The Eye Institute, Dr. Bennett forged ahead to begin his long-awaited career.

With clinical faculty status at The Eye Institute, Dr. Bennett

soon became Chief of the Primary Care Module 2, where he regularly treated patients with glaucoma. In the summer of 1996, he was appointed Director of the Glaucoma Service at The Eye Institute, where he has been practicing ever since.

In addition to caring for patients, for the past 15 years, he has been acting as principal investigator for The Ocular Hypertensive Treatment Study (OHTS) – a multi-center randomized clinical trial funded by the National Eye Institute (NEI) of The National Institutes of Health (NIH). “As the longest running glaucoma study, it has been an enriching experience for me,” Dr. Bennett said. “Participation in this study has also led to national recognition for me, The Eye Institute and the optometric profession.”

Of the 1600 patients included in this national study, The Eye Institute's patient participants represent the largest African American study group. The study, which concludes at the end of this year, has yielded dozens of publications, collectively

resulting in a better understanding of how to diagnosis and treat glaucoma. “We discovered that measuring corneal thickness is an important predictor for the development of glaucoma,” Dr. Bennett said. Corneal thickness became one of the most important risk factors in deciding how to treat a patient.

Dr. Bennett continues to stress the importance of early detection. “Since glaucoma is often a symptom free disease, patients should be seen by their family eye doctor once a year,” Dr. Bennett said. “Glaucoma screenings are an important component of every eye exam.”

According to Bennett, individuals are often not fully aware of the debilitating effects of glaucoma. “Open angle glaucoma is the most common cause of legal blindness among African Americans and third among white Americans,” he said.

**\*\*To make an appointment for a comprehensive primary eye care evaluation, call 215-276-6111.\*\***

# Know Your Numbers for **GOOD** Health and Vision\*

Many underlying medical problems, including diabetes, high blood pressure and high blood cholesterol, can have significant effects on ocular health. As a result, one cannot understate the importance of managing systemic health problems as essential to ensuring good vision as you age. If you have any of the conditions mentioned above, it is critical that you, the patient, become an equal partner in managing your problem with your doctor. One can do that by:

- Taking recommended medications
- Returning for care when your physician recommends
- Listening to dietary and physical activity recommendations

Knowing important numbers related to your disease condition can make you a partner with your doctor as he/she recommends treatments. Keep records of your blood pressure, cholesterol, blood sugar, and for patients with glaucoma, your eye (intraocular) pressure.

## **What are those important numbers?**

### **Blood Pressure:**

The American Heart Association reported nearly one-third of adults in the country have high blood pressure. High blood pressure (hypertension) can lead to heart attacks, strokes, kidney disease and more. Medications, diet and exercise represent the foundation of medical treatment for this condition. When blood pressure is poorly controlled, it can lead to serious complications such as narrowing and leaking (hemorrhage) of the blood vessels in the eye (retinal blood vessels), or swelling of the retina or optic nerve. Singly or collectively, these retinal changes can seriously decrease vision.

**Normal Blood Pressure:**  
119/79 or lower

**Pre-hypertension:**  
120-139/80-89

**High Blood Pressure:**  
140/90 or higher

### **Cholesterol:**

Elevated levels of fat (lipid/cholesterol) in the blood can contribute to serious health issues including coronary (heart) artery disease and stroke. Knowing ones' total cholesterol and different types of cholesterol is important.

### **Optimal Total Cholesterol:**

- less than 200

### **LDL (low density lipoprotein – “bad cholesterol”):**

- Optimal: less than 100
- Cause for concern: more than 130

### **Optimal HDL (high density lipoprotein – “good cholesterol”):**

- Men: more than 40
- Women: more than 50

### **Blood Sugar:**

High blood sugar leads to diabetes and contributes to complications such as kidney disease, vision problems, heart disease and stroke.

### **Blood sugar (after an eight hour fast):**

- Optimal: less than 100
- Pre-diabetes: 100-125 (watch closely and change lifestyle)
- Diabetes: 126 or higher

### **Glycosylated Hemoglobin (Hemoglobin A<sub>1</sub>C/HbA<sub>1</sub>C):**

Hemoglobin A<sub>1</sub>C is another way diabetic control can be judged. Hemoglobin A<sub>1</sub>C levels in the blood represent an important indicator that assesses blood glucose (sugar) control over a 60 day period. The HbA<sub>1</sub>C levels are expressed in percentages. The American



Association of Clinical Endocrinologists set the HbA<sub>1</sub>C goal at 6.5 percent or less. When protein levels are elevated (greater than 6.5%), oxygen-carrying capacity in the blood is reduced and therefore correlated with increased diabetic retinopathy.

### **Intraocular Pressure (IOP):**

Measuring eye pressure as part of a comprehensive ocular health assessment is an important screening test for glaucoma. Glaucoma cannot be diagnosed by measurement of eye pressure alone. However, eye pressures undoubtedly provide valuable information for the diagnosis and management of glaucoma.

### **Characteristics of intraocular pressure:**

- Average: approximately 13.5-18.5 mm Hg
- In normal eyes, there is no significant difference between the two eyes
- Pressures exceeding 21 mm Hg should be evaluated for other signs of glaucoma

## When, Why and How Often Should I Have My Eyes Examined?

When, why and how often an individual should have their eyes examined depends on a number of factors. Age, race, medical history, family history, occupation and other risk factors all impact when and how often eye examinations should occur. The following represents the recommendations of the American Optometric Association ([www.aoa.org](http://www.aoa.org)) for regular eye care for patients with and without risk factors.

Patient Age	Examination Interval	
	No Symptoms/No Risk Factors	Risk Factors
Birth to 24 months	By six months of age	By six months of age or as recommended
Two to five years-old	At three years of age	At three years of age or as recommended
Six to 18 years-old	Before first grade and every two years thereafter	Annually or as recommended
18 – 40 years-old	Every two to three years	Every one to two years or as recommended
41 – 60 years-old	Every two years	Every one to two years or as recommended
61 and older years-old	Annually	Annually or as recommended

**Infant Risk Factors:**

- Born prematurely with low birth weight
- Birth mother with rubella, venereal disease, AIDS-related infection or history of substance abuse or other health related problems
- Family history of eye disease, crossed eyes

or congenital eye problems

**School-Aged Children Risk Factors:**

- Failing to progress academically or exhibiting reading or learning difficulties

**Adult Risk Factors:**

- Individuals diagnosed with diabetes, hypertension or other

health related problems

- Family history of glaucoma or cataract
- African Americans
- Taking medications with ocular side effects



Remember, The Eye Institute is a participating provider in the InfantSEE™ program. Call 215.276.6111 today to schedule your free infant eye assessment and mention InfantSEE™.

## Acknowledgements

The Eye Institute would like to acknowledge the generous support of Alcon Laboratories in the production of this newsletter.

Alcon’s mission is “ To

discover, develop, produce, and market innovative, high quality eye care products that preserve, restore and enhance vision.” For more information, visit their website at:

[www.alcon.com](http://www.alcon.com).

The following sources were also used in the information published herein:

National Eye Health Program/National Institutes of Health/National Eye Institute.



**The Clear Choice for Your Vision Care Needs**

**Three convenient locations to serve you:**

The Eye Institute  
1200 West Godfrey Ave  
Philadelphia, PA 19141

The Eye Institute  
at Mount Airy  
7145 Germantown Ave  
Philadelphia, PA 19119

The Eye Institute  
at Strawberry Mansion  
2800 West Dauphin Street  
Philadelphia, PA 19132

Main: 215-276-6000  
Appointments: 215-276-6111  
Website: [www.TELvision.com](http://www.TELvision.com)

**L.J. Smith, Tight End of the Philadelphia Eagles, Knows the Importance of Protecting His Eyes from the Sun...Do You?**

The sun's harmful rays can damage not only our skin, but our eyes as well. Over exposure from ultraviolet radiation (UV) can lead to an increased risk of cataracts (a clouding of the lens of the eye) and damage the retina. Sunglasses filtering UV rays can help protect your eyes from these vision problems all year long.

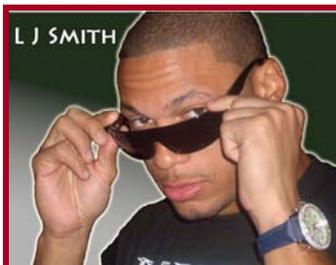
Transitions® (photochromic)

lenses become darker when exposed to sunlight, which helps shield your eyes from harmful UV rays.

However, not all sunglasses provide 100% UV protection. With summer quickly approaching, it's important to make sure you have the right sunglasses.

If you're unsure, ask the expert opticians in our eyewear center, Eyeworks,

about the many options and brands available for UV protection.



*L.J. Smith reminds us how important and cool it is to wear sunglasses during those hot, summer months.*

**Did You Know:**

- We are exposed to ultraviolet radiation (UV) from the sun everyday, even if it's cloudy?
- Two types of sunlight affect the eye—UVA can increase cataract development whereas UVB can severely damage the retina?
- Polarized sun lenses provide glare free vision, enhanced contrast vision, 100% UV protection, outstanding color perception and reduce eye fatigue from the sun's bright light?
- You can get 50% off sun wear from The Eye Institute's Eyewear Center (Eye Works) with the attached coupon?



**50% off**

Non-Prescription Sunwear, Polarized, Transitions® and Prescription UV Protective Sunwear from any of the three Eye Institute Eyewear Center locations.

The Eye Institute  
of the Pennsylvania College of Optometry

Coupon valid through Sept. 15, 2008. Offer good on complete pair of sunwear including frame and lens. Cannot be combined with any other offer or insurance benefit. Nontransferable. Limit four pairs per customer. Featured designers at Eyeworks are Prada, Gucci, Christian Dior, Dolce & Gabbana, Rocawear and Fendi, among others.