

**Glaucoma**

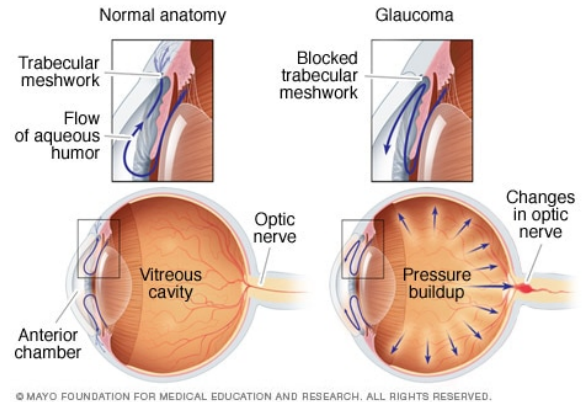
Glaucoma is a group of eye conditions characterized by progressive optic nerve damage caused by an increase in intraocular pressure (IOP). Glaucoma is the 2nd most common cause of blindness worldwide and the 2nd most common cause of blindness in the US. About 3 million Americans and 64 million people worldwide have glaucoma, but only half are aware of it. Glaucoma can occur at any age but is 6 times more common among people over the age of 60.

Glaucoma is the result of damage to the optic nerve caused by increased pressure in the eye. As this nerve gradually deteriorates, blind spots develop in the visual field. Elevated eye pressure is due to a buildup of a fluid (aqueous humor) that is produced by ciliary bodies and flows throughout the inside of the eye. This internal fluid normally drains out through a tissue called the trabecular meshwork. The trabecular meshwork is the spongy tissue located at the angle where the iris and cornea meet and it is responsible for regulating the outflow of aqueous humor. Through trabecular meshwork, 80-90 percent of aqueous humor flows out of the eye into the Schlemm's Canal which a ring-like passageway around the outer angle of the anterior chamber in front of the iris. From the canal, the liquid enters the veins. When fluid is overproduced or the drainage system doesn't work properly, the fluid can't flow out at its normal rate and eye pressure increases.

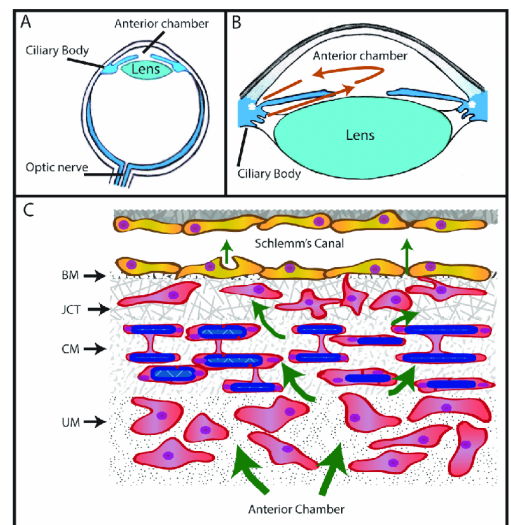
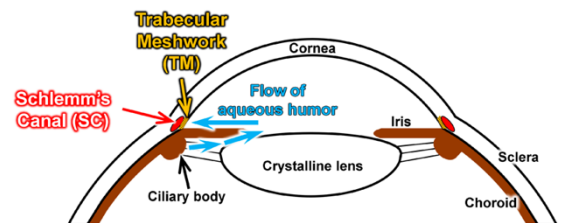
The angle where the iris and cornea meet can vary and this determines the type of glaucoma an individual is suffering from. The most common type is open-angle glaucoma in which the drainage angle formed by the cornea and iris remains open, but the trabecular meshwork is partially blocked. This causes the aqueous humor to drain out of the eye too slowly causing a fluid back up leading to the pressure within the eye to gradually increase and eventually damage the optic nerve. Damage to the optic nerve is painless and occurs slowly over time, vision loss can occur before a patient may be aware they have a problem.

The trabecular meshwork is the eye's lymphatic drainage system. It consists of two parts: a non-filtering portion and a filtering portion. The non-filtering portion consists mainly of the trabecular cells which are highly phagocytic cells that remove particles, cellular debris, and proteins from the aqueous humor. The filtering portion is a network of beams covered with endothelial cells. The trabecular meshwork is a contractile tissue with properties similar to smooth muscle. The contraction of the endothelial cells reduces the size of the intercellular spaces and decreases permeability. When the endothelial cells relax, the permeability increases.<sup>1</sup> Disruption of the contractibility of the trabecular meshwork in an aged eye with increased contraction can lead to glaucoma development.

Angle-closure glaucoma is also referred to as acute or narrow-angle glaucoma which occurs due to the narrowing of the angle between the iris and cornea when the iris bulges forward and blocks the drainage. As a result, fluid cannot pass through the drainage canals and eye pressure increases suddenly. In contrast to open-angle glaucoma, this type develops quickly and has very noticeable symptoms. The severe nature of the condition warrants immediate medical attention and prompt treatment. Some individuals are born with narrow drainage angles which puts them at an increased risk of developing angle-closure glaucoma.



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There is also a form of glaucoma in which the individual's optic nerve becomes damaged even though there is not an increase in eye pressure. Researchers and doctors still do not know the exact reason for this occurrence. It may be due to a sensitive optic nerve or a decrease in blood supply to the optic nerve.

## **Wellness Recommendation**

### Glaucoma

The wellness recommendation for age-related open-angle glaucoma includes Optinin, LC Balancer, and Brown. Optinin helps to remove eye deficiency heat to help relax the trabecular meshwork epithelial cells and improve the drainage function of the trabecular meshwork to resolve the drainage blockage. This helps to improve fluid circulation to decrease eye pressure. Herbal ingredients, such as Cortex Moutan, helps to improve blood circulation to remove stasis. LC and Balancer and Brown work synergistically to improve systemic microcirculation and liver function which helps to support the effects of Optinin. Patients can experience symptom improvement with decreased pressure in the first week and 1-3 months of the protocol is recommended for significant improvement. If the optical nerve is damaged, Eye Brighter is also recommended to improve blood circulation of the eye and increase nutrient supply to the eye to support repair of the damaged eye nerve. A further customized treatment may be required if the patient does not respond to the protocol.

## **Selected Case Studies**

### Case 1: Decreased Eye Pressure in Glaucoma Patient

*Mayda Carrillo, AP/RN, FL*

A 72-year-old female suffering from glaucoma visited Dr. Carrillo in February. Her eye doctor had done an examination and her eye pressure was very high. Dr. Carrillo recommended Optinin formula from Wei Laboratories which helps clear eye deficiency heat and improve fluid circulation of the eye. After 1 week use of Optinin, her eye pressure dropped by 25%. But her stomach could not hold any more pills. One week use of the herbal pills was the limit for her.

Then Dr. Carrillo started to work on improving her stomach condition using herbal juices along with diet adjustment so she could take any pills. After nearly one year of work. Her stomach is finally better. Then patient resumed the protocol with Optinin together with liver and kidney supporting formulas from Wei Labs including LC Balancer, Brown and Xcel. The patient took a total of 3 bottles of each product.

4 months later, the patient did another eye examine and the results showed her eye pressure was completely normal. Her original pressure was 13mmHg on the right eye and 24mmHg on the left. Now the pressure was 10 on the right eye and 8 on the left eye. The patient is very happy about that and is now able to avoid surgery.

## **References:**

1. Knepper, P., & Yue, B. (2010, April 28). Abnormal trabecular meshwork outflow. Retrieved August 25, 2020, from <https://www.sciencedirect.com/science/article/pii/B978070202983700022X>