

## Narrow Angles

Narrow angles is a very common condition that is associated with smaller eyes; smaller eyes have smaller structures, including narrower angles. You were born with this structural variation. Figure 1 explains the anatomy of the front of our eye and the angle.

Narrow angles are associated with a risk for raised intraocular pressure due to restricted outflow of aqueous humor leading to a buildup of aqueous humor in the eye. This can happen especially when the iris muscle contracts to enlarge the pupil such as in dim light settings or with pharmacological dilation.

When the iris muscle contracts, it bunches up into the angle and can partially or fully obstruct the angle into which the aqueous humor drains. If the pressure in eye is raised for an extended period of time (months or years) or if the eye experiences repeated high pressure spikes from pupil dilation, it can cause damage to some of the structures of the back of the eye.

Your eye doctor will work with you to minimize the risk of raised pressure in the eye by monitoring your angles regularly, checking the structures in the back of your eye for any evidence of damage, and/or referring you to an eye specialist for a simple procedure called laser peripheral iridotomy.

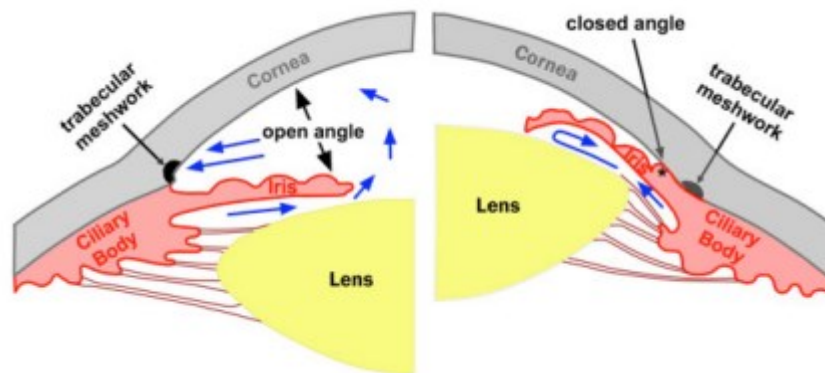
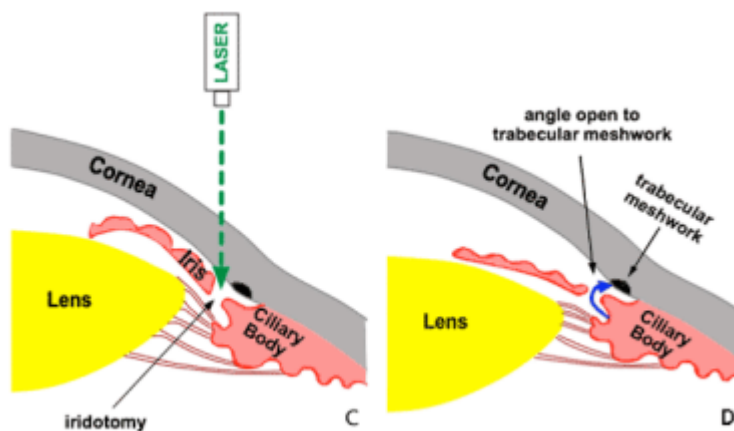


Figure 1. Anatomy of an open angle and a closed angle. This diagram depicts the structures of the front of the eye. The 'angle' is where the iris and the cornea meet and it houses the drainage structure of our eye called the trabecular meshwork. The blue arrows show the flow of aqueous humor, which is the fluid that fills the front part of our eye. Aqueous humor is produced by the ciliary body and in an open angle, is drained by the trabecular meshwork as depicted in the left half of the diagram. In the most extreme case of a narrow angle, the aqueous humor cannot drain into the trabecular meshwork because the iris obstructs flow of aqueous humor into the drainage structure. This can lead to increased eye pressure because aqueous humor is still being produced at the same rate, but not being drained at the same rate. In the case of narrow angles, the iris can sometimes partially obstruct the flow of aqueous humor into the drainage structure of the eye.



Laser peripheral iridotomy (LPI) is a very simple, painless and fast procedure that helps to increase the drainage of aqueous humor to prevent buildup of pressure in the eye. Figure 2 explains the procedure. You will be sitting in a machine where your chin and forehead rest. The doctor will ask you to be very still and you will see some bright flashing lights. Afterwards, the doctor may give you some eyedrops. You can resume your normal daily activities after the procedure. This procedure will prevent the pressure in your eye from being high or spiking during dilation. Routine visits to your eye doctor after this procedure are still required to ensure that your eye pressure is normal, that the peripheral iridotomy remains open and to ensure that your ocular health is normal.

Figure 2. Peripheral laser iridotomy. An eye specialist will use a laser beam to open a hole (iridotomy) in the iris as seen in the left hand figure. This will not cosmetically alter the way that your eye looks. As seen in the right hand figure, aqueous humor can flow through this iridotomy into the drainage system, even when the iris bunches up to open up the pupil such as in dim lighting or pharmacological dilation during your routine eye examinations. With this iridotomy, the risk of raised intraocular pressure is reduced.