

# The Influence of Age on Refractive Cataract Surgery

Patient age, lifestyle, and attitudes dictate when refractive cataract surgery is performed.

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**A**ge plays a significant role in the refractive aspect of cataract surgery. Traditionally, cataract surgery has been associated with older patients who have worn spectacles for years and have never contemplated life without them. This trend is changing. In the past, we waited for a cataract to mature before removing it; today, an individual's quality of life dictates when cataract surgery is performed as well as the refractive solution to be provided. As a result, we are performing cataract surgery more regularly in younger patients to achieve specific refractive outcomes.

The concept of aging has changed over the past 20 to 30 years. Today's 60-year-olds are yesterday's 50-year-olds. Older people are generally healthier and more active, playing sports later in life than previous generations. Also, gender roles have shifted; many women are career women and primary breadwinners. More men choose careers that are sedentary or office-bound. All of these factors affect our patients' choices for their vision.

Better surgical techniques and technologies, including improved phacoemulsification and fluidics, small-incision surgery, ophthalmic viscosurgical devices, modern implant technology, premium IOLs, and the trend to operate under topical anesthesia, have generated higher patient expectations and increased surgery volumes. Additionally, the success of laser vision correction in improving UCVA and quality of life have raised the expectations of patients across all age groups for all eye procedures. Therefore, our goals at the Wellington Eye Clinic are to customize our approach to each patient, maximize visual potential to accommodate his or her needs, and reduce dependence on spectacles—all of which are dictated by the patient's age, lifestyle, attitudes, and expectations.

## INCIDENCE IN YOUNGER PATIENTS

In Ireland, the average age of cataract patients is 65 to 70 years; however, in our experience, cataract incidence is occurring in a progressively younger age group. It is not unusual to find cataracts in patients younger than 65 years who come in to request refractive surgery. Possible causes for cataract development in younger people include moderate alcohol consumption, use of antidepressants, radiation treatment for malignancies, and use of topical steroidal nasal sprays or systemic cortisone.

Examples of medical conditions that lead to early cataract removal include very narrow anterior chamber angles that may potentially lead to angle-closure glaucoma, zonular instability, and pseudoexfoliation. In the latter two situations, the rate of intraoperative complications is lower when the nuclear cataract is immature and less dense rather than rock hard.

## TARGETED REFRACTIVE OUTCOMES

For patients who desire spectacle independence, we target an outcome that will provide both distance and near vision through multifocal or accommodating IOLs or monovision. One question that has helped us plan the intended refractive outcome and achieve a high rate of patient satisfaction is this: If you (ie, the patient) were to need spectacles after cataract surgery, would you be most satisfied wearing them for distance, intermediate, or near?

**Monovision.** For generally healthy patients who want spectacle independence, we suggest monovision. We first treat the eye in which we are targeting emmetropia. We suggest at least a 2-week period between surgeries to obtain feedback on how the patient has experienced anisometropia following the first cataract procedure. If

the patient has found the imbalance intolerable, then the obvious target for the second eye is emmetropia, with the knowledge that reading glasses will be required. If the patient was not bothered by anisometropia, then monovision is a viable option.

In elderly patients who are unsteady on their legs or have had previous hip or knee surgery, we would target emmetropia in both eyes, even if they coped well with anisometropia. Elderly people are more stable on their feet and at less risk of falling when they are emmetropic in both eyes.

**IOLs.** Age is directly associated with macular health. Multifocal and accommodating IOLs perform satisfactorily only if the patient's macula is healthy. In the case of risk factors such as age-related macular degeneration (AMD) that may affect BCVA, we target both eyes for emmetropia and prescribe spectacles as needed. We recommend using ocular coherence tomography to scan the macula preoperatively in patients who have a family history of AMD or who want a premium IOL.

**Customized approach.** The elderly have a huge range of variability in their visual needs. For example, one of our older patients plays golf 7 days per week, and many of our retired patients play golf or tennis 3 or more days per week. For these patients, we would not normally entertain monovision but would suggest emmetropia for both eyes. Other elderly patients are housebound, and their world is within arm's reach. They read much of the time, and when they are not reading they are doing activities that require good near vision. For these patients, targeting -2.00 D in both eyes provides a satisfactory result. Monovision works well in these patients too. Many older people have become computer literate and are avid users of the Internet; in these patients, we may prefer -1.00 D in both eyes as a refractive target.

We always use aspheric IOLs, which provide patients with greater depth of field than standard spherical IOLs. In many cases, patients with these lenses see 20/20 uncorrected, yet they can still read text messages on their phones.

#### TAKE-HOME MESSAGE

- Today, an individual's quality of life dictates when cataract surgery is performed as well as the refractive solution to be provided.
- Targeted outcomes can be achieved with monovision, IOL implantation, or a customized approach; however, patients' macular and overall health, lifestyle, and age must be considered.

## VISUAL PREFERENCES

It is important to understand the patient's visual needs and preferences. If a patient is satisfied with his or her phakic vision, then surgery is not suggested. If a patient is unhappy with his or her quality of vision and it is affecting their quality of life, then cataract surgery is advised. The only exceptions to this approach are when legal driving requirements must be met or when the cataract is affecting the health of the eye. For example, if an older patient needs to drive and cannot be corrected to 20/40 or better, cataract surgery is recommended.

We explain to all cataract patients that, despite improvements in IOL power calculation, cataract outcomes still do not compete with laser refractive surgical outcomes in terms of accuracy and predictability. Those who want a guarantee of 20/20 UCVA must know that laser vision correction after cataract surgery may be required. We provide this solution to all our cataract patients at a reduced rate. Interestingly, most cataract patients, particularly if they have lived with ametropia, are satisfied with 20/30 or 20/25 UCVA. This may be the best UCVA they have enjoyed in their lives.

## CONCLUSION

Age plays a significant role in the refractive side of cataract surgery. As surgeons, we must educate ourselves, our staff, and our cataract patients about the available refractive options. This requires time, patience, and resources. We recommend that patients be counseled before surgery through a combination of audiovisual aids, educational DVDs, and animated videos and that they give informed consent. In the same way that laser refractive surgery has built up the Wellington Eye Clinic's reputation in the recent past, refractive cataract surgery is performing the same task for a different generation of grateful patients. ■

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