

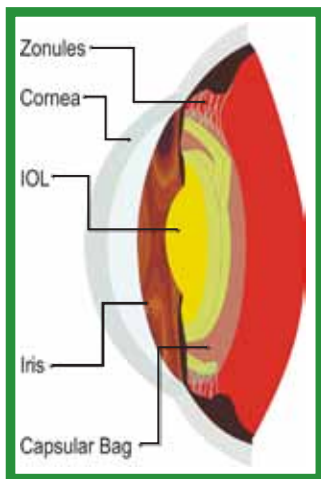
SIMPLY speaking

Common Eye Diseases

YAG CAPSULOTOMY

YAG Capsulotomy

YAG stands for three exotic elements: Yttrium, Aluminum, and Garnet. These elements combined with Neodymium make up the components of what is commonly referred to as YAG Laser. The laser emits an intense but invisible ray of light that causes a very tiny explosion in the space where the beam is focused. During treatment, each shot can be heard as a popping or a clicking sound. A red beam that is "on" all the time is used to aim the laser gun toward the area to be treated. The laser fires short millisecond bursts.



After successful cataract surgery and lens implantation, vision can blur within a few months to several years later. When the cataract is removed, the membrane around the cataract is left intact. This membrane is called the capsule. The capsule is preserved in modern cataract surgery for various reasons. One of them is to enable the surgeon to implant the IntraOcular Lens (IOL) and fixate it within the bag. This capsule is usually transparent but with time, it hardens and can become opaque. If the opacity becomes significant in the center of the capsule, vision becomes blurred or hazy. It would seem that the cataract has come back.

Indication

When significant opacification of the capsule and visual disturbance occur, the capsule must be incised or cut open just behind the IOL to remove the obstruction and bring back clarity. Incising the capsule is called capsulotomy. Before the use of the laser, a capsulotomy was performed using a needle or a thin blade inserted through the side of the eye. With the laser, capsulotomy no longer requires an incision into the eye. The laser beam goes through the transparent cornea and IOL, bursts behind the lens, and punches a hole in the capsule. Only the central portion of the capsule needs to be torn open. The laser is also used for cutting other membranes and for Laser Iridotomy (see Lasers in Glaucoma brochure).

The Procedure

The procedure is quick (<5 mins). The pupil is dilated with eye drops to increase exposure and access to the capsule and IOL. Once ready, the patient is seated in front of the Nd:YAG laser machine. The patient's chin is placed on the chin rest and the head kept steady with straps to the sidebars. A focusing lens is placed on top of the anesthetized cornea and held there by the doctor. The doctor aims the red beam on the capsule behind the IOL and fires the laser several times until there is a satisfactorily large opening in the capsule. The focusing lens is pulled away and some drops instilled. Eye drops may be prescribed by your doctor.

Effect of the procedure

There is no pain but there may be some glare because the pupil is dilated after the laser treatment. Vision will not be immediately clear but will soon return to what it was after cataract surgery unless the retina has developed degenerative changes.

*Laser is the acronym for Light Amplification by Stimulated Emission of Radiation.



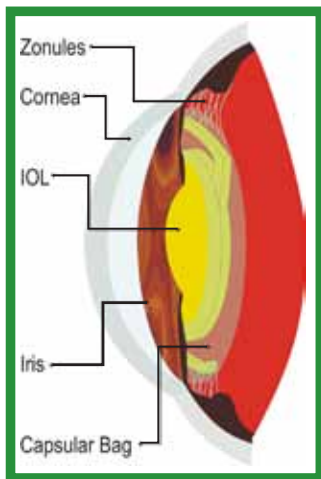
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