FEA Used To Restore Eyesight

Traditional cataract surgery may remove the cloudiness from a patient's vision, but usually destroys the ability for their eyes to focus on objects up close.

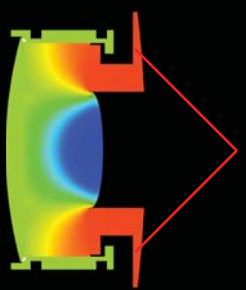
Using NEi Nastran FEA Software, NuLens LTD. has developed a prosthetic adjustable lens replacement. Now patients are able to receive clear vision with the ability to focus on images up close and far away.

Imagine an 80 year old cataract patient having better eyesight than when they were 25.

This amazing feat was achieved by designing a lens that mimics the mechanics of the human lens. Conventional cataract surgery uses a simple fixed lens, which restores vision but is not attached to the eye muscles that focuses the eye's lens. NuLens is more than a lens, it's a flexible lens mechanism that is attached to the eye's focusing muscles.

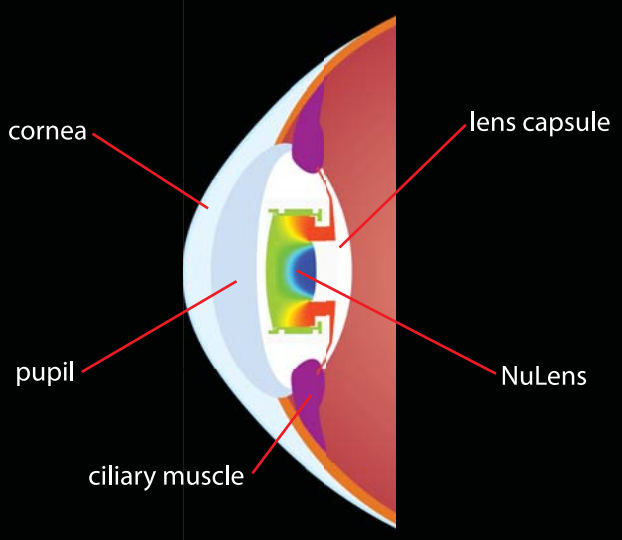
Why did NuLens choose NEi Nastran? NEi Nastran was used during the design process of NuLens to determine the plunger force and displacement required to achieve the desired optical power or deformed shape for lens sizing. NEi Nastran has advanced nonlinear analysis capabilities such as surface contact with large strain hyperelastic materials that can handle large displacement scenarios. These were required analysis tools for the design of NuLens that other FEA software applications considered simply lacked.

Discover more at: NEiSoftware.com/NuLens



The eye's ciliary muscles flex the NuLens plunger tabs, causing the lens to bend. Bending of the lens is how the eye focuses.

NuLens Adjustable Lens Mechanism
Designed With NEi Nastran



NuLens After Surgical Insertion

NEi Software, Inc. **NEiSoftware.com** **877-Nastran**