Ageing eyes causing blurry vision

Q I have presbyopia and am looking for a treatment to solve my problem. What is the best option? Should I wear spectacles or have surgery? How reliable is presbyopia surgery?

A Presbyopia (tia hua yan) affects everyone from the age of 40 onwards. It causes progressive difficulty in the ability to focus when reading and or looking at near objects.

As the eye ages, there is loss of elasticity in the crystalline lens and loss of power of the ciliary muscle to automatically contract and relax the crystalline lens for focusing, resulting in presbyopia. This weakening process inside the eye gets worse with age.

Some patients cannot adjust to progressive glasses and must deal with the inconvenience of constantly switching between regular and reading glasses.

Others are bothered by the psychological stress of ageing, which is compounded by the need for unattractive bifocal glasses.

Contact lenses can cause discomfort, exacerbate dry eye (a condition common in people above 50 years old); and raise the risk of potentially vision-threatening infections, such as bacterial corneal ulcers.

Many new technologies have emerged in the market in recent years. Examples are PresbyLasik, corneal inlays and Intracr. But many of them are not approved by the US Food and Drug Administration (FDA).

The FDA-approved methods for treating presbyopia are mono-vision Lasik, mono-vision cataract surgery and multi-focal cataract surgery. Younger patients with presbyopia but no cataracts may opt for Lasik – a type of eye surgery that uses a laser to change the shape of the cornea, thereby correcting any refractive errors, such as myopia, astigmatism and presbyopia.

One of the first FDA-approved surgical options for presbyopia correction is mono-vision Lasik, where one eye is laser-corrected for distance vision, and the other eye is laser-corrected for near vision.

To a large extent, binocular vision is preserved, so you have adequate depth perception for driving, for instance.

But one eye sees more clearly in the distance, and the other eye sees better up close.

The 10-minute painless procedure is done under topical anaesthetic eye-drops, and short-sightedness, astigmatism and presbyopia will be “zapped” away by a laser.

Dry eyes may be a temporary side effect for two to three months after the operation.

However, most people will experience a lower degree of dry eye after recovery, compared with when they wore contact lenses previously.

Another option is the implantable contact lens (ICL), but this is not FDA-approved for patients above 45 years old as the internal environment of the eye starts to change at that age.

And the ICL, which is a foreign body in the eye, stands a greater chance of removal if it encroaches too close to the natural lens or the iris, which can cause cataracts or glaucoma, respectively.

CATARACT WOEs

Similar to presbyopia, the development of cataracts is also inevitable as part of the ageing process.

Cataract surgery – the insertion of a presbyopia-correcting lens implant – kills two birds with one stone by providing clearer vision as well as correcting myopia, astigmatism and presbyopia at the same time.

Therefore, older patients with presbyopia and cataracts should opt for cataract surgery instead.

There is a choice between monofocal or multifocal lens implants to replace the natural lens that has turned cloudy.

Both are able to treat refractive errors (such as myopia, astigmatism and presbyopia). There is no need to wear spectacles after the procedure.

The procedure takes 15 minutes per eye, and can also be performed using only topical anaesthetic eye-drops.

High-definition lens implant materials are available to enhance contrast sensitivity and provide high quality vision for the ageing eye.

Meanwhile, monovision cataract surgery involves implanting a monofocal lens in one eye that is set for near vision, while the other eye is implanted with another monofocal lens that is set to see objects at far distances.

The brain takes a few weeks to get used to monovision, after which the person becomes unaware which eye is focused on near objects and which is focused on faraway things.

Those who tried monovision trial lenses in the clinic and did not like it should opt for multi-focal cataract surgery.

Multifocal lens implants can provide the eye with both a distance-focus and a near-focus at all times.

They are similar to progressive glasses, but without the need to look up and down to switch between far and near focus.

Your brain will adapt to the multi-focal visual system after the operation.

You may consider presbyopia surgery if you are not satisfied with glasses or contact lens wear.

The advantages of presbyopia surgery include spectacle freedom from most daily tasks, a high success rate and the possibility of further enhancement of your vision with spectacles when necessary.