

Pearls for Using the AcrySof IQ Restor IOL+3.0 D

Careful preoperative planning and skillful implantation can help surgeons take advantage of the full utility of this lens.

BY RICHARD J. MACKOOL, MD

In the recent FDA clinical trial of the AcrySof IQ Restor IOL +3.0 D (Alcon Laboratories, Inc., Fort Worth, TX), patients achieved the same superb distance and near vision with this lens as those who received the AcrySof IQ Restor +4.0 D lens (Alcon Laboratories, Inc.). As an added benefit, compared with the +4.0 D model, the +3.0 D design dramatically improved patients' intermediate vision at 50, 60, and 70 cm (Figure 1). This article describes my experience with the AcrySof IQ Restor IOL +3.0 D and shares some tips for success with this lens.

THOROUGH PATIENT EDUCATION

Surgeons should provide patients with written information about cataract surgery and refractive IOLs prior to their initial consultation. Documents should explain multifocal lenses, describe their function, and summarize their benefits. The documents should also clearly state that health insurance policies do not pay for the additional expenses associated with the implantation of premium IOLs.

The educational material should include specific information about the IOL the patient is likely to receive. Surgeons who implant the AcrySof IQ Restor IOL +3.0 D should provide a general description of the lens as well as the results of the FDA study. Patients should be advised that the procedure is identical to cataract surgery with a standard monofocal IOL and that they may require additional surgical interventions to fine-tune their vision

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postoperatively. The cost of additional procedures (eg, the correction of astigmatism) should also be listed on the handout.

Preoperative handouts should explain what patients can expect from their postoperative vision. For example, written materials must emphasize that patients may not be able to evaluate their vision until they receive both IOLs. Surgeons should also provide patients with an estimate of their likely postoperative visual acuity for reading and counsel them that multifocal IOLs generally provide better distance and reading versus intermediate vision. In some cases, patients may require spectacles to enhance their vision at intermediate distance. I have found this to be true in only a small minority of my patients.

EXPECTATIONS

It is important to ascertain patients' visual goals preoperatively. A simple questionnaire can help, and it can identify patients who desire spectacle independence. The survey should determine whether a patient would rather

have sharp distance or near vision without glasses and whether he thinks it is more important to have clear vision for objects at intermediate, far, or near distances.

Patients should be informed prior to surgery that they may require a refractive touchup (the case with approximately 10% of my patients) and that 3% to 4% of them may experience serious glare or halos postoperatively. Although many patients report that these visual disturbances abate over time, candidates should be aware that they may not experience a similar improvement.

During preoperative consultations, I assure patients that I can easily exchange their AcrySof IQ Restor IOLs for different lenses in the unlikely event that glare or halos continue to be bothersome. In anticipation of this possibility, I carefully remove epithelial cells from beneath the anterior capsule intraoperatively. I have found that this strategy delays the lens' adhesion to the capsule and facilitates an exchange for many months after the initial surgery.¹

PUPILLARY DIAMETER

Preoperative workups should include the measurement of pupillary diameter during reading (accommodative pupillary diameter). I have found that patients whose pupils measure 2.5 mm or less will almost always read well postoperatively. Most patients whose pupils range between 2.5 and 3.5 mm in size will also have good reading vision, but some may experience ghosting around printed material. The majority of patients whose pupillary diameters measure 4.0 mm or greater will require miotic treatment to achieve satisfactory reading vision. The problem of ghosting can be eliminated by instilling pilocarpine 0.5% twice daily (usually at 8 o'clock AM and 3 o'clock PM).

TARGETS

In my experience, switching from the AcrySof IQ Restor IOL +4.0 D to the +3.0 D model does not require a learning curve, and patients who qualified for the +4.0 D model are also good candidates for the new lens. The major difference between the IOLs is that the +3.0 D lens provides a near focal point of 15 inches versus 12 inches with the +4.0 D model. Nevertheless, both lenses provide excellent near vision.

To achieve excellent uncorrected distance vision, patients should have a postoperative spherical equivalent refraction ranging from -0.25 D of myopia to +0.50 D of hyperopia. In addition, astigmatism must generally be no more than 0.50 D, because greater amounts can adversely affect distant and near visual acuity.

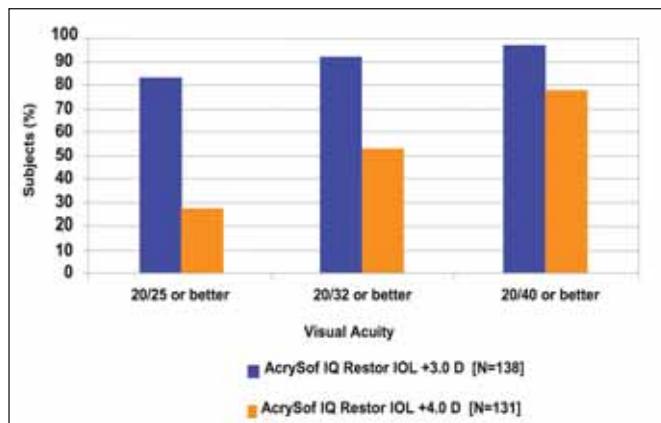


Figure 1. A comparison of distance-corrected intermediate vision at 50 cm with the +3.0 D and +4.0 D models of the AcrySof IQ Restor IOL.

OPERATIVE ORDER

Patients who receive an AcrySof IQ Restor IOL as part of a refractive lens exchange should undergo surgery on their nondominant eye first. I advocate this strategy because, in the unlikely event that troublesome glare and halos develop, the implantation of a monofocal IOL in the dominant eye can be considered. Doing this would likely leave the patient with the ability to drive well at night because the dominant eye has no halo issue, and it would allow him to read with the nondominant eye without correction. I also follow this rule (ie, removal of the cataract from the nondominant eye first) for implanting AcrySof IQ Restor IOLs in cataract surgery patients who have approximately equal preoperative visual acuities in both eyes.

CONCLUSION

I have found that both the AcrySof IQ Restor +4.0 D and +3.0 D IOLs provide excellent distance and near vision. Based on my experience, the new +3.0 D model is a great option for individuals who desire a wider range of reading distance and highly value their intermediate vision. Because of these advantages, I suspect that the +3.0 D lens is the better choice for the majority of patients who are qualified to receive AcrySof IQ Restor IOLs. ■

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1. Mackool RJ, Mackool RJ Jr. Removal of lens epithelial cells to delay anterior capsule intraocular lens adherence. *J Cataract Refract Surg*. 2006;32:1766-1767.