

Fitting toric lenses - no longer a stigma!

A Guide for Eye Care Professionals

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Introduction

In a recent survey of contact lens prescribing trends in the UK, toric lenses accounted for around 30% of lens fits.¹ This statistic not only demonstrates the prevalence of astigmatism in the contact lens wearer base, but it also reveals that **at least one in three patients presenting for contact lenses requires a toric lens** — this aligns well with the ‘true’ number of astigmats in the population with a cyl of 1.00D or more.² The increase of soft toric contact lens fitting over the past few years (approximately doubling in the last decade) is an indicator of improvements in the time required for a stable and reliable fit, manufacturing reproducibility and visual outcome. This booklet reviews current approaches to toric lens fitting and how best to communicate astigmatic contact lens correction to patients.

Clinical considerations

Vision and comfort

In order for the contact lens wearer base to grow, efforts must be made to ensure patients are both comfortable in lenses and seeing well. A study investigating why patients discontinue with lenses revealed comfort to be the primary reason, with vision problems taking second place.³ There is ongoing academic debate regarding the inextricable link between vision and comfort. A very mobile lens often results in increased lens awareness and with that some variability of vision. Another question that can be posed is, does a lens delivering relatively poor vision ‘feel’ worse to the patient thereby leading to comments about perceived lens discomfort?

More letters for your money

At what level of cyl should a toric lens be considered for a patient? Some practitioners fit low astigmatic patients with spherical lenses as first choice, and only when the patient complains about poor vision is the toric option considered. The reasons for the reluctance to prescribe toric lenses are

- fitting time
- stability of vision
- cost

However, with the wide range of toric lenses readily available in different modalities and materials, and with improved lens designs which usually work first time, **the opportunity to provide the best quality vision to astigmatic patients has never been better.**



Simulated retinal images for illustrative purposes: Low astigmats masked with a spherical contact lens may not receive the astigmatic correction they need



Simulated view with toric lens correction

Research has shown that fitting toric lenses to patients with low astigmatism (0.75 to 1.25 DC) provides patients with significantly better acuity than with spherical equivalent lenses. Over the years, the clinical practice of ‘masking’ cyls using soft spherical lenses was thought to minimise the effect of smaller amounts of astigmatism; however, this is not the case.^{4,5,6} Furthermore, the wider availability of aspheric soft contact lenses produced claims regarding their potential to correct low levels of astigmatism. This has been shown to be invalid, especially with larger pupils, **where soft toric lenses outperform aspheric spherical lenses by approximately half a line or more, which is deemed to be clinically significant.**⁷ Further to this, **visual acuity attained with soft toric lenses was similar to that achieved with spectacle correction.**⁷

When considering the time taken to fit a patient with toric lenses, there is little more involvement than fitting a patient with spherical lenses apart from investigating the orientation of the lens on eye. One approach here is to judge lens stability at five and 30 minutes, with this latter measure indicative of performance for the rest of the working day. **Up to 90% of toric patients can be fitted empirically, which helps to minimise return visits.**⁷

Educating patients

Explaining astigmatism

The optical concept of astigmatism is fraught with complexity. Clearly, drawing a ray diagram of two different powers and the astigmatic pencil is not something that will enhance the understanding of the average patient — unless of course they are an expert in visual optics. Even the word ‘astigmatism’ is ugly and sounds like it could be a disease. **As such, explanations about a patient having astigmatism should be dealt with sensitively, so that the patient does not leave the consulting room bemused, confused or filled with anxiety about their new ‘diagnosis’.**

Astigmatism has to be discussed when advising on the best type of contact lens, so the patient has some inkling about how to get the best out of lens wear in addition to knowing that they need something a little more sophisticated than a regular spherical lens.

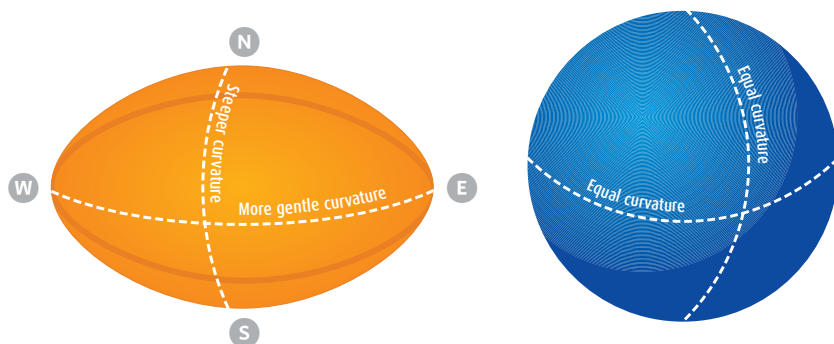


Image 1.

A very standard approach in contact lens practice is to describe the astigmatic cornea as one which is similar to an egg or rugby ball. Although this approach is somewhat visual, the patient may wrongly assume they are very unusual and inherently ‘complex’ which can in turn give rise to uncertainty about how well or otherwise a practitioner may be able to ‘cope’ with their needs. An alternative description can be to compare the eye surface with a microscopic hill with the North to South slopes being steeper and the East to West slopes being gentle (**Image 1**). The patient then has a reasonable picture of their

ocular topography, given their life experiences of observing hills in the countryside. Axis position can then be explained in terms of 'up and down' and 'side to side' for vertical and horizontal axes, whereas oblique astigmatism can be referred to the slopes of the hillside being in a 'diagonal' position. **Patients relate well to the action of the lids**, and having an understanding of how their lids might interact with the positioning of the lens is helpful should any adjustments be necessary — it also helps them to grasp the concept of the lens orientating into position.

Optimising lens choice

Making a recommendation

Once the patient is more familiar with the physical aspects of astigmatism, the different options for contact lens correction can be discussed. In the case of the new wearer, it can be difficult to discuss their proposed wearing pattern when they have no experience whatsoever on how lenses feel and how their vision will be during lens wear. It is important to discuss that both soft and rigid lenses are available for their vision needs, and a recommendation made in terms as if they were a member of your family what you would suggest. The patient is not the expert, and **whilst it is important to involve the patient in the decision-making process, the practitioner is expected to provide appropriate direction.**

New wearers

First time wearers respond well to soft lenses in terms of initial comfort, and experience of a few days' wear provides the practitioner with the necessary feedback to decide on the most appropriate lens modality. **Daily disposable soft toric lenses offer the ultimate in convenience for both full-time and part-time wearers;** silicone hydrogel toric lenses have unrivaled oxygen performance for those patients who require additional lens breathability or the option of occasional or regular overnight use.

Existing wearers

When refitting an existing contact lens wearer from spherical soft lenses into soft toric lenses, it is worth explaining the difference in lens design and that the profile of the lens is enhanced to provide better visual quality in addition to ensuring the lens orientates correctly. If a patient has experienced only spherical equivalent

lenses, **the improvement in vision may be compared to moving to high definition**

television. Remarking that their vision may seem similar in bright light conditions, but at times when vision is more challenging (such as night driving), a soft toric lens will provide

them with significant visual improvement. Patients should be encouraged to experience the lenses and to raise their awareness of vision quality in these sorts of large pupil environments.



When cost is no barrier

Life would be easy if patients never asked the price. For a patient, asking the cost of something is often the only question they are able to ask due to their limited knowledge of other aspects of the product, and as such, **a question regarding price may be considered as a request for more information.** If a patient has presented with an idea of cost, and the lens of choice is higher than this, details must be provided to explain why a different lens is better. In most cases, the cost per day is less than a take-away coffee, and most people do not even consider the cost of such consumables. In the consulting room, the practitioner has the opportunity to demonstrate the spherical equivalent prescription and the visual acuity that this provides. This can then be changed for the appropriate sphere-cyl lenses to illustrate the enhancement in vision. The patient can be asked which they would prefer — it is unlikely that a patient will knowingly opt to have ‘worse’ vision!

Maintaining happy patients

At contact lens aftercare, many questions are asked of the patient in terms of compliance with lens handling and lens care, vision and comfort. More recently, comfort throughout the course of the day has been questioned, perhaps in a little more detail. Instead of asking simply how comfortable lenses are, practitioners are now asking for what proportion of the full wearing time are lenses actually comfortable. In the same way, questions need to be asked about vision. Currently, patients are questioned about how happy they are with their vision, but more searching questions on visual quality are not always asked. **Perhaps now is the time to venture into this zone, to establish how happy patients are with their vision quality.** Can lenses for astigmatism further enhance their vision? Will improving their vision aid overall comfort in lens wear with the benefit of reducing the likelihood of drop-outs?

In summary

- 30% of lens fits in the UK are with toric lenses
- vision quality plays a part in maintaining happy patients and preventing drop-outs
- low astigmats (0.75 to 1.25DC) enjoy significantly better acuity with toric lenses compared with the spherical equivalent
- up to 90% of toric patients can be fitted empirically
- explain astigmatism in such a way that the patient feels 'normal' and not 'diseased'!
- question patients on their vision quality (especially wide pupil conditions)



Sarah Morgan is an optometrist and staff development consultant. At the University of Manchester she is involved in undergraduate teaching across all three years of the optometry programme. She has trained hundreds of staff in her tailored interactive seminars. Sarah is the author of two books 'Up front — a practice knowledge guide' and her new book 'The Complete Optometric Assistant' includes the everyday information staff require in addition to recommendations on how best to train and develop staff in the practice. She has recently performed at the Comedy Store in Manchester and was the winner of the NIVEA Funny Women Awards 2 Hour Challenge 2008.

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