

# Choosing a Presbyopia-Correcting IOL for the Avid Marksman

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A 58-year-old male with spherical corneas presents with visually significant bilateral cataracts. This patient is an avid long gun and bow hunter and enjoys frequent recreational pistol shooting. He is interested in a premium IOL. Which presbyopia-correcting lens would you recommend and why? What routine concerns would you have?

## STEVEN J. DELL, MD

The visual demands of avid marksmen can be intense and somewhat counterintuitive to those unfamiliar with the sport. For example, it may be surprising to learn that sighting is generally performed with both eyes open unless one is attempting to sight with the nondominant eye for reasons such as a contralaterally dominant hand. The front sight of a long gun or a pistol held at arm's length is approximately 1 m from the shooter's eye. The shooter typically alternates focus between the target and the front sight. However, most agree that the front sight needs to be clearly focused just before the shot. If the target is a round bull's eye, a small amount of blur at distance will still allow the shooter to make a fairly precise determination of the target's center. In light of the patient's requirements, I would advise against multifocal IOLs and suggest implantation of the Crystalens HD (Bausch & Lomb, Rochester, NY) targeted for plano. This option would allow extremely high-grade distance and intermediate vision. I would probably approach the patient's nondominant eye in the same fashion or perhaps with -0.25 D of defocus.

## JAY S. PEPOSE, MD, PhD

I would recommend phacoemulsification with bilateral implantation of the Crystalens HD in this case. Given his

avocation, this patient is in need of both excellent uncorrected distance visual acuity and high levels of image quality in both high- and low-contrast situations. He also must be able to align the target using the sights of the gun or bow, which requires good intermediate vision. When emmetropia is obtained, the Crystalens HD provides excellent uncorrected distance and intermediate visual acuity as well as high-quality vision without sacrificing mesopic contrast sensitivity or inducing night glare or dysphotopsia.

## KARL G. STONECIPHER, MD

For the avid sportsman, vision is vital in multiple lighting conditions, whether it is early in the morning, in the middle of the day, or at dusk. Hunters' visual needs are primarily distant and intermediate, so I suggest concentrating on those. I would recommend the Crystalens Five-O (Bausch & Lomb) in this patient's dominant eye, but I would not implant a lens in his other eye until I knew what the patient liked and disliked about the results of his first surgery. If he were happy with his distance and intermediate vision but unhappy with near, I would implant a Crystalens HD lens in his nondominant eye, as long as his pupils were not less than 2.0 mm or greater than 5.5 mm. I would implant the Crystalens Five-O in his second eye if the patient were happy with the vision in his dominant eye. As a third option, I could use a modified monovision target of -0.50 D or -0.75 D in the patient's second eye with the Crystalens Five-O to improve his near vision.

## STEPHEN A. UPDEGRAFF, MD

Consideration should be given to this patient's habitual prescription before his cataracts developed. Marksmen

"Consideration should be given to this patient's habitual prescription before his cataracts developed."

—Stephen A. Updegraff, MD

have unique demands that they may have compensated for over the years if they were myopic, hyperopic, or astigmatic. For instance, a marksman who shoots open sights versus a scope is more dependent on his ability to see at near and intermediate distance to line the rear sight with the front. At a target range, some riflemen wearing trifocals will look continuously through each segment to align the target.

It is also necessary to consider the patient's personality. For example, is he a perfectionist? I have successfully operated many times on marksmen who are perfectionists. In these cases, I typically do blended vision with aspheric IOLs in both eyes, with the nondominant eye set to -1.00 D. When the Sofport AO Crystalens (Bausch & Lomb) IOL is available in 2010, this aspheric lens will be a great application for a shooter's dominant eye with the Crystalens HD in the nondominant eye. This combination will give the patient better range without blended monovision. I would avoid multifocals because hunters and snipers typically find "the shot" in low-light settings. Aspheric IOLs for distance are best for scope shooters and snipers.

#### JEFFREY C. WHITSETT, MD

This patient's hobbies are common in South Texas where I practice. Assuming that he has healthy corneas and maculae and reasonable expectations, it appears his requirements for these activities emphasize distance and intermediate vision. Depending on his desire for uncorrected near vision, this patient is best suited for the AcrySof IQ Restor IOL +3.0 D (Alcon Laboratories, Inc., Fort Worth, TX) or the Crystalens HD. In my experience, the AcrySof IQ Restor IOL +3.0 D improves functional vision in the intermediate range without compromising distance or near vision. If the patient's near demands are minimal, the Crystalens HD would provide excellent distance vision and quality intermediate vision for these activities.

#### J. TREVOR WOODHAMS, MD

Presbyopic correction has reached a point where I feel comfortable recommending it to any patient contemplating cataract surgery. Although there are still important relative contraindications such as maculopathies, prior keratorefractive surgery, and significant tear insufficiency, the overall optical performance of today's premium IOLs even under less-than-ideal lighting conditions is more than acceptable. My current first choice is the

AcrySof IQ Restor IOL (Alcon Laboratories, Inc.) and, if necessary, later astigmatic correction with PRK. ■

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