

# 4. Steps of laser cataract surgery

The time for surgery can vary for each individual patient taking somewhat between 10 and 15 minutes per eye. The surgical procedure itself can be divided into the following steps:

## Exam of your eye

The eyes will be examined properly so that the right artificial lens can be selected.

Your doctor will discuss the best individual option for you as a patient.



## On the day of surgery

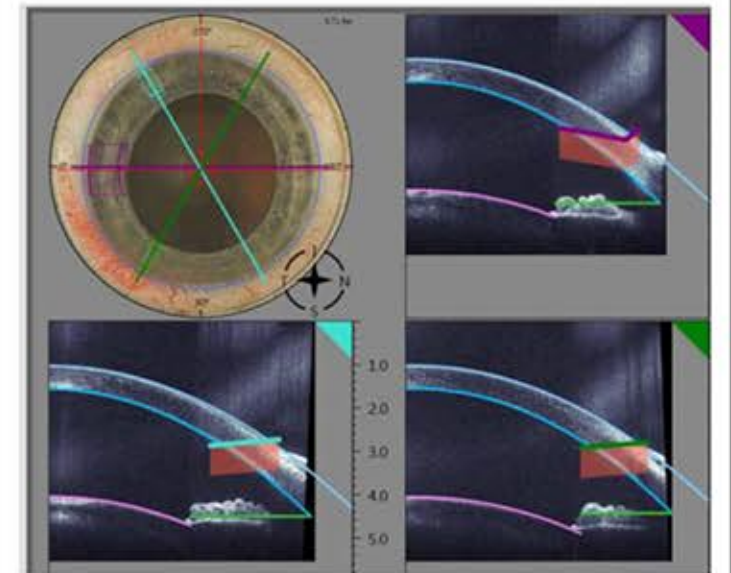
A comfortable surgical bed will be prepared. The area around the eye will be disinfected and dressed in sterile fashion.

Drops will be put in the eye so that no pain is felt during the procedure.



## Imaging of your eye structure

Before the laser treatment starts, an imaging system called OCT (optical coherence tomography) creates images of your eye structure that enable the surgeon to perform a really individualized treatment.



## Lens Fragmentation

The first part of the laser pre-treatment is the so called lens fragmentation. Within seconds, the laser fragments the clouded lens into precise sections customized for the individual patient.

This fragmentation makes it easier for the surgeon to extract the lens significantly reducing the phaco energy needed later which makes the surgery gentler.





## Capsulotomy

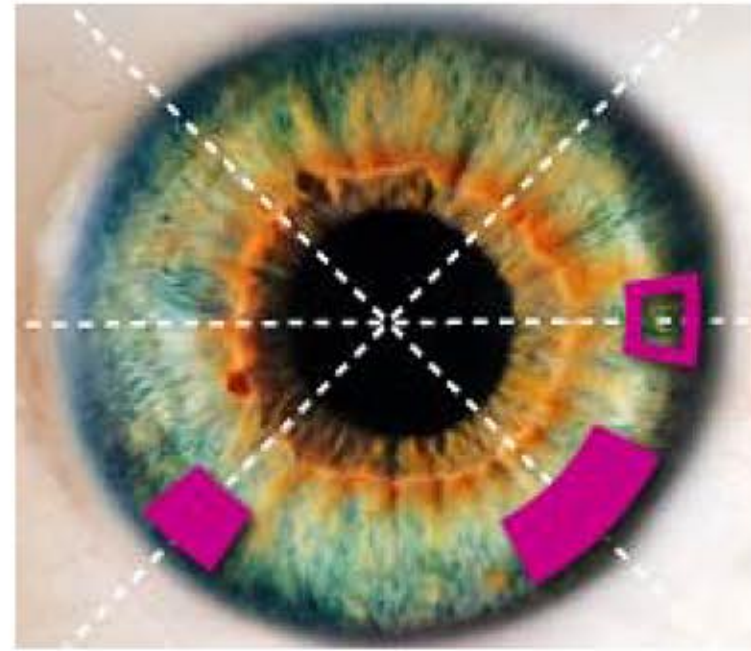
Secondly, a circular opening is made in the lens capsule; the so called capsulotomy. This opening will be used to place your new artificial lens in your eye. The capsulotomy performed by the laser is always perfectly round of the desired size.

The imaging system of the laser enables the surgeon to best place this opening which is important for a good visual outcome.



## Clear Corneal Incisions

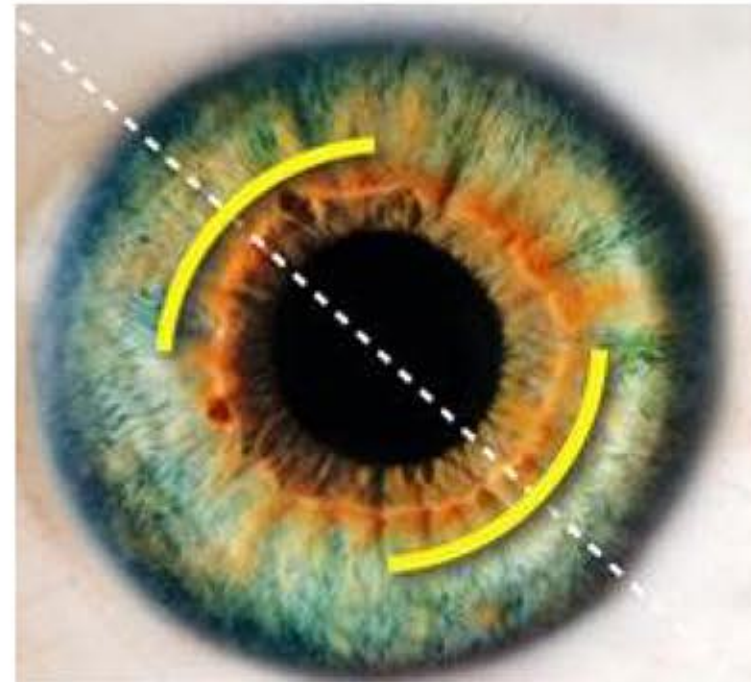
The next step includes the creation of tiny tunnels to gain the surgeon access to the lens. The laser creates these tunnels precisely within fractions of millimeters exactly where they are needed. With the precision of the laser the incisions are stabler and seal without sutures. Laser incisions help to avoid any unwanted changes to your cornea (no surgically induced astigmatism).



## Arcuate Incisions

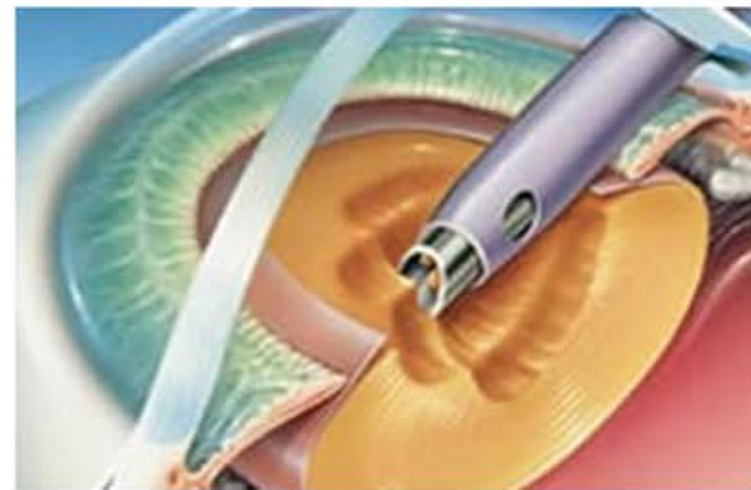
Finally, tiny incisions in arc shapes are created to reduce astigmatism. The laser creates these incisions with utmost accuracy in depth and arc length. The incisions will reduce astigmatism and improve the quality of your vision.

This step is only used for patients that suffer from astigmatism.



## Phacoemulsification

Now the laser part of the surgery is done and the surgeon continues with the actual replacement of your cloudy lens. The surgeon extracts the fragmented lens through the tiny tunnel access by aspiration. With the laser, this step is easier and gentler compared to conventional surgery.



## IOL Implantation

Finally, the artificial lens is inserted. This lens is made of an elastic biocompatible material. It is folded and can be implanted with a special injector. After the insertion the lens will be unfolded and aligned by the surgeon.

