

New Technology Or Highly Improved Medical Advancement?

Premium IOL Cataract Surgery



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A Board Certified Ophthalmologist, Dr. Boles is considered one of Maryland's top Surgeons with a subspecialty in cataract and glaucoma disease. Voted by his peers as Top Doc in 2009, Dr. Boles is founder and Medical Director of Anne Arundel Eye Center, a state-of-the-art treatment center offering complete ophthalmic exams as well as diagnostic pre and post-surgical eye care. This article is part of a larger ongoing series. For more information, go to www.AnneArundelEyeCenter.com or call (410) 224-2010.

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By the 21st century, it is reported that over a million IOLs are implanted annually in the U.S.

Sir Harold Ridley was the first to successfully implant an intraocular lens (IOL) on November 29, 1949, at St Thomas' Hospital at London. That first intraocular lens was manufactured in East Sussex, England from Perspex CQ Polymethylmethacrylate (PMMA). It is said the idea of implanting an intraocular lens came to him after an intern asked him why he was not replacing the lens he had removed during cataract surgery. The acrylic plastic material was chosen because Harold Ridley noticed that it was inert, after seeing RAF (Royal Air Force) pilots of World War II with pieces of shattered canopies in their eyes (this acrylic resin is known by several trade names including Lucite and Plexiglas). The intraocular lens did not find widespread acceptance in cataract surgery until the 1970s, when further developments in lens design and surgical techniques had come about. Today, patients may have options when it comes to cataract surgery lens choices. A consultation with an experienced and knowledgeable Ophthalmologist will guide the patient on advice as to what choices are suitable concerning their particular vision and lifestyle.

Cataract surgery involves the removal of the eye's natural lens and the implant of a new artificial lens. **In the past, there were only standard IOL's (intra ocular lens), which allowed for vision at only one distance.** This meant that cataract patients would need glasses after cataract surgery to be able to see at all distances.

Premium Lens

A premium lens is now an option for cataract patients and has continually improved with new generations of lenses entering the market over the last decade. In the coming years, there is expected to be continuing releases of new lenses allowing cataract surgeons and their patients many options. Among the types of new lenses are Multi-Focal Lenses, Accommodating Lenses and Dual-Optic Accommodating Lenses. Each type of premium lens has its own advantages and disadvantages, as well as its own costs. There are many types of premium lenses, each for specific types of cataract patients. One of the most important factors

when choosing a lens for a cataract patient is the Ophthalmologist's understanding and management of patient expectations.

Premium IOL's are not covered by insurance or Medicare, which means that cataract patient's who choose a premium lens will need to pay out of pocket for the additional cost of the premium lens as well as the additional cost of the surgical center and surgeons fee. Often the lens price alone is around a thousand dollars a lens. Your cataract surgeon will discuss the full price of your specific lens at the time of consultation as well as their fee for implanting the specific lens.

Types of Premium Lenses

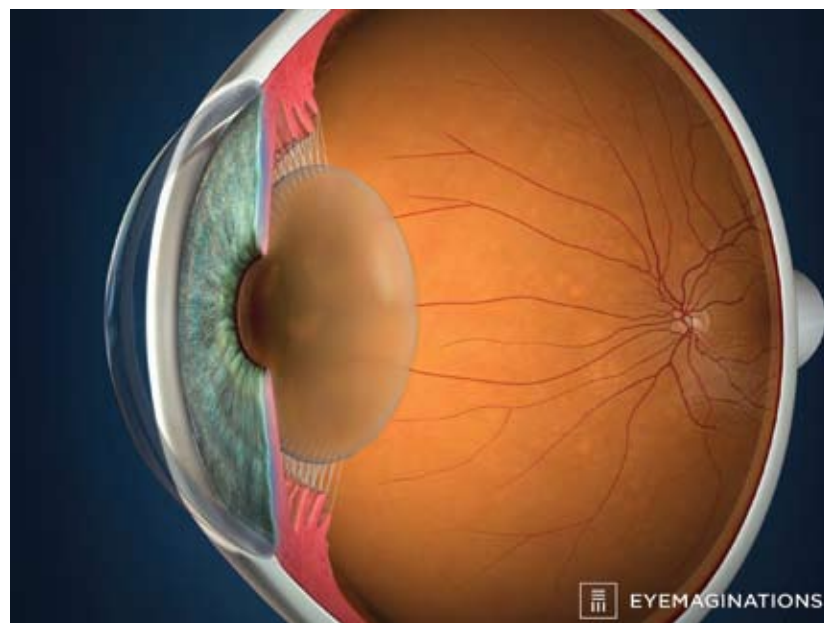
Multi-Focal Lenses

Multi-Focal Lenses are lenses that have multiple viewing areas that allow the cataract patient to view at multiple distances. Much like bi-focal glasses, these lenses have different regions set to refract differently. Sometimes these lenses

for viewing at all distances. Unlike Multi-Focal Lenses, an Accommodating Lens is much more like the natural lens that was removed during cataract surgery. The natural lens has muscles that pull on the lens, altering its shape, which allows the eye to focus. An Accommodating Lens aims to have this same functionality. Over the next few years there are expected to be many different Accommodating Lens designs. Each will use slightly different methods to achieve accommodation.

Dual-Optic Accommodating Lens

A Dual-Optic Lens is a premium lens that has two optics. This means that it has two different lens pieces that adjust with the natural movements of the eye. Much like a combination of an Accommodating Lens and a Multi-Focal lens, this type of lens seeks to allow for vision at all distances. Currently there are many designs for dual-optic lenses. Over the upcoming years there are expected to be even more.



Example of Complex Cataract requiring surgical removal

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are even intentionally different in each eye to allow for specific types of intermediate vision. This is where a good understanding of the patient's desired outcome becomes critical. Only if the surgeon understands the patient's goals will they be able to choose the best premium lens or premium lens combination.

Accommodating Lens

An Accommodating Lens is a lens that is made to move, adjust or otherwise alter itself to allow

Only time will tell as to which type of premium lens will prove best (if any) but the future does look bright for cataract patients. With the ever growing number of premium lenses, cataract surgeons and their patients will have many options to improve their vision and quality of life.

To learn more or find out whether Premium IOL for your Cataract Surgery may be a viable option for your eye health, talk with your Ophthalmologist.