CONQUERING GLAUCOMA

Lower your eye pressure in 30 days.... without medications!

Edward C. Kondrot, MD, CCH, DHt
Lower your eye pressure by 5 to 10 mm Hg in 30 days!
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- What is Glaucoma? ...................................................3
- Steps to lower your eye pressure ......................5
- Diet ........................................................................5
- Exercise ...............................................................5
- Smoking ..............................................................7
- Hypothyroidism ..................................................7
- Men should avoid wearing a necktie................8
- Alternative therapies to lower pressure and improve function .........................................................9
- Homeopathy ........................................................9
- Color therapy in the treatment glaucoma ..........10
- Frequency Specific Microcurrent in the treatment of glaucoma .........................................................12
- Lipid Exchange/ Phospholipid Therapy ..........14
- Chelation Therapy ..............................................15
- Vitamins and nutritional products for glaucoma .16
- Suggested nutritional products for Glaucoma ...20
- Monitor your eye pressure at Home .................22
- Subscribe to Dr. Kondrot’s monthly Newsletter ...23
Because of side effects of medication and the hazards of surgery, glaucoma patients are looking for natural methods for lowering the eye pressure and preserving their vision.

Glaucoma is an eye disease where the pressure inside the eye begins to slowly increase. This increase in pressure causes the circulation of the optic nerve to decrease and the vision begins to fade. At first the loss is barely noticeable in the periphery and then slowly progressing to involve the central vision.

**Glaucoma is the thief in the night. A painless loss of vision that must be diagnosed early to prevent loss of vision**

Most cases of glaucoma do not produce any symptoms. There is a slowly progressive loss of peripheral vision that is not noticed by the glaucoma patient. This fact alone makes it important to have yearly eye exams especially if you have a family history of glaucoma or are being treated for arteriosclerosis or diabetes.

**Glaucoma has two components: increase in pressure and decrease in blood flow to the optic nerve**

When the pressure in the eye is increased the blood flow to the optic nerve decreases, likewise when the pressure in the eye is decreased the blood flow to the nerve increases. An example is when you fall asleep in an awkward position and your hand falls asleep. Once you move your hand and release the pressure the sensation and function come back into your hand. Normally if you are healthy the function
returns quickly but if you suffer from diabetes, poor circulation or nutritional deficiencies the circulation return will take much longer. Have you ever inadvertently pushed on your eye and noticed the vision getting dimmer? This occurs when the pressure inside the eye is greater than the fluid pressure of the blood vessels going to the optic nerve. Normally when you stop the pressure on the eye the circulation to the optic nerve will rapidly return. In glaucoma the blood vessels are not as resilient and are subject to permanent damage when the pressure increase is sustained for a long period of time.

The optic nerve is the transmitter of visual images from the eye to the brain. There are over 100 million rods and cones in the retina. Each of these visual cells sends its image to the brain though a tiny fiber strand called the nerve fiber layer. In the early stages damage of the nerve fiber layer results in loss of peripheral vision; in later stages blindness may result. How does this happen? The optic nerve has a delicate supply of blood that is sensitive to changes in pressure inside the eye. This loss of circulation to the optic nerve appears to be the reason for loss of vision. Elevated intraocular pressure is felt to be the main contributing factor, although there are patients with glaucoma who have low or normal intraocular pressure. Other factors which make the nerve more susceptible to damage are arteriosclerosis and diabetes mellitus.
Steps to lower your eye pressure

Diet
You should shift your diet away from meats and dairy products towards a largely vegetarian diet that includes cold water fish and eggs. Our clinic encourages patients to follow the 70/30 diet. 70% of your diet should be organic and live food. Organic food has a greater nutritional value and it is free of toxic preservatives and pesticides. Live or raw food has a much better nutritional value. Cooking destroys much of the nutritional value. The remaining 30% can be cooked food. There is evidence that this type of diet will help in weight reduction, reduce the risk of atherosclerotic vascular disease, lower blood pressure, reduce the incidence of diabetes and improve blood flow to the eye.

Exercise
Aerobic exercise can reduce intraocular pressure by 4 to 6 mm Hg when compared to previously sedentary glaucoma patients. This has the same result as the pressure lowering properties of many glaucoma medication.

If you do not have a regular exercise program now is the time to start! You should begin slowly under your physicians supervision. Begin with 10 to 15 minute several times a week. This should gradually be increased to 30 minutes of moderate exercise everyday. The ideal exercise will increase your heart rate a small amount without producing undue fatigue.
General guidelines are to exercise at 60% of your maximum heart rate. To calculate this number subtract your age from 220. This number is your maximum heart rate. 60% of this number will be your target heart rate. During exercise be sure to monitor your heart rate.

Example: Let say your age is 60.
First calculate your maximum heart rate
   220-60 is 160.
Next calculate your target heart rate
   60% of 160 is 96
A heart rate of 96 is therefore your goal when you exercise.

Find something that you enjoy and remember to continue your program. Brisk walking is a favorite activity of many people. Other exercise to consider is swimming, aerobics, and cycling. If you are physically limited consult with your doctor on other activities.

Moderate exercise improves your cardiovascular system, helps keep off extra pounds, lowers cholesterol, reduces high blood pressure and improves retinal circulation. Exercise also helps to improve your mental outlook and reduces stress. These factors are important in helping the body fight disease. This is probably the best thing you will do for your health!

Coffee
Coffee should be reduced or eliminated. Studies have shown that coffee can produce a 13% reduction in retinal
blood flow. This is especially important in patients that have existing retinal damage and who are losing vision.

**Smoking**
If you smoke please do everything possible to stop. Some studies show that there is a 2.9 increase in risk in developing glaucoma in smokers. While smoking, each cigarette can raise the intraocular pressure by 5.0 mm Hg or more. Nicotine has been shown to reduce retinal blood flow by 16%. Tobacco also robs the body of 25 mg of vitamin C per cigarette. Smokers have an increase in lipids (both fat and cholesterol) which increases the risk of severe cardiovascular disease. These factors produce narrowing of the retina blood vessels that carry valuable nutrients to the eye.

**Hypothyroidism**
If you have glaucoma it is important to have your thyroid checked. Some cases of low glaucoma have been linked to low thyroid functioning. Hypothyroidism can lead to a condition called myxedema which results in a buildup of mucopolysaccharides throughout the body. These mucopolysaccharides in the eye can block the outflow of aqueous producing elevations of intraocular pressure.

**Reducing levels of Mucopolysaccharides**
Proper thyroid functioning is important to prevent increase levels of mucopolysaccharides. A high fiber diet, vitamins A and C have also been shown to reduce these levels.
Low morning body temperature can be a clue to low thyroid functioning.
If you have glaucoma you should beform these simple steps to determine if your thyroid function might be reduced. Begin by placing a thermometer on your night stand before going to bed.

- Shake down mercury thermometer to 96 degrees or less
- In the morning, before getting out of bed, put the thermometer deep into your armpit for 10 minutes
- Temperature should be taken for 5 days
- For women, the temperature should be taken starting the second day menstruation
- Normal axillary temperature is 97.8-98.2 degrees F.
- Average temperature less than 97.4 is suggestive of hypothyroidism

Men should avoid wearing a necktie! Yes I will give you a doctor’s excuse!
Researchers at State University of New York Downstate Medical Center evaluated the results that neckties had on the IOP. They enrolled healthy men and 20 men with glaucoma. They tested pressure first with an open-collar shirt, then after three minutes after donning a tie, and again three minutes after loosening their ties.

60% of the men with glaucoma and 70% of the healthy men experienced a significant increase in IOP after wearing the tie for only 3 minutes. The increases ranged from more than 2 mm Hg to over 4 mm Hg.
The researchers concluded that overly tight neckties can definitely affect eye health, interfere with the treatment of glaucoma, and possibly even increase the risk of developing glaucoma. (*Br J Ophthalmol* 03;87(8):946-9)

**Alternative therapies to lower pressure and improve function of the optic nerve**

**Homeopathy**

Homeopathy is scientific method of therapy based on the principle of stimulating the body’s own healing processes in order to accomplish cure. The basic system was devised and verified by Samuel Hahnemann, a German physician, nearly 200 years ago. Homeopathy’s astounding success rates in both chronic and acute diseases has resulted in not only standing the test of time, but rapidly achieving widespread acceptance in Europe, India and South America.

In Homeopathy (“homeo-” means “similar”), each of us is a total, complete individual, no aspect of which can be separated from any other. To be effective, any valid therapy must be based on a deep understanding of and respect for the uniqueness of each individual. In Homeopathy each patient is evaluated as a whole person—mental, emotional and physical. The prescribing remedy is based on the unique patterns found on all three levels. This means that each person is given a remedy that will stimulate their particular body to heal. Ten people with glaucoma might receive ten different homeopathic remedies.

Homeopathy can be a valuable adjunct in your treatment of Glaucoma.

**Color therapy in the treatment glaucoma**
Color therapy sounds like something that belongs to interior design and not in the doctor’s office! You may be surprised that there is a long history of color in the treatment of eye disease. A 73 year old institution called the College of Syntonics has investigated color therapy in the treatment of eye disease. Evidence shows that disease is caused by an imbalance in the autonomic nervous system. The autonomic system has 2 parts the sympathetic and the parasympathetic. The sympathetic responsible for survival or “fight or flight” and the parasympathetic which is responsible for the body sustaining life, like digestion and healing disease. When you are running away from a grizzly bear your body does not care about digesting your food! Stress – yes we have heard of that word - STRESS certainly contributes to disease and stress can also be the fuel that sustains disease and prevents healing. The mechanism of stress is felt to over-stimulate the sympathetic nervous system and to suppress the
parasympathetic. When the parasympathetic system is suppressed the body has a difficult time to heal disease. Healing will not take place unless there is a balance in the autonomic system. Color therapy can help. The red spectrum has been documented to stimulate the sympathetic system. No we do not want this since most of our life takes care of this very nicely! The color red has been associated with anger and increase heart rate and an increase in blood pressure. Blue on the other hand will relax the sympathetic system and stimulate the parasympathetic. This is the first step towards healing disease. Think about how relaxing the blue ocean water and blue sky can be! A vacation to the beach can be very healing.

The College of Syntonics has investigated specific color wave lengths and has studied the affects on eye disease.

**Green light lowers intraocular pressure!**

An article called “Some Experiments with Green Spectacles Prescribed to Glaucomatous Patients” By R. B. Zaretskava was published in the American Journal of Ophthalmology (AJO) in 1948. The article showed a pronounced tendency of reducing intra ocular pressure in glaucomatous patients who wore green glasses. Pressures were measured 3 times a day at 7:00 AM, 1:00 PM and 7:00 PM. in 19 patents who had glaucoma. The decrease in pressure was fairly appreciable 6 mm Hg in 8 cases, 6 to 10 mm Hg in 9 cases and 10 or more in 3 cases. It was felt that green light brought about a definite rearrangement of the autonomic nervous system and thus affecting the intraocular pressure of the eye. This
may be a valuable adjunctive therapy for glaucoma patients who are struggling to lower their pressures and those who are interested in reducing or eliminating toxic eye drops. The AJO is a very prestigious peer review journal in ophthalmology. How many eye doctors do you think are aware of this article or the positive effects of green light! At the Healing the Eye and Wellness center we routinely use green light therapy along with microcurrent in the treatment of glaucoma.

**Frequency Specific Microcurrent in the treatment of glaucoma**

Microcurrent has been used over the past 8 years to help improve the vision of people suffering from macular degeneration. The mechanism is felt to be 3 fold; increasing the circulation to the eye, stimulating the function of the retinal cells and possibly in the regeneration of cells. The effects of 10 to 500 microamps on the cellular level have been documented by Dr. Cheng to increase ATP production by 500%, increase protein synthesis by 70% and increase cell transport by 40%.

A new technique called Frequency Specific Microcurrent (FSM) has produced a dramatic improvement in treatment outcomes of macular degeneration. Instead of using basic generic frequencies which have a low level affect on the diseased eye tissue we now can use frequencies specific to the retinal tissue and the pathology. The energy is driven into the area needed for tissue repair.
FSM in the treatment of glaucoma is designed to help lower the pressure, improve blood flow to the optic nerve and to remove toxins in the eye. The goal in traditional glaucoma treatment is to lower the pressure inside the eye thus enabling the optic nerve to have greater blood flow. Using Microcurrent we are using frequencies to both lower the pressure and at the same time improve blood flow to the nerve. There has been several studies to show that microcurrent can improve the function of the optic nerve.

The roots of Frequency Specific Microcurrent (FSM) date back to the early 1900’s from Dr. Albert Abrams, who was the first physician to use calibrated instruments capable of detecting the radiations of living tissue. Dr. Abrams concluded that all matter radiates electromagnetic energy and the characteristics of the radiation depends upon the unique molecular structure.

Modern FSM utilizes hundreds of frequencies within the range of .01 to 999 Hz with varying intensities of 20 to 600 micro amps. Each tissue in the body has an individualized frequencies for example the retina has a frequency of 95 Hz and macula 137 Hz. Each type of pathology also has a frequency. Hemorrhage has a frequency of 18 and edema is 14.

FSM is “frequency specific” because the frequencies of the tissue and that of the pathology are “matched” with two frequencies. For example hemorrhage in the macula the FSM treatment would use 18 Hz and 137 Hz. This coupled frequencies then matches the exact abnormalities that are
present in the damaged tissue. The desired effect is to neutralize those frequencies that are in disharmony.

**Lipid Exchange/ Phospholipid Therapy**

Phosphatidylcholine (PC) is one of the most exciting therapies now available in our clinic. PC has only recently received increased clinical focus because of its ability to dramatically improve the outcomes of patients in a wide range of disorders such as ALS, Lyme, Parkinson’s, Alzheimer’s, MS, Fibromyalgia, Chronic Fatigue, Autism, Bipolar, Seizures, Hepatitis C, Environmental Illness, Cardiovascular disease and eye disease. There is good evidence that this therapy can be of value in restoring optic nerve function in patients with glaucoma.

**The eye ranks as one of the highest in lipid cellular complexity.** There are over 100 million rods and cones in each eye and each one has up to 2000 layers of lipid membrane. Each membrane contains 140 million rhodopsin proteins which are responsible for capturing photons to produce sight. Each day a portion of this membrane and the rhodopsin proteins are sloughed off. Each cell discards about 7% of its lipid membrane stack each day. The entire photo-receiving structure is regenerated every 14 days!

PC directly up-regulates the fluidity of the membrane, improving its vitality which is essential for all of metabolism including neuronal transmission. Poor neuronal response is degraded in all the neurological disorders and is directly improved with Phosphatidylcholine (PC) therapy.
Raising PC levels plays an important role in improving memory and recall, and has clinically shown to improve the flow of information of all the senses and most significantly eyesight. PC given either orally or intravenously helps restore the proper integrity of the cell membrane thereby restoring proper function of organ systems, especially the liver, the gut, the brain, immune system, heart, and hormonal system, which ultimately improves the total health of the individual.

**Chelation Therapy**

Chelation therapy is an intravenous therapy using the synthetic amino acid EDTA (Ethylene diamine tetraacetic acid) which has the ability to “bond” or “hook onto” atoms of calcium, lead, cadmium, mercury and some of the trace minerals. These minerals combined with the EDTA are eliminated from the body through the kidneys into the urine. Chelation therapy is used for patients with heavy metal poisoning, poor circulation due to arteriosclerosis and conditions related to these primary diagnoses. The causes of glaucoma are many but it is felt that arteriosclerosis, accumulation of heavy metals and the formation of free radicals contribute to this disease. Chelation therapy has been documented to be helpful in all of these conditions. In arteriosclerosis, the blood vessels are damaged and then obstructed by the buildup of plaque. During and following chelation therapy, this plaque is dissolved very slowly and the blood flow throughout the body improves. We expect chelation patients to follow a basic program of non-smoking, diet, exercise and vitamin and mineral supplements. Studies have shown that oral chelation is not
as effective as intravenous. The oral agents are bound to metals in the gastrointestinal tract and are rendered ineffective for chelating any metals or calcium from the body. You can call the American College of Advancement of Medicine for more information regarding chelation (949) 583-7666 or visit their web page www.acam.org

**Vitamins and nutritional products for glaucoma**

**Antioxidants**
Antioxidants may help improve outflow of fluid in the eye and lower the intraocular pressure. The trabecular meshwork is the drain of the eye. There have been some studies which have shown that when the antioxidants are blocked the intraocular pressure will be increased. Antioxidants may also protect the optic nerve by blocking oxygen free radical vasoconstriction which may lead to ischemia. Antioxidants may also protect the optic nerve from the inflammatory affects of infection and inflammation.

**Vitamin C**
3 to 6 grams of vitamin C can lower the intraocular pressure by 5 mm HG. Begin by slowly increasing your dosage of vitamin C. Another benefit is Vitamin C is also a chelating agent. It will help remove toxic metals from the body which interfere with function of the optic nerve. It is best to take 3 divided doses with each meal. Begin with 1 gram 3 times a day and gradually increase to 2 grams three
times a day. Decrease you dosage if you develop indigestion of loose stools

**Vitamin B12**
Vitamin B12 may have a protective effect on the optic nerve and prevent visual loss in glaucoma. A Japanese study showed that people who took 1500 mcg. had a much lower visual loss. It protects the myelin sheath or covering around the optic nerve.

**Magnesium**
Magnesium deficiency is associated with systemic hypertension. It may have a role in blocking the affect of calcium which causes vasoconstriction of blood vessels. The use of magnesium has been shown to improve retinal circulation in some cases of retinopathy. Physical or emotional stress also causes an increase in the need for magnesium.

**Selenium**
It is a vital antioxidant which protects the immune system by preventing the formation of free radicals. It is especially important to combine Selenium with Vitamin E. They act together to aid in the production of antibodies and to help maintain a healthy heart, liver and eyes.

**Chromium**
Studies have shown that Chromium will lower lipid levels in the body and increase the levels of good cholesterol (HDL). Chromium may be especially important in patients taking beta blockers. Timoptic has been shown to increase
the levels of lipids and lower the levels of HDL. All individuals who are taking Timoptic should consider supplemental Chromium.

**Amino Acids**
Glutathione is a powerful antioxidant that protects retinal cells from UV radiation. N-acetyl cysteine, selenium and riboflavin all help to stimulate the production of glutathione.

**Fatty Acids**
Diets deficient in Omega-3 fatty acids have been shown to result in visual impairment. In one European study Omega-3 fats improved the vision in 6 out of 7 patients with macular degeneration.

**Quercetin**
A Bioflavinoid found in red onions has been shown to be potent in preventing the damage of fat tissue in the eyes from UV light. It also inhibits histamine release and relaxes the smooth muscles of blood vessels. It has a strong affinity for iron. Reducing this oxidant may reduce the oxidative stress of the body.

**Bilberry**
Interest developed in this European plant, when World War II British Air Force pilots reported improved night vision after taking Bilberry. It is now used in Europe for many eye disorders including cataract, glaucoma, macular degeneration, retinitis pigmentosa and diabetic retinopathy. It contains anthocyanosides which have been shown to
stabilize collagen, increase intracellular Vitamin C levels and decrease capillary fragility. Studies have also shown a decrease in platelet aggregation (similar affect as aspirin) and a reduction in blood sugar. Bilberry may improve oxygen delivery to the eye and act as an antioxidant. Bilberry may have a protective effect on the eye and prevent further damage from the glaucoma.

**Ginkgo Biloba**
It is tree that lives as long as 1000 years. Originally found in China, it was imported into the United States in 1784. The Ginkgo leaf extracts are now among the leading prescription medications in both Germany and France. Ginkgo’s primary clinical application has been in the treatment of vascular insufficiency. Many studies have demonstrated improvement in circulation in patients with arterial insufficiency. In addition to improving retinal circulation, Ginkgo also has a protective affect against free radicals. One study has shown that a combination of ginko biloba and zinc may slow the progression of visual loss.

**Coleus Forskohlii**
It is an extract from the Coleus, a variety of the mint plant. It has been used by Hindu practitioners for the treatment of cardiac disease, asthma and high blood pressure. It relaxes smooth muscles and produces vasodilatation of blood vessels. It has been reported in several studies to lower the intraocular pressure in patients with glaucoma. Forskohliin was an experiment eye drop found to reduce eye pressure. It was abandoned because the eye drops produced a milky
covering over the eye. This side affect is eliminated by taking the Herb orally.

**Suggested nutritional products for Glaucoma**

**Ocular Function spray**
Sublingual spray that contains essential antioxidants along with ingredients essential for the treatment of glaucoma. Ginko Bilobao, coleus forskollei and Vitamin E. Sublingual route delivers a higher and more consistent absorption into the body.
(3 sprays under the tongue twice a day)

**Glaucoma Formula**
Vitamin, mineral and herbal formula designed for patients with glaucoma. Contains B complex vitamins to protect the optic nerve. Also contains coleus forskohlii an Indian herb which has been shown to reduce the intraocular pressure.
(3 capsules twice a day)

**Glaucoma Homeopathic Formula**
Homeopathic formula designed for glaucoma. Contains tissue salts and other homeopathic products.
(1 pellet twice a day)

**A-C Carbamide**
Also called urea which is a component of blood and all tissue fluids. It is an essential lymph salt which functions as
an osmotic regulator. In glaucoma aqueous fluid (Product of Lymph) accumulates in the eye producing an elevation of pressure. A-C Carbamide helps to regulate this lymph of the eye. In my Ophthalmology residency I can remember giving intravenous urea to patients prior to cataract surgery to help lower the eye pressure. This same substance can now be given orally to have the same effect. (6 to 12 capusles a day)

**Iplex**
A combination formula for the health of the eye. It contains porcine brain especially the pineal, bovine liver, kidney and adrenal extracts. These ingredients aid in the ocular function of the eye. (2 to 4 capsules a day)

**BodyBio PC**
Formulated with a 4:1 Ratio of Omega 6 to Omega 3 in softgels and liquid form. Of the tens of thousands of molecules that make up the life of a cell, Phosphatidylcholine (PC) stands apart; probably the most important one of all. BodyBio PC is made of only pure phospholipids which automatically form liposomes in the watery environment of the body, but it goes one important step further… it is also formulated with the essential lipids at a 4:1 ratio. (2 soft gels twice a day)
Metagenics - EPA-DHA 720
Enhanced Omega-3 Levels for Greater Support - provides 720 mg of omega-3 essential fatty acids from cold water fish per soft gel (2 soft gels twice a day)

For more information on these products please call 800-430-9328 / 602-631-4504
Or go to:

http://www.nutritionalresearch.net/glaucoma_products.htm

Monitor your eye pressure at Home

Proview™ Eye Pressure Monitor is an easy to use “at home” monitoring device for patients of all ages. It is the first tonometer that detects IOP changes “off of the cornea” and “out of the office”.

A patient presses the device on their partially closed eyelid until they see the appearance of a pressure phosphene, usually described as a dark circle with a ring of light around the outer circumference. The device will allow for proactive co-management of IOP between you and your patients.

Proview will be sold as a complete IOP monitoring kit. Through logbook records provided by the patient, doctors will be able to obtain a more in-depth profile of their patients’ IOP fluctuations and thus track the impact of new
and additive drug therapy, ophthalmic surgery, and different daily dosing regimens.

If you would like more information about this product, or to order the Proview Eye Pressure Monitor, please call 1-800-828-9030.

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