

# Treatment Options Multiply for Presbyopia Surgery

By Jay Greene

One of the biggest changes in ophthalmology the last few years is the use of lens implants to treat presbyopia.

Presbyopia is a condition that is a natural effect of aging, in which the eye loses its ability to focus up close. It starts to affect people in their middle 40s. As the world's most common ocular condition, an estimated 100 million people in the U.S. have it. The first sign of presbyopia is difficulty reading fine print.

What was so clear in your 20s, 30s and early 40s are now simply hazy blurs.

For years, many people simply corrected this problem with reading spectacles.

Just within the last few years, the U.S. Food and Drug Administration has approved a number of outpatient treatment options to correct presbyopia.

"The use of accommodating lens implants such as the Crystalens is one of the most exiting frontiers in ophthalmology," says Dr. Y. Ralph Chu of Chu Vision Institute. "These procedures have allowed us to perform intraocular lens implants to increase patients' range of focus."

Dr. Chu says the typical patient seeking presbyopia correction who enters Chu Vision Institute is age 50, has mild complaints of cataracts and has difficulty seeing in dim lighting conditions.

Patients often describe the problem as their "arms are too short — the so-called alligator arm syndrome — where they must move near objects and reading materials farther away in order to see them clearly and in focus."

Dr. Chu first performs a medical evaluation and discusses a variety of lifestyle issues before choosing a treatment course.

"A typical evaluation begins because

the patient has decreased vision due to cataracts and they would also like to reduce their dependency of reading glasses. During the examination, we first ensure the entire ocular system is healthy. We evaluate them to see which implant would be their best option, based on a number of factors."

Lifestyle issues are an important factor in determining the treatment option, he says.

"We can customize our procedures to their needs. We interview the patient during the exam to better understand what they do on a daily basis. For example, we ask what they do for a living, what are their hobbies? Do they like to do needlepoint or do they play golf? Are they a truck driver who works at night?"

More than a decade ago, the only surgical options for presbyopia correction involved producing what is known as monovision, whether with contact lenses or during LASIK surgery. Monovision correction involves adjusting one eye for improved near vision, and the other for distance.

But Dr. Chu says not all patients tolerate monovision.

"It doesn't work for all patients. Some patients may experience a loss of depth perception or have a feeling of being off balance," Dr. Chu says.

Another option that was more popular just a few years ago for presbyopia was conductive keratoplasty (CK). The FDA approved CK in 2004 for presbyopia correction.

"It is a niche procedure, a modified form of monovision," Dr. Chu says. "It is very good for patients who can tolerate monovision. This procedure isn't as

popular, but it is a great tool to have as an option."

Over the last four years, Dr. Chu says the Crystalens implant has become the most common and popular option for his patients. It is designed to address the loss of intermediate and near focusing ability.

"The Crystalens implant is an accommodating intraocular lens. It has hinges that allows the lens to flex or move in the eye. That flexion increases the range of focus and that allows people to see more clearly at any distance."

Patients choosing to have a presbyopia-correcting lens implant will likely find that they can drive, watch television, read or do crafts with a decreased dependency on their glasses, Dr. Chu says.

Because presbyopia also affects just about everyone who has cataracts, Dr. Chu can now fix the cataract and correct presbyopia by replacing the clouded natural crystalline lens (with the cataract) with a single-lens implant.

"I am most excited about using lens implants for people who have had cataract surgery and now have presbyopia and want to restore reading vision," Dr. Chu says.

The surgical procedure is now much less invasive, with small incisions and recovery time much quicker, he says. It works like this: After removing the natural lens inside the eye during surgery, an intraocular lens is placed within the eyes.

There are several types of lenses for correcting vision after the natural lens is removed. With the standard monofocal intraocular lens, patients have their cataracts corrected and have good distance vision, but they will need reading glasses.

Chu Vision Institute is a state-of-the-art eye center specializing in refractive, cataract and corneal surgery.



Multifocal intraocular lenses include AcrySof, ReSTOR and the ReZoom. The only available accommodating lens on the market is the Crystalens.

Dr. Chu says the outcomes are excellent. "Patients are able to function better now than they ever had before. It gives them a different life with more freedom," he says.

On June 30, the U.S. Food and Drug Administration approved the Crystalens HD (high-definition) implant. The HD lens is designed for patients with cataracts who could also benefit from receiving a presbyopia-correcting lens.

"It has an improved optic design that gives patients better reading strengths," Dr. Chu says. It provides clear vision for people over a wide range of distances, from reading street signs to fine print, he says.

Chu Vision Institute was one of the FDA investigation sites to be involved in the Crystalens HD.

"Clinical trials are a critical part of our practice because they give us the opportunity to bring the latest technologies into our practices, which keeps us on the cutting edge," Dr. Chu says. "Clinical trials give our patients options they may not have had access to, and gives us a glimpse into the future."

Opened in 1999, Chu Vision Institute in Edina is a consultative refractive, cataract and corneal surgical practice. Dr. Chu's staff of 15 includes one primary care optometrist who helps him manage pre- and postoperative surgery. ■

## advertisers' index

Chu Vision Institute....	Inside Back Cover
CRL VeinClinic .....	9
Crutchfield	
Dermatology.....	Inside Front Cover
Edina Plastic	
Surgery, Ltd. ....	Back Cover
Minnesota Vein Center .....	11
Plastic Surgery	
David Thao, M.D., PA.....	8