The Nutrition Factor

The importance of nutrition in protecting you from serious illnesses has been well documented. Much has also been written about foods and supplements that might protect your eyes. Before you consider incorporating nutritional therapy into your glaucoma treatment regimen, it is important to consult your general physician.

While no conclusive studies prove a connection between specific foods or drinks and glaucoma, it has been suggested that foods rich in the antioxidants lutein and zeaxanthin may be the most effective in protecting the health of the eye. Foods high in lutein include egg yolks, kale, spinach, broccoli, corn and peas and other fruits and vegetables. Zeaxanthin is found in many of these same foods, but oranges and corn contain more zeaxanthin than lutein.

It is also believed that individuals with a high intake of omega-3 fatty acids may have a lower incidence of certain eye diseases. Good sources are cold-water fish, such as salmon, cod and mackerel, black currant seed oil and flaxseed oil.

An early study suggested that people who drank red wine in moderation might be less likely to develop age-related macular degeneration. Later studies have not supported these findings. Some believe that resveratrol, an ingredient in red wine, may confer some beneficial ocular effects.

There are anecdotal and unconfirmed reports that excessive caffeine intake may, in some patients, cause mild to moderate elevations of IOP.

Eating more fruits and vegetables may or may not be protective for glaucoma, but it’s definitely protective for the heart and helps prevent other diseases.

A better diet should also improve the health of the blood vessels, and they nourish the optic nerve, so this kind of change certainly can be positive.

Supplements and Vitamins

A balanced diet is the best way to ensure you are getting an appropriate supply of essential vitamins and minerals. If you are concerned that you are not getting sufficient nutrients from the food you eat, you may want to talk to your doctor about taking a multivitamin or multimineral nutritional supplement. Some of the vitamins and minerals that may be good for the eyes are zinc and copper, and antioxidant vitamins C, E, and A. But studies thus far show no effect on IOP. While massive doses of vitamin C may lower IOP, such high doses bring other potential problems, as does too much vitamin A, which can cause headaches, vision problems, nausea, etc.

Where herbal remedies are concerned, gingko biloba is an antioxidant and an early study indicated it appeared to improve visual field. However, further studies are needed to determine any proven effects. Gingko biloba increases ocular blood flow and may provide a neuroprotective effect. Bilberry is supposed to promote optic nerve health, but again, there is no evidence to support this claim. Moderately long-term studies have shown that marijuana has no proven effect on glaucoma.

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Dear Friends:

I write this as we are about to leave for Boston, where The Glaucoma Foundation is participating in the 2009 World Glaucoma Congress. It clearly does take a global exchange of knowledge to meet the challenges of finding new treatments and ultimately eliminating blindness from glaucoma. TGF is playing an increasingly active role in this growing international community.

Our own primary international event is the renowned Scientific Think Tank, which each year brings researchers, scientists and clinicians from different disciplines together to consider a compelling issue relating to glaucoma. As we know, glaucoma is a group of diseases that share a common endpoint—a specific type of damage to the optic nerve. This October the 2009 Think Tank will sharply focus on one type of glaucoma, with its theme, “Exfoliation Syndrome: The First Potentially Curable Glaucoma.” We’ll report on that gathering in a future issue.

Providing seed grants so that researchers can give innovative ideas a chance to show they have merit has been at the heart of The Glaucoma Foundation’s mission since we awarded our first grants in 1985. We have just surveyed grantees from the past 10 years to gauge the impact our funding has had on their research. It is most encouraging that so many responses indicate initial funding received from TGF was crucial in launching their research, which in many cases led to larger government grants.

Another focus of our mission is educating the public about glaucoma and living with the disease. We hope you find the articles in this “Eye to Eye” useful and interesting.

We thank all our supporters for making the important programs and initiatives of TGF possible. We are counting on your continued generosity during these difficult times.

Sincerely,

Scott R. Christensen
President
Chief Executive Officer
**What should I do if my medication is no longer manufactured or I receive a different bottle?**

Several brand name medications (Trusopt, CoSopt, Alphagan, and Timoptic) have recently become available generically. At times, your drug plan may replace your drug with its generic equivalent without informing the individual, leading to confusion. If you receive a drug you are not familiar with, check to see if it is the generic equivalent by comparing the old and new bottles. The generic equivalents of the above named drugs are dorzolamide, timolol-dorzolamide, brimonidine, and timolol. To further complicate the matter, the cap colors of some of the generic drugs are different than the original agents. If your medication has changed or appears to have been discontinued, speak with your doctor immediately.

**What is the relationship between steroids and glaucoma?**

Steroids are medications with a wide variety of uses, not only in eyecare, but to treat illnesses including breathing disorders, such as asthma, and inflammatory diseases, for example arthritis. Steroids can be taken in the form of pills, creams, eye drops, breath inhalers, injections or nasal sprays. It is understood that steroids can cause elevation of the intraocular pressure. Topical ocular administration of steroids is the most likely to cause elevation of IOP. But any form can cause a rise in eye pressure in persons with glaucoma or at risk for the disease. People with or at risk for glaucoma should have their IOP measured periodically while on steroid treatment. All individuals should have an eye exam if steroids – even inhalers or skin preparations – are to be used on a long-term basis. It’s important for the eye doctor and general physician to work together so treatment can be started or advanced to compensate for the rise in pressure.

**Is it okay to suspend medication if it has adverse side effects?**

All medications have some potential side effects. Since glaucoma eye drops can be absorbed systemically, these side effects can affect both the eye and the body. Some, such as an initial stinging sensation, are bothersome. Others can be more serious. Every patient should contact his or her physician to determine whether a side effect warrants discontinuing a medication. If you believe your side effect is serious and you can not reach your doctor, it is better to skip a dose until you have a chance to review the options with your doctor.
World Glaucoma Day (WGD) on March 12, the second annual observance, once again was immensely successful, with over 2,000 activities having been reported. Among the activities: screenings, educational programs, and other events taking place in Australia, Asia, Africa, Europe, North and South America.

Leading up to WGD, The Glaucoma Foundation co-sponsored a Congressional Briefing on Capitol Hill on March 10th. TGF Board Member Murray Fingeret was one of the two NEI-funded researchers who described the disease, its incidence and economic burden as well as the latest research.

On the following day, March 11th, to focus on the need for international awareness, The Glaucoma Foundation co-sponsored a glaucoma screening at the United Nations headquarters in New York. The day was spearheaded by Dr. Robert Ritch, TGF Medical Director, who is head of Glaucoma Service at New York Eye and Ear Infirmary. Ambassadors, deputy ambassadors and staff were invited to the free screening. Over 400 individuals from some 95 countries around the globe were tested and provided with their results, which indicated whether they had glaucoma, were a glaucoma suspect, or had normal eyes. More than 30 doctors, technicians and volunteers assisted with the UN screenings.

While at the United Nations, Scott Christensen was interviewed on icastNews.com’s “Live and Direct from the United Nations.” That interview by the New York Bureau Chief of the ITAR-Tass News Agency is available on TGF’s website at www.glaucomafoundation.org/news.htm.
“I’ve been dealing with my eyesight most of my life,” says Susan Genis, a former criminal lawyer who today is an instructor and practitioner of Anusara yoga. “In the first grade, I found out I was nearsighted and had to get glasses. In my 20s, I developed uveitis, a chronic inflammation within the eye that can lead to glaucoma. Physically, I’m feeling better than I have in years.

“There were many horrible procedures along the way involving a lot of steroids, which can provoke glaucoma and also cataracts. I’ve had surgeries and a shunt in one eye. There’s a lot of damage, with almost no vision in one eye. And I’m losing vision in the other eye. The thought of losing my sight completely is terrifying, but I just seem to be good at dealing with what I have.”

As a lawyer, Susan worked with a federal judge and later in the DA’s office. It got more difficult being a lawyer as she lost vision, but that isn’t why she stopped. She started practicing yoga as a stress release. She got to the point where she knew she had to make a change, and she had to leave her job to figure out what she would do.

“I found myself doing more yoga, occasionally substituting for another teacher. And I became a vegetarian in the late 1970s. Then, about five years ago I was introduced to Anusara yoga — a way of teaching and studying yoga that encompasses a yoga philosophy and life view with physical alignment. Anusura yoga teaches that life is good and its essence is joy and freedom – it’s a celebration of these qualities. It made a lot of sense to me. All of this has totally changed my body and my practice.

“Today I’m a certified teacher at a small yoga studio in New York City. I also teach a lot of seniors – sometimes chair yoga. I work with several organizations and have private clients too. And then I study. I feel better. While there’s no real evidence that my yoga helps my eyesight, it helps me maintain things; it keeps me feeling fit.”

Early on, Susan heard about the New York Glaucoma Support and Education Group, now chaired by Edith Marks and Janice Ewenstein. “It’s been very helpful. Even today, when I have a complication that I have to face, I return to the group to ask about the experiences of others, doctors, etc.” And she volunteers at the TGF office to help with the mailing of the group’s newsletter. That support group now operates as the New York Chapter of The Glaucoma Foundation. “It’s growing, with a more diverse and younger membership,” Susan notes.
New Board Members

Barry S. Friedberg
Barry S. Friedberg is President and CEO of FriedbergMilstein, LLC, an independent investment management firm. Prior to that, he was an Executive Vice President of Merrill Lynch & Co., Inc. and a member of the firm’s Executive Management Committee. He was responsible for management of the Investment Banking Group from January, 1985 until May, 1993.

Mr. Friedberg began his career in 1963 with Chemical Bank. In 1964 he joined A.G. Becker, which was acquired by Merrill Lynch in 1984.

Mr. Friedberg is on the Board of Directors of New York Private Bank & Trust Corp., Golden Bear, and Yoostar, and he serves as an advisor to Crestview Partners, a private equity firm. He was Chairman of the Board of the New York City Ballet from 2003 to 2008. During this period, he also served on the Board of Lincoln Center for the Performing Arts. He is Chairman Emeritus of the Board of New York City Ballet, and a member of the Board of Directors of Boys & Girls Harbor, Inc.

Raised in Baltimore, Maryland, he is a graduate of Princeton University and lives in New York City.

Robert K. Warner
Robert K. Warner is Vice President of U.S. Pharmaceutical Products for Alcon Laboratories, Inc., headquartered in Fort Worth, Texas. In this role he today leads Global Pharmaceutical Marketing, Ophthalmic and Specialty Eye & Ear Sales, Managed Care and Falcon Pharmaceuticals.

Born in New York City, he attended Pace University, graduating in 1987 with a Bachelor of Science degree in chemistry. After working as a research development chemist at Sun Chemical, Inc., he decided to pursue his growing interest in business. He returned to school and in 1993 obtained his MBA in finance from Rutgers University, Newark, NJ.

Mr. Warner joined Alcon in 1993 as a sales representative and quickly rose through the ranks. With a strong track record, in 1997 he joined Pharmaceutical Marketing. His next move was to the new position of Global Director, Anti-Infectives, Anti-Inflammatories, Combinations, and Otic products in 2000.

In 2004, he was promoted to Director, Global Pharmaceutical Marketing, responsible for the worldwide marketing of Alcon’s then $2 billion pharmaceutical portfolio. In 2006 he was appointed Vice President, Global Pharmaceutical Marketing and in 2007 received a promotion to his current position.

New Scientific Advisory Board Member

Gülgün Tezel, M.D.
Gülgün Tezel, M.D., is professor in the departments of Ophthalmology & Visual Sciences and Anatomical Sciences & Neurobiology at the University of Louisville, Kentucky. She obtained her medical degree and completed her ophthalmology residency in Turkey and began her career in clinical practice in 1989. During a ten-year period, she saw that despite her best efforts to lower IOP, in many glaucoma patients the disease continued to progress. This led her to leave her practice to join a research team at Washington University in St. Louis. In 1999, she joined the faculty there. She established her new laboratory at the University of Louisville in 2002. Dr. Tezel’s work has brought new insights into the molecular mechanisms and treatment possibilities for glaucoma. Her accomplishments have resulted in numerous scientific publications; she has been a reviewer for many leading journals and granting agencies. Currently principal investigator for two National Eye Institute research projects, she is the recipient of the Research to Prevent Blindness Sybil B. Harrington Scholars Award and the World Glaucoma Association Potential Future Impact Award.
The best advice: have your eyes tested regularly, follow the medication regimen you have established with your glaucoma doctor, and discuss any alternative therapies with your physicians.

Exercise
A daily routine of exercise is a good prescription for anyone. But again, before embarking on a new exercise regime, always discuss the pros and cons with your physician.

There is some evidence that aerobic exercise (e.g., brisk walking, running, biking, dancing) performed on a regular basis can lower IOP. To reduce your IOP, you should spend about 30 minutes doing aerobic exercise at least four days a week.

Exercise may also improve blood flow to the retina and optic nerve. If you need an incentive, remember that once the aerobic exercise stops, your IOP will return to its previous levels.

There are some caveats. When patients with pigmented dispersion syndrome or pigmented glaucoma jog or participate in other jarring sports, they may develop an exercise-induced release of pigment from the iris and possibly an associated spike in IOP. These patients need to check with their ophthalmologist, who may want to evaluate them both before and after an exercise session.

If you have diabetes and take oral medication or insulin, your doctor will need to adjust your dose so your blood sugar does not fall too low during and after exercise. Remember, upside-down yoga positions, scuba diving, bungee jumping and other activities where you invert your body should be avoided, because they can raise your IOP. Exercises in which you inhale and then hold your breath – such as weightlifting – appear to have a negative impact on IOP as well.

It’s important to stay hydrated while exercising. Drink water before, during and after your workout. Although patients with glaucoma need water as much as anyone else, it is important not to drink large quantities of fluids too quickly, as that will cause a temporary rise in IOP.

Nutrition, Exercise and Glaucoma continued from page 1

TGF Reaching New Audiences

Lunch and Learn Events
There are new ways to become a friend of The Glaucoma Foundation and advocate for glaucoma awareness. If you are active in your community or workplace, consider hosting a “Lunch and Learn” event. Arrange a presentation for a local organization, social group, business office or any venue with an audience of 50 to 75 people. The Glaucoma Foundation will provide a knowledgeable spokesperson to attend. These “Lunch and Learn” programs are presented as a free community service of TGF and there are no fees involved. For additional information, email Kira Zmuda at kzmuda@glaucomafoundation.org.

Help TGF on eBay
eBay Giving Works was created to enable eBay buyers and sellers to help causes and non-profits that matter to them. As of mid-2009, more than $126 million has been received worldwide through eBay Giving Works. If you have something to sell on eBay, we hope you will list the item to benefit The Glaucoma Foundation and commit to donating a percentage of your listing’s final sale price to TGF. If you’re an eBay member with a PayPal account, you can make an immediate online cash donation to TGF. You’ll find a link to TGF on eBay by clicking on the “Support Us” tab at www.glaucomafoundation.org.

New Facebook Presence
While you’re online, check out TGF’s Facebook page. If you’re not already a member, sign up as a TGF fan. Read what our friends are saying. Learn about activities we’re planning. See what we are up to at The Foundation. It’s a great place to keep on top of things. You’ll find a link to the TGF Facebook page by clicking on the “Support Us” tab at www.glaucomafoundation.org.
With Your Support…
TGF Answers the Call of Promising Research

For years, we have stated that researchers funded with TGF seed grants frequently use preliminary data from their investigations to support proposals for larger grants from such funding sources as the National Institutes of Health (NIH). A new TGF survey of recent grantees confirms that assertion.

According to 50 surveys, 27 grantees used preliminary data from early work funded by TGF to establish the basis for a subsequent NEI grant and 23 grantees used their data to establish the basis for other major funding.

One researcher stated: “The initial funding we received from The Glaucoma Foundation was absolutely critical to our ability to gather the data and supporting publications necessary to be competitive for funding by the National Eye Institute at NIH…” Wrote another: “TGF’s generous support and funding was essential to achieve our goals and has opened up many exciting avenues of research in my laboratory focusing on why retinal ganglion cells die in glaucoma and what can we do to save them.”

Private donations remain critical for The Glaucoma Foundation to fund promising research projects that can bring us closer to finding new therapies and eventually a cure for glaucoma. Please be as generous as you can be.

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**WE NEED YOUR SUPPORT**

*Yes, I support The Glaucoma Foundation’s work in pursuit of new treatments and cures for glaucoma. Enclosed is my tax-deductible gift of:*

- $25
- $50
- $100
- $250
- $500
- $1000
- Other $__________

*Please make checks payable to: The Glaucoma Foundation*

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*In order to locate additional supporters, The Foundation occasionally trades mailing lists with other non-profit organizations. Checking this box will ensure that The Glaucoma Foundation never trades your address. [50-2009]*
New York City Chapter

The Glaucoma Support and Education Group completed a very successful 2008/09 season that ended with a visit to the National Association of the Visually Handicapped, a must visit for those with glaucoma. It’s an opportunity to learn about the visual aids available.

Plans for the 2009/10 season are currently underway. The lineup will include workshops on glaucoma treatment, medications, laser and surgical treatment, nutrition, recommended exercises and much more. The opening meeting will be held on Saturday, September 26, at 11 am. Dr. James Tsai will speak on “Current Directions for the Management of Glaucoma.” All meetings are free and open to the public. The meetings take place at The New York Eye and Ear Infirmary located at 310 East 14th Street, Manhattan. If you would like to be involved with the NYC Chapter please email kzmuda@glaucomafoundation.org.

Long Island (NY) Chapter

The Long Island Chapter of The Glaucoma Foundation is planning its first outreach initiative for Saturday, November 14, at a site to be determined in central Nassau County. The Chapter is reaching out to area glaucoma specialists and is planning a workshop format from 10 am to noon, with a keynote address, presentations, and a final question and answer session. Following this event, periodic meetings will be scheduled at which Long Island ophthalmologists will give presentations on topics of interest. If you would like to be involved with the Long Island Chapter please email kzmuda@glaucomafoundation.org.

New England Chapter

The New England Chapter is planning a varied format for its meetings for the season beginning in the fall. In September, there will be a lecture followed by a support group meeting. October will be devoted to pediatric glaucoma. The lecture series will continue in November and January with a support group meeting following each presentation. Speakers will talk about gene research and indications for trabeculectomy and for laser surgery in the treatment of glaucoma. There will be no meeting in December. Dates and speaker information will be available on The Glaucoma Foundation website or by emailing cduffek@glaucomafoundation.org.

Chicago Chapter

The Chicago Chapter ended its season with a meeting on June 23rd. Dr. Julia Agapov of Madison, Wisconsin, spoke on “Glaucoma Medication and How to Properly Administer It.” Programs will be held again in the fall. The chapter has been reaching out to Chicago area doctors and patients who would like to become involved and participate in the chapter’s work – in outreach, program planning, and educational presentations to local glaucoma patients. If you would like to be involved with the Chicago Chapter please email chicago@glaucomafoundation.org or kzmuda@glaucomafoundation.org.
TGF’s Annual Rx Travel Tips

• Start your trip with new refills of your glaucoma medications.
• Carry medications with you on an airplane instead of storing them in your checked luggage which can be lost.
• Store all medications in a dark, cool area, for example, among or inside clothing.
• For air travel, pack eye drops, with other liquids, in a one-quart, zip-top plastic bag in 3-ounce or smaller containers. (Recently relaxed TSA regulations permit carry-on of unlimited quantities of medications on commercial aircraft in the United States, Declare these items for inspection at the checkpoint.)

• To simplify your medication regimen while traveling, set up an alarm on your cellular phone, watch or travel alarm clock to remind you when to take your daily doses.

• Many doctors recommend adapting your medication schedule to the local time at your destination and not worrying about a missed dosage due to time zone changes. Ask your doctor to be sure.

• And don’t forget: make a list of all your medications, noting each prescription dosage, the medication’s trade name as well as its generic name – especially important if you are traveling abroad.

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