

# ArtIOLs®

**IOls designed to provide similar optical performance of the human lens**



## Patient Information

**“Delivering continuous range extension of vision with excellent visual outcome across ALL distances, with minimal side effects”**



### General Information

You are probably reading this leaflet as you are unhappy with your vision. This may be due to presbyopia or cataracts and your consultant will discuss this with you and the possibilities available for better eye sight.

It is now possible to reduce your dependence or live without glasses due to modern eye surgery and a range of advanced lens implants especially designed for this type of condition.

Your Ophthalmologist can offer you a specially designed lens which has special optical properties to give you good vision for reading, intermediate and distance, but also has special extended depth of field properties which provides good clear vision from 40cm to far vision.

### Cause of Presbyopia

It is increasingly difficult to see close up as we get older as our eyes need to adapt focusing on objects near and far away. This is the normal adaptation of the crystalline lenses in your eyes and is also known as accommodation. The natural lens over time loses its elasticity and does not accommodate as well. This reduces the sharpness of objects close up and the visual impairment is called presbyopia.

### What is the impact of presbyopia?

This visual problem normally starts from about 40 years old due to the reduced ability for your natural lens to accommodate. This reduces your ability to focus on objects close up and they will only become in focus as you move them away from you. A classic

example would be reading a newspaper at full arms-length.

This problem impacts on many daily activities at work or at home, such as reading, writing, computer work, or hobbies. The result is often corrected with several types of glasses and can impact on the quality of life. This is especially true for people with mixed activities which require near, intermediate and distance vision on a continual basis.



### Cataracts

Normally due to the natural process of aging opacity of the crystalline lens makes images look distorted and cloudy. As the process continues over time the cataract becomes cloudy and the quality of vision decreases. Some other factors contribute to the speed of cataract development such as excess Ultraviolet light, smoking, and some diseases such as diabetes.

## Treatment Possibilities

Your Ophthalmologist will discuss these with you and it would normally involve a procedure called phacoemulsification. This procedure removes the old crystalline lens from your eye and replaces it with a specific type of new lens suitable for you. The most advanced lenses available are now Meniscus-EDOF & multifocal-EDOF (Extended Depth of Field) lenses.

Diffraction multifocal-EDOF lenses provide in most cases good vision for near, intermediate and distance vision, but can in some cases have common side effects such as halo and glare which can be difficult for night driving and similar activities. The newer meniscus-EDOF lenses provide lower incidence of side effects and more comfortable vision for near vision from 40cm to 90cm (Full Range of Vision), while distance vision will remain optimal.

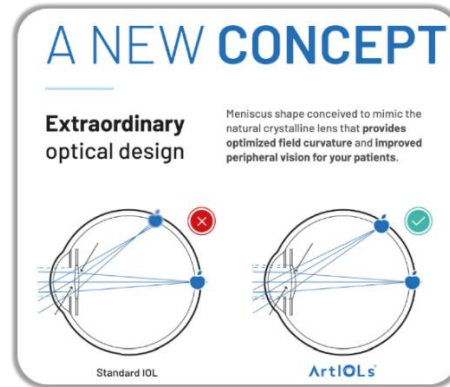
In most cases glasses will not be required and vision will be suitable for reading.

## What are ArtIOL® lenses

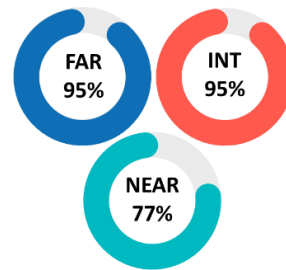
The ArtIOL® reproduce the imaging formation properties of the **natural crystalline lens** in the periphery of the retina with their **inverted meniscus design**.

Developed by Voptica S.L, they are a non-diffractive meniscus- extended depth of field (EDOF) lens delivering **Full Range of Vision**, which provides a wider sharp focus on the retina, resulting in high quality binocular vision from approximately **40cm to far vision**.

The ArtIOL® are available with two profiles the ArtIOL®40 and ArtIOL®70. Normally one of each lens is selected to complement each other for a smooth transition of vision from near through intermediate to far vision.



Percentage of patients reporting spectacle independence<sup>1</sup>:



<sup>1</sup>Marín JM et al. *Visual Performance at All Distances and Patient Satisfaction With a New Aspheric Inverted Meniscus Intraocular Lens.* J Refract Surg. 2023 Sep;39(9):582-588

The lenses work together and provide near, intermediate and distant vision, while the meniscus optic design allows clear focus on a greater area of the retina. This is particularly important for activities where peripheral vision is crucial such as driving, playing sports.

The ArtIOL® lenses have state of the art lens technology with an extended depth of field (EDOF) on a non-diffractive optical structure, reducing the risk of side effects such as halo and glare.

Recent studies have shown the majority of patients with ArtIOL® lenses can have a life style without the need for glasses<sup>1</sup>. This means you could get the most out of life and carry out those visual tasks, which are currently difficult and perform your normal activities.

There are very occasionally some side effects these do not significantly affect vision and over time usually decrease, as the non-interrupted and non-stepped optical surface minimizes visual disturbances.

ArtIOL® is another step forward in lens technology which helps reduce halo & glare and other visual disturbances, while providing a good functional Near vision and excellent Intermediate to far vision.



For more information, please speak to your Eye Surgeon or Consultant.

