Bring your Vision into Focus

Good vision is a major contributor to our quality of life. Seeing is independence, the freedom to do what you enjoy, and a life that is full of contrast and color. It is when our sight is impaired that we realize just how important good vision is in our everyday lives. Cataracts are a common cause of the gradual deterioration of vision, and are a normal part of aging.
Some of the symptoms you may experience are:
• Objects are not clear and colors appear dull,
• Driving at night is difficult, and
• Increased sensitivity to light.

This deterioration of vision has begun to affect your life; enough that you have consulted with your eye doctor. This booklet will help answer some of your questions about cataracts and explain how surgery will improve your vision. It is reassuring to know that cataract surgery is one of the most common procedures in the world, with highly successful outcomes.

What is cataract?

Cataract is a normal part of the eye's aging process and occurs when the crystalline lens becomes clouded due to a change in the structure of protein in the lens. With age, the lens becomes thicker and less transparent, preventing light from passing through and leading to a loss of vision. The condition is progressive, so over time vision quality diminishes, becoming dull and blurry –similar to looking through a dirty window. Cataract should be treated when the deterioration in your vision starts to impact your everyday life.

Signs of Cataract
• Gradual deterioration in the quality of your vision
• Hazy or cloudy vision
• Faded color perception
• Increased sensitivity to bright light
• Frequent changes in eyeglass prescription

Normal vision *Vision with cataract*

How is cataract treated?

To date, no medical treatment is available to delay or prevent the development of cataract. Surgical extraction of the natural lens, and replacement with an artificial intraocular lens (IOL), is the only technique certain to improve your vision and your quality of life.

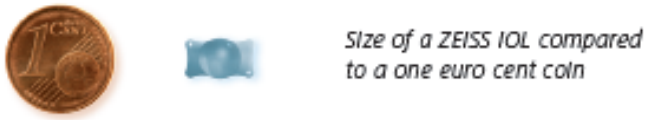
Cataract surgery is one of the most common, safest and most effective types of surgery in the world. The cataract affected lens is removed by a process called phacoemulsification, using an ultrasound probe that breaks down and removes the cloudy lens. An acrylic intraocular lens is implanted in its place. The entire procedure is performed through a tiny incision at the edge of the cornea. The incision is usually self-sealing, without the need for sutures, allowing for faster recovery. The procedure takes

approximately 15 to 20 minutes, and is pain-free with the use of a local or topical anesthesia.

What are intraocular lenses?

For such a small medical device, the intraocular lens is an amazing technology. Modern IOLs simulate the refractive properties of the natural lens so that you can enjoy better vision after surgery. Commonly made from an acrylic material, the lens optic is about 6mm wide and the thickness varies depending on the lens power. The IOL is made from a soft, foldable material that can be implanted through a micro incision, approximately 2.0mm in size. The most common type of intraocular lens has a monofocal optic that provides a single corrective power calculated to provide good distance vision. It is normal that with monofocal IOLs, for some tasks such as reading and close work, you may still need glasses. Prior to your cataract surgery, you and your doctor will discuss which IOL is best for your vision needs. Your doctor may recommend a ZEISS IOL.

ZEISS IOLs
CT SPHERIS® and CT ASPHINA® monofocal IOLs are innovative micro incision intraocular lenses with precise monofocal optics, providing clear distance vision after surgery.
ZEISS is a trusted brand in optics, and is well known for manufacturing a wide range of high quality lenses.



Size of a ZEISS IOL compared to a one euro cent coin

What are multifocal intraocular lenses?

Multifocal IOLs are more technologically advanced to provide more than one focal point. The base lens power is calculated to provide good distance vision and additional focal points provide vision at closer distances, such as for reading, writing or other close work.
Multifocal toric IOLs are designed for patients with astigmatism, to provide special toric correction for distance vision, as well as additional focal points for seeing objects that are up close.

Adjusting to multifocal IOLs
Multifocal IOLs project multiple images on the retina, which your brain uses for viewing objects at different distances. It is normal that it may take a few months for your brain to adapt and quality of vision to reach full performance.

Light phenomena
Immediately after surgery, you may experience some visual disturbances common with multifocal IOLs. This may be more evident under poor light conditions, such as

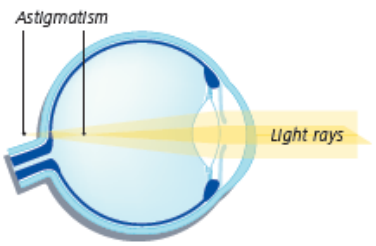
driving at night. These rings of light, commonly called ‘halos’, may appear around street lights or car headlights. As the brain adapts, these will diminish after a few months.

For patients with astigmatism

Corneal astigmatism is a common eye condition that causes vision to be blurry or distorted due to an irregular (slightly oval) shape of the cornea. This irregularity prevents the eye from properly focusing light on the retina. If you have cataract and astigmatism, you have the option to correct the cataract only, or for spectacle-free distance vision, your doctor may recommend a toric intraocular lens. When the lens with cataract is replaced, your astigmatism is corrected, giving you better distance vision than prior to surgery. You may need glasses for reading.

Astigmatism and cataract

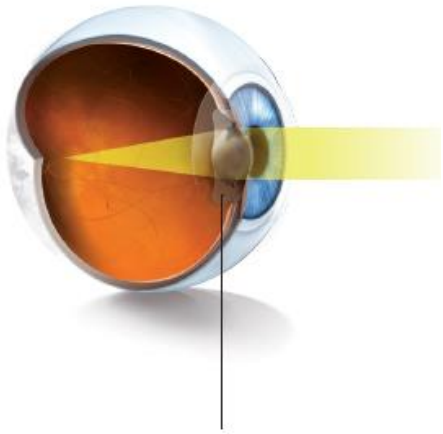
Corrected astigmatism and corrected cataract



Due to the irregular shape of the cornea, light focuses at different points.

What are toric intraocular lenses?

Toric IOLs are a special type of intraocular lens, with the optic shaped especially to correct corneal astigmatism. The light rays, which are distorted when passing through the astigmatic cornea, are corrected by the lens. Light is then properly focused on the retina, providing good distance vision. Implantation of a toric IOL requires exact measurements of your eye, to enable your surgeon to select the correct lens and angle or “axis” of implantation, to correct the regular corneal astigmatism. Your doctor will advise if a toric IOL is best for you. Enjoy better distance vision after cataract surgery with the implantation of a toric IOL.



ZEISS AT TORBI® toric IOL implanted after cataract surgery