

Columbus Ophthalmology Associates
PERIPHERAL IRIDOTOMY BY LASER

What is angle closure glaucoma?

Angle closure glaucoma is one of many types of glaucoma. Although many people think of glaucoma as just one disease, in fact there are many different forms of glaucoma. Differences depend in part upon where the blockage to the drainage of aqueous fluid occurs.

Aqueous fluid is produced near the pupil of the eye and helps to nourish the front part of the eye. This clear fluid must pass through the pupil before leaving the eye through a tiny drain called the trabecular meshwork. The balance between how much fluid is produced, and how much leaves the eye determines the eye pressure. When the amount of fluid leaving the eye is reduced, the eye pressure increases. This high pressure can lead to damage to the optic nerve and glaucoma.

In patients with angle closure, the blockage of aqueous fluid occurs at the pupil. This causes the pressure behind the iris to rise. As it rises, the iris is pushed forward covering the trabecular meshwork acting like a plug in a drain. Most patients with angle closure are unaware of this condition and the condition is detected through a routine eye examination (in these patients the drain is only partially plugged). Other patients, however, can have symptoms which include: redness of the eye, pain, blurred vision, brow ache and nausea (these patients usually have more complete occlusion of the drain). In patients with complete blockage, the pressure can increase to a level that can permanently damage the eye and cause blindness if not treated promptly. In general, the sooner the blockage of fluid flow behind the pupil is relieved, the less damage occurs.

What treatment is available?

The treatment, for both patients who have angle closure glaucoma and patients who are at risk for developing angle closure, is called a laser iridotomy. An iridotomy is a small hole that is placed in the iris that allows fluid to flow to the front of the eye and bypass the pupil. Ophthalmologists have used lasers to create this opening for the last 20 years. Lasers deliver focused light energy. This type of light energy is similar to using a magnifying glass to harness the energy from the sun to burn a hole in a piece of paper. The magnifying glass needs to be in focus to create the hole in the paper. Likewise, the ophthalmologist uses a slit lamp and special contact lens to properly focus the laser. The slit lamp is actually a microscope used in routine examinations that allows for precise focus of the laser.

Do not worry about the size of the hole in your iris. Neither you nor your friends will notice it. It is usually placed in the upper portion of the iris that is covered by your upper lid. The size of the iridotomy is only the size of a pinhead.

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Before having the iridotomy, your ophthalmologist will place three different eye drops. The first drop, pilocarpine, will make your pupil smaller. This thins out the iris making it easier for the laser to penetrate. Another drop will help prevent the pressure from increasing after the laser treatment. Immediately before the laser, a last drop will numb the surface of your eye. In order to properly focus the laser, the ophthalmologist places a special contact lens on the eye. A clear jelly is used on the lens to prevent scratching the surface of the eye. This jelly may remain on the eye for 30 minutes after the laser and cause temporary blurred vision. The laser itself is painless, but you may experience a light flash or stinging sensation.

What should I expect following the laser?

After the laser, the eye pressure will be checked to insure that it has not increased. There are no restrictions on your activity following the laser. You can expect some redness of the eye, a sensitivity to light, and a scratchy sensation. These symptoms may last for a few days. The risk of vision loss is extremely small. Some patients do notice a small amount of glare in certain conditions after the laser.

Most patients will use an anti-inflammatory drop for one week following the laser. In addition, some patients may still need to use eye drops or other treatments to keep the eye pressure sufficiently low.

Remember that the creation of a laser iridotomy is safe and effective. There are few risks. The purpose of the iridotomy is to preserve your vision.

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