

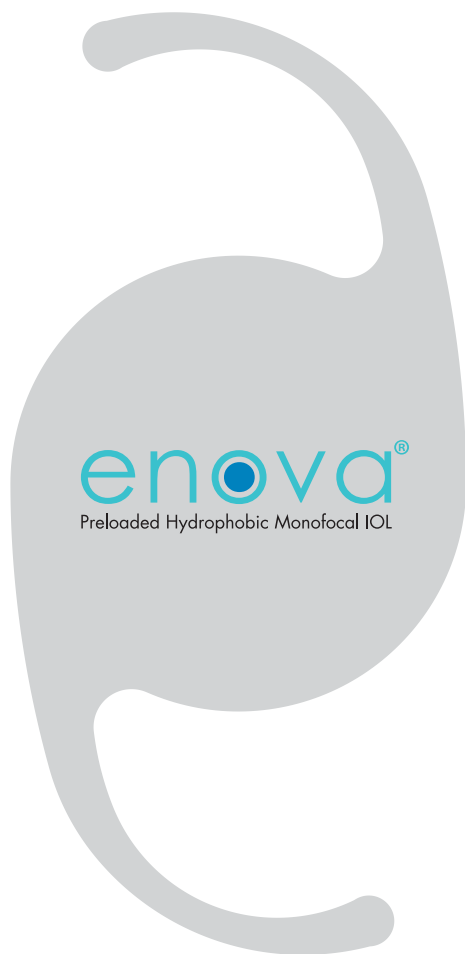
Enovation of Hydrophobic IOLs



The illustration depicts the evolution of man through three stages: an ape-like ancestor, a crouching hominid, and a modern human. The first two figures have teal-colored areas on their backs and heads, while the third figure is entirely white. The background features a large, stylized white 'C' shape on a dark blue background.

enova[®]
Preloaded Hydrophobic Monofocal IOL

Enovation of Hydrophobic IOLs



100%
Glistening-Free Material



Outstanding
Biomechanical Properties



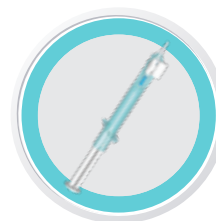
Clinically Proven
Low PCO Rate



Pre-Conditioning Free

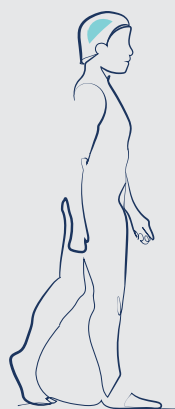


Preloaded



Enovation of Hydrophobic IOLs

Hydrophobic IOLs have evolved significantly over time, and Enova® represents the pinnacle of this evolution. That's why we call it "Enovation".



enova® Generation

Enova® is the only 100% glistening-free¹ hydrophobic acrylic IOL that requires neither pre-hydration nor storage in saline. Enova®, which has 7% water content, is dry-packed and has excellent optical and mechanical properties with a preloaded system.



2ND Generation Hydrophobic IOLs

Hybrid polymers, which include less than 5% water content, demonstrate a so-called control over water uptake and improved resistance to glistening formation, albeit at reduced levels. However, IOLs made from such materials either have poor mechanical properties or require both pre-hydration and storage in saline².



1ST Generation Hydrophobic IOLs

Acrylic IOLs, with less than 1% water content³, develop various levels of glistening post-implantation due to uncontrolled water intake into the IOL polymers.

1- Glistening Analysis in Enova® Hydrophobic Acrylic Intraocular Lenses / In-vitro Study Evaluating the Tendency of Different Intraocular Lenses to Form Intraoptical Glistenings by the University of Utah

2- Bausch & Lomb. enVista Directions for Use

3- Comparative analysis of in vitro accelerated glistening formation in foldable hydrophobic intraocular lenses. International Ophthalmology Tandogan, T., Auffarth, G. U., Choi, C. Y., Son, H.-S., & Khoramnia, R. (2021).



Enovation of 100% Glistening-Free IOL Material

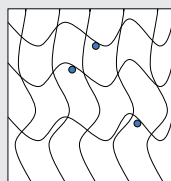
The Enova® IOL Material is the first 100% Glistening-Free hydrophobic acrylic IOL that does not require pre-hydration and storage in saline solution!

The Enova® PGF3 IOL is dry-packed and boasts exceptional optical and mechanical properties.

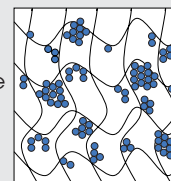
Glistening Formation in Most of the Hydrophobic IOLs

Water molecules bind to certain chemical groups through weak hydrogen bonds. Over time, more water molecules diffuse into the polymer network and bind preferably to other water molecules, which forms clusters referred to as "glistening."

First day of implementation



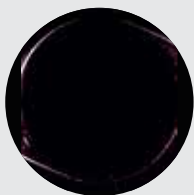
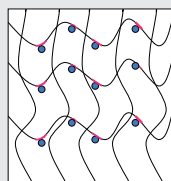
One year after the implementation



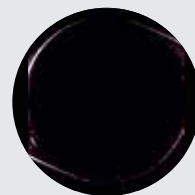
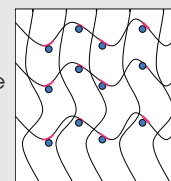
ENOVA® 100% Glistening-Free Hydrophobic IOL

The unique composition of Enova® material allows the uniform hydration of specific sites, controlled water uptake, and resistance to glistening formation.

First day of implementation



One year after the implementation



100%

unique hydrophobic
IOL material

in-house production



Enovation of 100% Glistening-Free IOL Material

Conclusion by the University of Utah



In vitro glistenings study: University of Utah

Study: *In vitro study evaluating the incidence of different intraocular lenses*

to form intraocular glistenings

STUDY REPORT

Intermountain Ocular Research Center
Julia A. Moseley Eye Center
University of Utah

Sponsor: VSV Biotechnology



In vitro glistenings study: University of Utah

Conclusions: Enova® hydrophobic acrylic intraocular lenses exhibited no glistening formation after hydration and variation of the temperature. Tecnis intraocular lenses exhibited trace glistening formation, and AcrySof intraocular lenses exhibited mild glistening formation in these in vitro test conditions. The new Enova® intraocular lenses showed no surface haze and glistenings when compared with other commercially available hydrophobic acrylic IOLs as AcrySof and Tecnis intraocular lenses.

Liliana Werner, MD, PhD

Nick Mamalis, MD

Week 1: The findings at this time point were generally similar to those on Day 1. Overall, whenever glistening formation was observed in this study at week 1, it was mostly within the central 4.0 mm of the IOL optic.

- Enova® IOLs: No glistening, no haze.
- AcrySof IQ IOLs: Mild optic haze (giving the lens a slight yellowish/brownish discoloration under light microscopy) and mild glistening formation. Diameter of the glistenings: 10 to 20 microns.
- Tecnis IOLs: Moderate central optic haze (giving the central part of the optic a yellowish/brownish discoloration under light microscopy) and trace glistening formation. Diameter of glistenings: 25 microns.

In an attempt to quantify glistening formation within the lenses, the number of glistenings or microvacuoles (MV) that were well focused in the X200 light photomicrographs (area of 0.35 mm²) were counted, and the results were converted to MV/mm².

IOL	MV/mm² Week 1
Enova®	0
AcrySof IQ	8.7
Tecnis	2.9

Table 1 : Number of Microvacuoles Converted to MV/mm²



In vitro glistenings study: University of Utah

Conclusions: Enova® hydrophobic acrylic intraocular lenses exhibited no glistening formation after hydration and variation of the temperature. Tecnis intraocular lenses exhibited trace glistening formation, and AcrySof intraocular lenses exhibited mild glistening formation in these in vitro test conditions. The new Enova® intraocular lenses showed no surface haze and glistenings when compared with other commercially available hydrophobic acrylic IOLs as AcrySof and Tecnis intraocular lenses.

Liliana Werner, MD, PhD

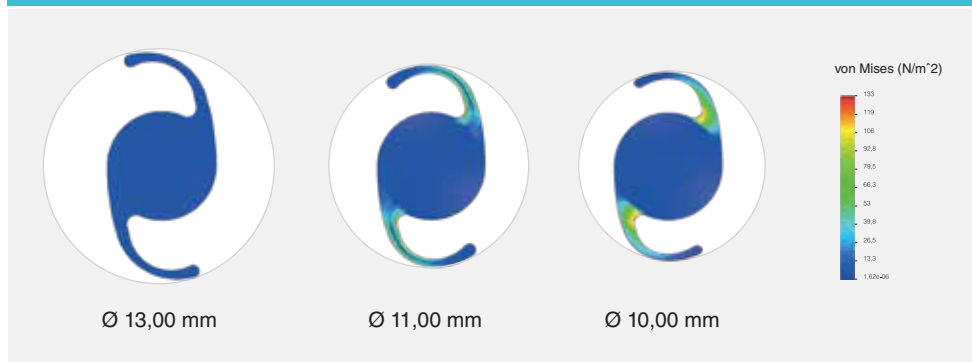
Nick Mamalis, MD



Outstanding Biomechanical Properties

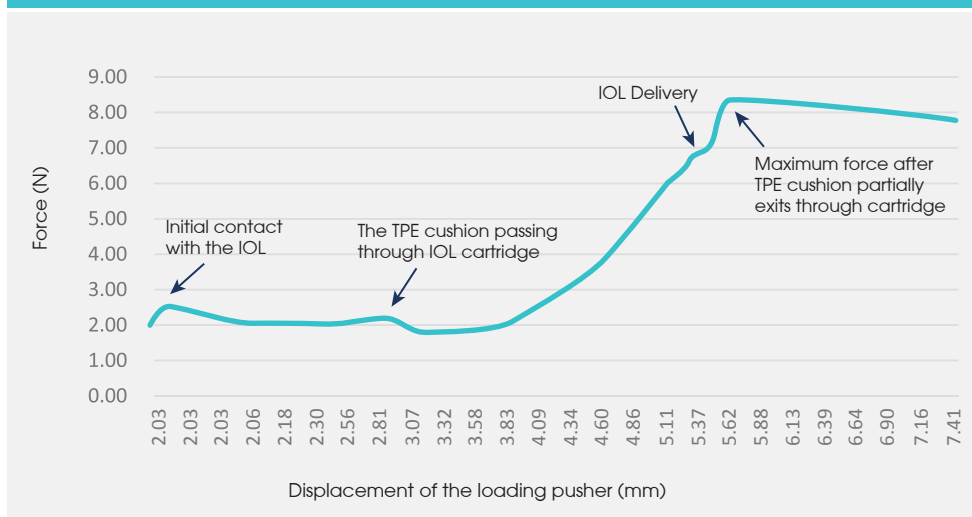
Gentle and controlled unfolding process in the posterior chamber and no pre-warming or special pre-conditioning is required.

Biomechanical stability of IOL inside the post-cataract capsular bag



Introducing our groundbreaking IOL, delivering easy unfolding, special haptic design and IOL memory effect for great stability, and smooth injection capability.

Description of the IOL delivery process



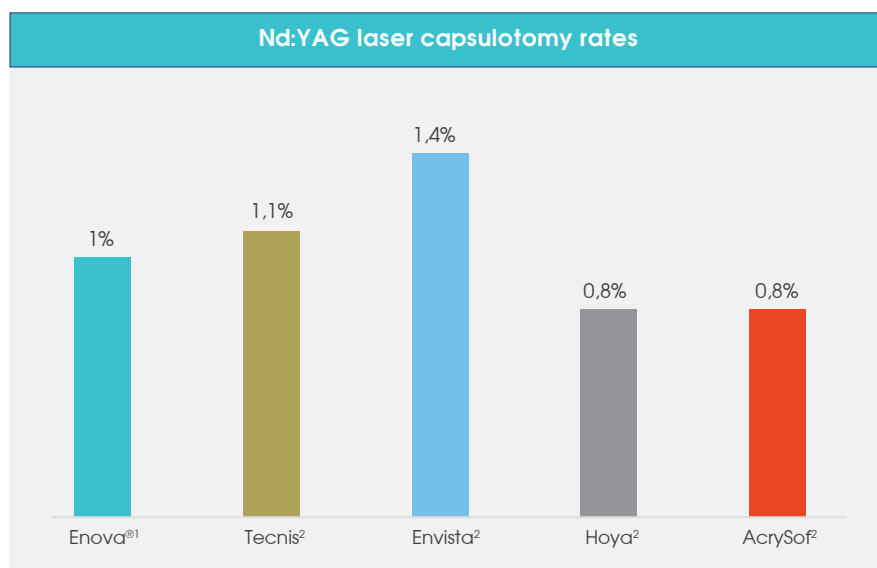
Experience the convenience of controlled deployment for precise positioning and a seamless implantation process.



Clinically Proven Low PCO Rate

Posterior capsule opacification (PCO) after cataract surgery is impacted by the intraocular lens' (IOL) design and material. Enova®'s new 100% Glistening-Free material minimizes the risk of PCO and Nd: YAG procedures after implantation.

In the multicenter studies performed on Enova® IOLs, PCO was evaluated on 320 eyes. After 1 year, the post-operative results showed that only 5% of the total eyes and 1% of total implantations had PCO, necessitating Nd-YAG laser treatment.



1- VSY Biotechnology Data on File, 2023.

2- RCOphth National Ophthalmology Database Audit Feasibility Study of Post-cataract Posterior Capsule Opacification 2021

No Pre-Conditioning Required

A polymer's Glass Transition Temperature (T_g) is reached when the polymer changes from a rigid material to a soft material. Having a T_g of -2.0°C, all IOLs with the unique Enova® material undergo a gentle and controlled unfolding process below standard operating room temperatures.

Thus, no warming or special pre-conditioning is required.

IOL	T _g (°C)	Glistening	Packaging State
enova®	-2.0	No	Dry
AcrySof Vivity®	15	Yes	Dry
Tecnis®	14	Yes	Dry



Ready-to-Go Preloaded System

Due to its patented Rotaryjet technology, the Enova® Hydrophobic IOL with the Rotaryjet Preloaded IOL system provides a safe, efficient, and user-friendly delivery procedure. Its smart design allows for reliable surgery with smooth IOL implantation and reduced post-op risks.

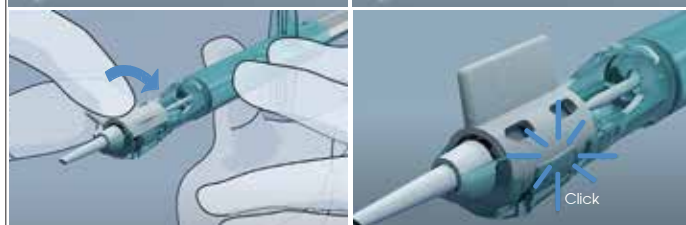
Step 1

Apply BSS, followed by the OVD. The IOL must be implanted within one hour.



Step 2

Rotate the mechanism through 90 degrees until you hear the 'click'.



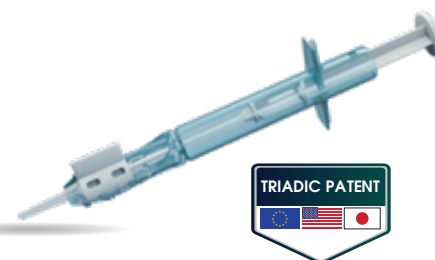
Step 3

Push the injector until the blue cushion is visible through the cartridge. Then, pull it back gently until it is automatically stopped by the barrier.



Step 4

Now it is ready to inject.



Technical Features

Enova [®] PGF3		
Material	Single Piece, 100% Glistening-Free, Hydrophobic Acrylic, Dry-Packed	
Refractive Index	1.53 (546 nm)	
Glass Transition Temperature (Tg)	-2°C	
Water Content	7%	
Square Edge	360° square edge	
Optic Diameter	6.00 mm	
Overall Diameter	13.00 mm	
Haptic Design	C-Loop	
Haptic Angle	0°	
Lens Color	Clear	
Photo Protection	UV Filtration	
Recommended Constants	Ac A constant: 118.0 SRK-II: 118.7 SRK-T: 118.7 Haigis a0, a1, a2: 1.11, 0.4, 0.1 HofferQ pACD: 5.37 Holladay sf: 1.62 Barrett Universal II LF: 1.73	
Optic Design	Monofocal, Biconvex Aspheric	
Spherical Power Range	Preloaded	From +6.00 D to +30.00 D (0.50 D increments)
	Standalone*	From 0.00 D to +32.00 D (0.50 D increments)
Recommended Injector System	Rotaryjet Preloaded System (2.2mm - 2.4mm)	

*Recommended injector system: Acrijetfly

enova[®]

Preloaded Hydrophobic Monofocal IOL

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