



**LIBERTY**<sup>®</sup>

See more  
without  
glasses after  
cataract  
surgery

**FOR YOUR  
EYES**

# Get to know your Trifocal Liberty<sup>®</sup> intraocular lens

Trifocal



Trifocal Toric

## THE IOL



The real size  
of your  
Liberty<sup>®</sup> lens:  
Compared to a  
standard  
paper clip (28 mm)

An intraocular lens (IOL) is an artificial lens designed to replace the crystalline lens of the eye after cataract surgery. With a diameter of only 13 mm, an IOL is around half the size of a regular paper clip.

### Can you read this text without glasses?

This is the sample text.

With Liberty<sup>®</sup> you will most likely be able to read this text.<sup>1,2</sup>

### ■ INTERESTING FACTS

The history of the IOLs began during the Second World War, when Royal Air Force pilots suffered eye injuries from shattered Perspex aircraft canopies, but their body's immune system did not react to the PMMA splinters.

Modern soft, foldable acrylic IOLs are made from a material chemically similar to PMMA lenses, which are proven to be safe in the eye.

**LIBERTY**<sup>®</sup>

# Enjoy spectacle-free vision at multiple distances



**Trifocal intraocular lenses (IOL's)** are an advanced solution that can provide sharp vision at all distances without the need for glasses after cataract or lens exchange surgery.

If you have astigmatism, a **trifocal toric** lens can be implanted to simultaneously correct astigmatism, with the same lens.

✓ Near ✓ Intermediate ✓ Far



**Monofocal intraocular lenses (IOL's)** can provide sharp vision at only one distance. Clear vision is usually set for far distance and glasses are needed for intermediate and near vision tasks.

If you have astigmatism, a **monofocal toric** lens can be implanted.

Near Intermediate ✓ Far

## DID YOU KNOW?

Patients implanted with a monofocal lens usually need glasses for near vision activities, like reading. With the Trifocal Liberty® you are likely to achieve spectacle freedom for the rest of your life for the price of 5–6 reading glasses.<sup>3</sup>



# Cataract

## Progressive clouding of the natural crystalline lens

### ■ HOW DOES CATARACT DEVELOP?

As people age, the natural crystalline lens of the eye becomes cloudy. The most common cause of cataract is age-related however cataract can also develop due to trauma, the use of certain medications or the presence of certain diseases. Cataract can be present in one or both eyes.

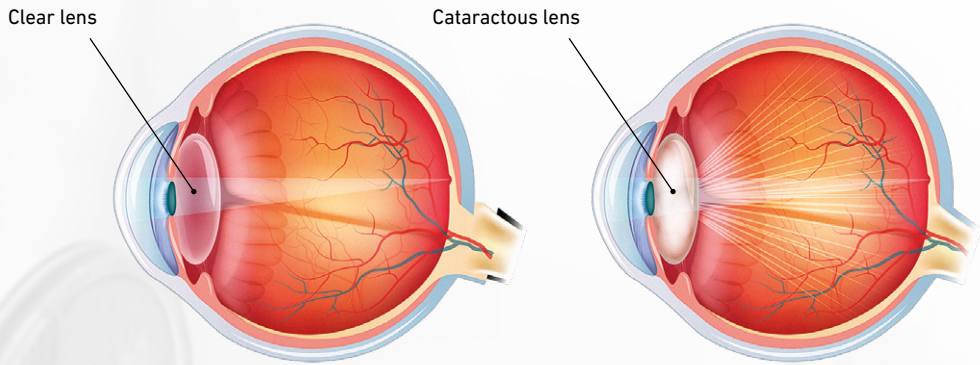
### ■ HOW DOES IT AFFECT YOUR VISION?

Cataract can cause blurred vision, problems with glare and faded colours. Difficulties with night vision can also occur. The severity of your cataract depends on multiple factors, including your age and individual health conditions.

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### DID YOU KNOW?

Currently, no medications are available to treat cataract and restore your vision. The only effective solution is the surgical removal of the cataractous lens along with its replacement with an artificial lens (IOL).



#### ■ INTERESTING FACTS ABOUT CATARACT SURGERY

The natural crystalline lens is removed during cataract surgery and replaced by an intraocular lens. Cataract surgery is considered to be one of the safest operations with a success rate over 98%<sup>4</sup>

Cataract surgery is one of the most common operations performed in the world. It usually takes between 20 to 30 minutes.<sup>5</sup>

#### ■ WHAT ABOUT LIBERTY®?

With the implantation of the trifocal Liberty® IOL, not only your crystalline lens is replaced, but the IOL is also able to correct previous refractive errors such as **myopia** (short-sightedness), **hyperopia** (far-sightedness), or **astigmatism**, and provide spectacle-freedom shortly after surgery.

# Presbyopia

## Increased difficulty in seeing near objects

### ■ HOW DOES PRESBYOPIA DEVELOP?

The natural hardening of the crystalline lens happens with age and results in a loss of flexibility, which is needed for **lens accommodation** (the ability of focusing on near objects).

Most people begin to notice the symptoms of presbyopia around or after the age of 40.<sup>6</sup>

### ■ HOW DOES PRESBYOPIA AFFECT YOUR VISION?

People with presbyopia find it difficult to see near objects clearly without the use of reading glasses. Headaches and eye strain may also occur. Holding objects further away from the eyes may help with overcoming symptoms during the early stages of presbyopia.

### DID YOU KNOW?

The development of presbyopia is a natural process. Presbyopia usually gets worse over time.

The symptoms of presbyopia can be overcome with reading glasses, contact lenses or refractive lens exchange with a trifocal intraocular lens in case you have an onset of cataract.

A photograph of a middle-aged couple sitting together, looking at a laptop screen. The woman on the left has blonde hair and is wearing a white button-down shirt. The man on the right has grey hair and a beard, wearing a white t-shirt. They are both smiling and appear to be in a bright, indoor setting with a window in the background. The text is overlaid on the bottom left of the image.

95% of Liberty® patients  
are **highly satisfied**  
with their vision  
at all distances after  
cataract surgery.<sup>1</sup>

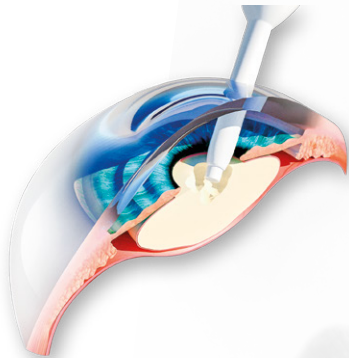
# Cataract Surgery

## Your next step to visual freedom

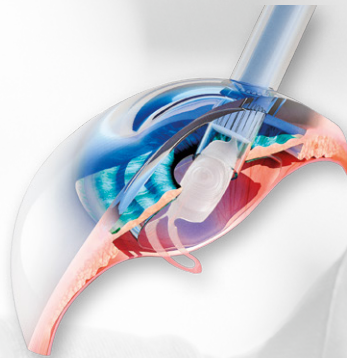
### DID YOU KNOW?

More than 27 million IOLs are implanted in the world every single year!<sup>7</sup>

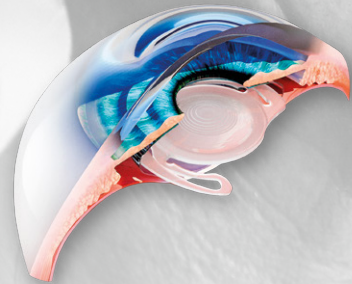
### ■ HOW IS THE TRIFOCAL LIBERTY® IOL IMPLANTED?



**Figure 1:**  
The crystalline lens is carefully removed through a small incision at the edge of the cornea.



**Figure 2:**  
An intraocular lens is implanted through the same incision.



**Figure 3:**  
The intraocular lens stays in a stable position within the eye.



### ■ IS THE SURGERY PAINFUL?

Cataract surgery is usually not painful due to the use of anaesthesia.

### ■ CAN I SEE ANYTHING DURING THE SURGERY?

It is possible that you will see light and movement.

### ■ WILL MY VISION IMPROVE IMMEDIATELY AFTER SURGERY?

You are likely to experience an immediate improvement in your vision, however it might take a few weeks to achieve optimal visual outcomes.

### ■ CAN THE IOL BE SEEN IN MY EYE?

Usually the IOL can not be seen in your eye.

### ■ HOW SUCCESSFUL IS CATARACT SURGERY AND WHAT ABOUT THE RISKS?

While the surgery is considered a safe procedure, the occurrence of complications and adverse events cannot be completely ruled out. However, these adverse events are **relatively rare** and can be treated successfully.<sup>8</sup>



Segundina Lao Tan (77)

” I was able to see right away after surgery. Now, I wake up and don't need to reach for my eye glasses anymore since I can see and read clearly. Before, I used a magnifying glass to read the small print in the newspaper. It's like I have new eyes! ”

# Glossary

## ACCOMMODATION

is the adjustment of the crystalline lens to keep close objects in focus on the retina.

## ASTIGMATISM

is a common vision condition that causes blurred vision. It usually occurs when the cornea (the clear front cover of the eye) is irregularly shaped.

## HYPEROPIA

also known as far-sightedness, is a common vision condition which results in near objects appearing blurry, while far objects may appear normal.

## INTRAOCULAR LENS (IOL)

is an artificial lens implanted in the eye during cataract surgery or clear lens extraction.

## MONOFOCAL

lenses are the most common type of intraocular lenses (IOLs) for cataract patients. Monofocal lenses are usually designed to restore far vision, while near vision usually will need further correction.

## MONOFOCAL TORIC

lenses are monofocal IOLs which also correct astigmatism.

## MYOPIA

also known as near-sightedness, is a common vision condition which results in far objects appearing blurry, while near objects may appear normal.

## PMMA

is polymethyl methacrylate, plexiglass.

## TRIFOCAL LENSES

are novel intraocular lenses (IOLs) with advanced technology, providing sharp vision for all distances (near, intermediate and far).

## WILL MY HEALTH INSURANCE COVER THE COST OF THE SURGERY?

Your health insurance provider may cover most of the costs associated with cataract surgery including the intraocular lens.

Please contact your health insurance provider to find out what you are covered for and if there are any out of pocket costs.

# References

1. Györy JF, Madár E, Srinivasan S. Implantation of a diffractive-refractive trifocal intraocular lens with centralized diffractive rings: Two-year results. *J Cataract Refract Surg*. 2019 May;45(5):639-646.
2. Randall TJ (ed.): *Understanding low vision*. New York: Americal Foundation for the Blind Press. 1983;p148.
3. Prescription eye glasses, typically cost about \$200. Available from: <https://bit.ly/2MOd0IP>
4. Turner, TD. What are the risks of cataract surgery? Available from: <https://visionaware.org/your-eye-condition/cataracts/risks-of-cataract-surgery/125/>
5. Paine, DA. How long does it take to remove a cataract? Available from: [https://www.emedicinehealth.com/ask\\_how\\_long\\_does\\_it\\_take\\_to\\_remove\\_a\\_cataract/article\\_em.htm](https://www.emedicinehealth.com/ask_how_long_does_it_take_to_remove_a_cataract/article_em.htm)
6. Bailey G, Thomson V. Presbyopia: What causes it and how to treat it. Available from: <https://www.allaboutvision.com/conditions/presbyopia.htm>
7. Eyeware News: Steady Growth in Cataract Surgical Procedures Is Expected Over the Next 5 Years. Available from: <https://eyewire.news/articles/annual-global-iol-procedures-expected-to-top-30-million-by-2021/>
8. Knobbe CA. Cataract surgery complications. Available from: <https://www.allaboutvision.com/conditions/cataract-complications.html>



**i** **DISCLAIMER**

This brochure was created to assist ophthalmologists in the education and preparation of patients for cataract surgery and does not replace professional consultation with the patients.

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**MEDICENTUR**

Material. Design. Optics.