

GLAUCOMA
RESEARCH FOUNDATION

GLEAMS

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TIPS FOR HEALTHY VISION

MAY IS HEALTHY VISION MONTH. TAKING STEPS TO CARE FOR YOUR EYES CAN HELP PREVENT VISION LOSS FROM GLAUCOMA AND OTHER EYE DISEASES.

Get a dilated eye exam. A dilated eye exam can detect eye diseases at an early stage when there are no symptoms. To perform a dilated eye exam, your eye care professional puts drops in the eyes to dilate, or widen, the pupil so he or she can get a good look at the back of the eye. Early detection and treatment of eye diseases such as glaucoma can slow or stop vision loss and reduce the risk of blindness. Talk to your eye doctor about how often you should have a dilated eye exam.

Be aware of risk factors. The risk of vision loss and blindness is higher for some people based on race, ethnicity, and other demographic factors. For example, you might be at higher risk for glaucoma if you have a family history of glaucoma; have diabetes; are African American, Hispanic/Latino, American Indian, or Alaska Native; or are older than 50. Knowing about your family's health is helpful to maintain your own eye health. Talk to your family members about their eye health history, because some eye diseases (like glaucoma) have a hereditary component.

Use protective eyewear. Protect your eyes when doing chores around the house, playing sports, or on the job, to prevent eye injuries from happening. This includes wearing safety glasses, goggles, safety shields, and eye guards that are made of polycarbonate.

Wear sunglasses. When purchasing sunglasses, look for ones that block out 99 to 100% of both UVA and UVB radiation, so you can keep your vision sharp and eyes healthy. A hat offers great sun protection, too!

Live a healthy lifestyle. Eating healthy foods, maintaining a healthy weight, managing chronic conditions, and not smoking, can significantly lower your risk of eye disease.

WHAT TO EAT AND WHAT TO AVOID

A balanced diet rich in essential nutrients, such as antioxidants, vitamins, and minerals, can support overall eye health. Foods high in antioxidants, like leafy greens and colorful fruits, are particularly beneficial.

Foods to include:

- Leafy greens
- Berries
- Omega-3 fatty acids (found in fish)

Foods to limit:

- High caffeine beverages
- High-sodium foods
- Excessive alcohol

REGULAR EXERCISE

In addition to positively affecting overall health, moderate exercise like walking or swimming can help reduce intraocular pressure, which is an important factor in glaucoma.

STRESS MANAGEMENT

Stress is known to have a significant impact on various health conditions, and stress management techniques like meditation and deep breathing exercises can be beneficial. The exact relationship between stress and glaucoma is complex and not fully understood. A recent study suggests that in patients with glaucoma, there may be benefits to eye pressure and optic nerve health by doing mindfulness meditation on a regular basis.

Diet, exercise, and stress management techniques should complement, not replace, the traditional treatments for glaucoma.

The 2024 Shaffer Grants for Innovative Glaucoma Research

Our Shaffer Grants program inspires innovation by attracting much-needed brainpower to glaucoma research and taking us closer to a cure. These one-year grants provide \$55,000 in seed money for projects that target one or more of our strategic research goals.

The 2024 Shaffer Research Grants were awarded to:



Revathi Balasubramanian, PhD, at Columbia University Irving Medical Center, for her project: "Endothelin Signaling in Trabecular Meshwork and Schlemm's Canal Development" funded by The Dr. Henry A. Sutro Family Grant for Research



Kevin Chan, PhD, at New York University Grossman School of Medicine, for his project: "Role of Insulin Resistance and Aquaporin-4 in Glaucoma"



Bryce Chiang, MD, PhD, at Stanford University, for his project: "Targeted Optic Nerve Head Drug Delivery" funded by the Rajen Savjani Fund for Innovative Glaucoma Research



Cátia Gomes, PhD, at Indiana University School of Medicine, for her project: "Studying the Contribution of Aging to Retinal Ganglion Cell Degeneration Relevant to Glaucoma"



Meredith Gregory-Ksander, PhD, at Schepens Eye Research Institute of Mass Eye and Ear, Harvard Medical School, for her project: "Restoring Microglia Homeostasis as a Treatment for Glaucoma"



Takaaki Kuwajima, PhD, at University of Pittsburgh School of Medicine, for his project: "Development of Immune Cell-mediated Optic Nerve Regeneration Therapy" funded by The Rajen Savjani Fund for Innovative Glaucoma Research



Margaret MacNeil, PhD, at York College, CUNY, for her project: "Protecting the Optic Nerve with Mitochondrial Directed Peptides" funded by the Rajen Savjani Fund for Innovative Glaucoma Research



Felipe Medeiros, MD, PhD, at Bascom Palmer Eye Institute, for his project: "Race, Polygenic Risk Scores, and Glaucoma Progression" funded by the Zander Family Research Fund for Glaucoma Genetics



Olusola Olawoye, MD, PhD, at the University of Ibadan, for her project: "Genetic characterization of Juvenile Glaucoma in Africa" funded by the Frank Stein and Paul S. May Grants for Innovative Glaucoma Research



Samantha Sze Wan Shan, PhD, at The Hong Kong Polytechnic University for her project: "MiR-17-92 Members in IOP Regulation" funded by the Frank Stein and Paul S. May Grants for Innovative Glaucoma Research

Q&A

Can Eye Pressure Become Too Low?

There is a lot of variability in what pressure an eye can tolerate. But how low is too low?



Sunita Radhakrishnan, MD, specializes in the medical and surgical treatment of glaucoma at the Glaucoma Center of San Francisco and is Research Director at the Glaucoma Research and Education Group in San Francisco.

Q Can eye pressure become too low?

A The average eye pressure for most individuals is between 10 and 21 mm HG (millimeters of mercury). When the eye pressure is consistently at 5 mm HG or below, that is generally considered to be a low eye pressure. There is a lot of variability in what pressure an eye can tolerate. Just as some eyes are more sensitive to high pressure, some eyes are more easily troubled by low pressures. So, rather than the pressure number, it is more important to know if the low pressure is causing problems with the eye structure or vision.

Q How does low eye pressure affect the eye?

A When the eye pressure is lower than the eye can tolerate, the effect is like a ball that doesn't have enough air and parts of the ball can fold or collapse. Low eye pressure is often associated with detachment of the choroid (the layer of the eye lying between the retina and sclera) and shallowing of the anterior

chamber (the front inner part of the eye). Low eye pressure can also cause abnormalities in the retina, lens and cornea. All of these changes in the eye can lead to decreased vision.

Q What causes the eye pressure to become low?

A Eye pressure can become too low from various causes including eye injury, chronic inflammation, retinal detachment, and eye surgery. When glaucoma surgery is performed to lower the eye pressure, it may sometimes lower the pressure too much. The risk of having low eye pressure after glaucoma surgery varies depending on the type of surgery and various patient factors.

Q How is low eye pressure treated?

A Treatment depends on the underlying cause. Low eye pressure after glaucoma surgery is usually a temporary issue that resolves as the eye heals. If the low eye pressure is persistent and causing vision loss, then surgical treatment may be considered.

IN APPRECIATION

We are incredibly grateful for the generous and loyal support from all of our donors. Following is a listing of recent contributions and pledges at the \$1,000 level and above. Please note these are new contributions and pledge payments between **November 1, 2023** and **February 29, 2024** and will not reflect a donor's cumulative giving for the year.

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Tadd Schwab: A Caregiver's Commitment to a Cure

Sandy Schwab and her husband Tadd were shocked when Sandy was diagnosed with glaucoma at the age of 42. Tadd shared: "Little did we know the disease can strike people of any age, even our children and grandchildren."

As Sandy's husband and caregiver, Tadd has been by her side every step of the way with her medications, doctor's appointments, and several surgeries: "Sandy and I have been married 46 years. I see what she goes through every day. I am committed to doing everything I can to make sure she keeps her eyesight."

But Tadd wanted to do even more to help his wife and future generations, so he began to raise funds to support Glaucoma Research Foundation. He learned about our research programs from Sandy's doctor, Douglas Kohl, MD, who also serves as a GRF Ambassador and encourages his patients to utilize our educational resources.

"I would guarantee there are people in your life who would join you in supporting researchers working hard to discover new treatments for glaucoma... and even a cure."

Using our online giving platform, Tadd launched a peer-to-peer campaign, made his own generous gift of \$5,000, and then emailed his friends and family to share Sandy's story and asked them to match his contribution. And they did! Since this was a special surprise for his wife, when Sandy found out what her loved ones did in her honor, she was incredibly touched.

Now in her 60's Sandy does have some vision loss but is able to drive and loves gardening, travelling, and most of all, her grandchildren. Tadd added,



"while Sandy is doing well, we both know her condition could deteriorate at any moment and I was inspired to give back including raising funds for the world's top glaucoma research organization. They are the best shot at a cure."

Our sincere thanks to Tadd and Sandy, as well as all our donors for their unwavering support and commitment to a future free from glaucoma. To learn more about doing your own online fundraising campaign, visit <https://glaucoma.org/get-involved/fundraise-for-grf/> or email Katherine Grillo at Katherine@glaucoma.org.

Remembering H. Dunbar Hoskins, Jr., MD

GLAUCOMA RESEARCH FOUNDATION CO-FOUNDER AND DIRECTOR EMERITUS, H. DUNBAR HOSKINS, JR., MD, PASSED AWAY PEACEFULLY ON JANUARY 27TH AT THE AGE OF 84. DR. HOSKINS SERVED ON OUR BOARD OF DIRECTORS FOR 38 YEARS. IN 2009, HE RECEIVED OUR HIGHEST HONOR, THE CATALYST AWARD FOR HIS EXEMPLARY LEADERSHIP IN ADVANCING INNOVATIVE GLAUCOMA RESEARCH AND EDUCATION.



In 1978 with generous philanthropic support from their patients, Dr. Hoskins and his colleagues, Robert N. Shaffer, MD, and John (Jack) Hetherington, Jr. MD, established Glaucoma Research Foundation. Their goal was to fund research to discover more effective medications for their patients. Dr. Hoskins noted, “We weren’t seeing enough hope for our patients back then. We desperately needed better treatments. We knew we needed some breakthroughs, and urgently. But we also knew we needed to expand the field of glaucoma research and bring more innovative thinkers. We thought this kind of entrepreneurial research would be a catalyst for others, and we could accelerate the rate of discovery.”

Dr. Hoskins’ belief in compassionate, patient-centered care drove his research and his clinical practice for over 45 years. His distinguished career included research into improving the treatment — and thus the lives — of people living with glaucoma and preventing blindness. We are comforted to know that his legacy will continue in the lives of patients and the careers of ophthalmologists worldwide. Together, we will continue his efforts to advance promising scientific discovery toward new therapies for glaucoma and support the next generation of catalysts needed to bring us closer to a cure and a future free from glaucoma.

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