

GENERAL ADVICE FOR PATIENTS & THE SUPPORTING RATIONALE

Patients often ask what they can do about their glaucoma. Unfortunately there really isn't hard-core scientific proof that any self-directed interventions are helpful. Nonetheless, following are recommendations for patients based on the current literature with some supporting logic behind each recommendation.

- 1. Expand your daily vitamin regimen to include Vitamin C (500 mg per day), Vitamin B Complex, Omega-3 Fatty Acids and Resveratrol.** Each of these four supplements has been implicated in protecting the optic nerve, or at least having something to do with protecting against degeneration of the nervous system. They are a good complement to your normal once-a-day vitamin.

A good daily vitamin regimen for a glaucoma patient, based on our present level of knowledge (which is far from perfect in this area):

- ☐ **1 once-a-day vitamin with minerals** (E.g., Centrum Silver or generic equivalent)
- ☐ **Vitamin B Complex**
- ☐ **Vitamin C, 500 mg, unless there is to be, or has been surgery ***
- ☐ **1 Fish Oil softgel pill**, such as the ones obtained at Costco, which contain **1,200 mg Fish Oil Concentrate and 684 mg of Omega 3 Fatty Acids** per softgel.
- ☐ **Resveratrol, 100 mg a day or more** - Resveratrol may have neuro-protective properties, but these are far from proven at present. Resveratrol may be obtained from the web site for Longevinex as a pill; other sources are also available.

** **Note:** You should stop taking Vitamin C one week before glaucoma surgery because it can increase the creation of collagen in the filtering bleb. You may start up again one month after surgery.*

- 2. Avoid Stress.** Stress can cause changes in circulating catechols, which drive the production of aqueous humor in the eye. Obviously, we cannot avoid stress in many life situations and the relative role of stress in driving the eye pressure is speculative at best, but when possible, it is advised to minimize stress.
- 3. Normalize Blood Pressure.** Elevated blood pressure does correlate with elevated eye pressure. Both hypertension and low blood pressure can be harmful for retinal ganglion cells. Low blood pressure at night can be distinctly harmful, to such a degree that we often ask a patient's significant other to check their blood pressure at night.
- 4. Limit Caffeine Intake.** Glaucoma literature contains papers which implicate caffeine in elevated intraocular pressure in some instances; other papers refute this. Clinically, it seems that some patients are substantially more sensitive to the effects of caffeine on

their intraocular pressure than others. Occasionally, patients who drink a great deal of espresso have been found to substantially increase their intraocular pressure.

5. **Loosen Your Tie.** A tight neck tie or a tight collar can create venous obstruction in some patients. Glaucoma patients are well advised to increase their dress shirt neck size by at least ½ size.
6. **Exercise Daily.** Exercising daily improves the adrenergic tone of the body. Papers done in Oregon prove that prolonged very vigorous exercise can actually lower intraocular pressure for a discrete period after exercise. I am not suggesting you need vigorous daily exercise, but I am suggesting that daily exercise ~ at least 30 minutes per day ~ is good for your overall health and may also be good for your glaucoma.
7. **Correct Sleep Apnea.** Sleep apnea is insidious and undetected in many individuals. It does correlate with open angle glaucoma. Evaluation in a sleep lab is warranted whenever sleep apnea is suspected. Sleep apnea can be difficult to detect and evaluation in a sleep laboratory may be warranted.
8. **Avoid Corticosteroids.** Steroids whether in skin creams, orally or as an inhaler, can raise intraocular pressure. The pressure elevations may be transient or the pressure may vary to such a degree that it will be missed with a pressure check. Physicians in other specialties are often skeptical that a little bit of steroid will raise the intraocular pressure or cause trouble, but sometimes it can do just that. This is an instance where several pressure checks at different times of day may be very useful. **Note:** Sometimes your condition may require your physician to prescribe steroids, in which case you will need to take them, but be aware it may affect your intraocular pressure and as a result this may need to be monitored.
9. **Cease Smoking.** It is not only bad for all people in general, but smoking is particularly bad for glaucoma patients. There is a direct correlation between increased risk of bleb failure and smoking. Please use this as the extra prompt to stop smoking.