

This handout will help you make an informed choice about the intraocular lens implant you have at the time of cataract surgery.










An intraocular lens, or “IOL”, is the artificial lens implant that is placed in your eye at the time of cataract surgery. This allows you to see clearly after your natural lens – the cataract – has been removed.

Choosing a lens is an important decision which can sometimes feel quite daunting. I hope this handout is useful, but feel free to contact me if you have any questions.

There are three main lens options

99% of my patients will have a lens that is either (1) monofocal, (2) extended depth of focus, or (3) trifocal/multifocal. If I've given you this handout then your lens options are one of these three types.

Typical glasses use for different lens types

	Near vision Reading, sewing, labels	Mid-range vision Computer, piano, stove	Distance vision Driving, television, golf
Monofocal			
Extended depth of focus			
Trifocal/ multifocal			

Monofocal lenses

Monofocal lenses are the most commonly used lenses in cataract surgery. Whether a patient has their operation in a public hospital, private hospital, out of pocket, or with a health fund, the majority of patients in Australia will have a monofocal lens implant.

A monofocal lens has a narrow range of focus, meaning that it's in focus for the same area of vision all the time. A typical patient with a monofocal lens can see clearly in the distance without glasses (driving, TV, etc), but will need to wear glasses to see clearly at shorter distances.

Strengths

- Clearest possible vision
- No increased side effects such as glare, haloes around lights
- Suitable with other eye conditions
- Suitable if your eye measurements are unusual in size or shape
- Less expensive if paying out-of-pocket

Limitations

- Wear glasses after surgery more of the time than with other lens options,, especially for near and mid-range vision

Consider a monofocal lens if you want the clearest possible distance vision, and don't mind wearing glasses for other near vision tasks. If you have other eye problems such as macular degeneration, or unusual eye measurements, a monofocal might be your only option.

Extended depth of focus lenses

Extended depth of focus (EDOF) lenses have a larger range of focus. When I use an EDOF lens, a patient will typically be able to see clearly without glasses for distance vision and mid-range vision. Most patients need glasses for reading. In my experience many patients have "functional" reading vision without glasses, such as reading text messages in a large font, but there's no guarantee – this is not a lens for people who need to regularly read without glasses.

Strengths

- Great distance and mid-range vision, with functional reading vision
- Minimal or even no extra glare or haloes

Limitations

- Wear glasses for near vision
- Not suitable with some eye conditions
- Far distance vision slightly less clear than a monofocal lens
- More expensive without a health fund

Consider an EDOF lens if you'd like to see clearly without glasses at distance *and* at arm's length, and don't mind wearing glasses for reading. If you need especially clear far distance vision, or you do a lot of stuff in low light, talk to me – there may be better options for you.

Trifocal & multifocal lenses

Trifocal & multifocal lenses split light to achieve multiple focal points and a much deeper range of focus than any other lens option. Most patients with these lenses don't have to wear glasses at all after surgery.

With such great advantages you might wonder why I don't just use this lens for everyone. One reason is that they are not a good match for some eyes, such as eyes with previous surgery or other conditions such as macular degeneration. The second reason is that when these lenses split light they produce side effects such as glare, haloes, starbursts around light, and less contrast in dim light. 40% of patients notice these side effects, and 2% of patients rate them "very distracting".

Strengths

- The best bet for "glasses-free vision" – 80% of patients wear glasses "none of the time"
- Very good vision at all distances

Limitations

- Some visual side effects such as glare, haloes, and starbursts
- Not suitable with some eye conditions
- Far distance vision less clear than a monofocal lens
- Some loss of performance in low light
- More expensive without a health fund

Consider a trifocal or multifocal lens if you really value the idea of not wearing glasses after surgery. You will probably notice some visual side effects in certain conditions, but if you want to be glasses-free this is your best bet.



An uncommon risk of surgery is unexpected complications that require a different lens than what was planned. This usually results in needing glasses more than expected.

How much do the lenses cost?

If you're covered for surgery by private health, the cost of the lens is covered no matter what lens you choose.

If you're paying for surgery out-of-pocket (i.e. without private health) the cost of the lens is part of the hospital admission fee. Trifocal, multifocal, and EDOF lenses are more expensive than monofocal lenses – the extra cost is \$600–900 per eye.