



## **ASTIGMATISM AND CONTACT LENSES**

Virtually everyone has some degree of astigmatism, i.e. the cornea is not completely regular in curvature. The easiest way to describe it is to liken the cornea in astigmatism to the shape of a rugby ball compared to a soccer ball.

Only a small percentage of patients have enough astigmatism to require specially complex Contact Lenses to correct this. Indeed there are hundreds of thousands of patients who currently do not wear Contact Lenses because they have been told Soft Contact Lenses for astigmatism are impossible. This is a complete fallacy since if experienced enough, any Practitioner can fit both flexible and soft lenses which will correct virtually any error of astigmatism. It is however a fact that, because of the equipment, experience and specialist lenses needed to correct astigmatism, many Practitioners are still not prepared to fit these lenses.

IF YOU OR ANY FRIENDS THINK THEY ARE UNSUITABLE BECAUSE OF ASTIGMATISM PLEASE MAKE A FREE INITIAL TRIAL APPOINTMENT WITH US SO THAT WE CAN COMPLETELY DISPROVE MISTAKEN BELIEFS. OFTEN WITH OUR EXPERIENCE AND RESOURCES WE CAN EVEN OFFER FREE HOME TRIALS WITH LENSES INDIVIDUALLY DESIGNED AND MANUFACTURED BY OUR LABORATORY

## **CORRECTION OF ASTIGMATISM WITH FLEXIBLE OXYGEN PERMEABLE LENSES.**

Because of the inherent stability of such lenses regular spherical rigid Contact Lenses will completely cancel how to moderate degrees of astigmatism and actually offer significantly improved standards of vision compared to glasses. This is because the Contact Lens corrects the error of vision AT the corneal surface whereas glasses, sitting away from the eye on the end of the nose create distortion.

If the cornea is excessively irregular then special TORIC rigid lenses are needed with the actual back curves of the lenses designed with very complex curves to "mirror" the irregularity of the cornea on which they float. Obviously such lenses require the greatest levels of skill and expertise to fit and hence, are often only fitted in Specialist Practices.

## **SOFT LENSES TO CORRECT ASTIGMATISM**

A soft lens is like a "second skin" to the cornea and will actually "hug" the curvature onto which it is placed. It therefore follows that if there is any significant level of astigmatism a soft lens placed on the cornea may well simply reproduce this error unless specially designed lenses are used to avoid this. Soft lenses to correct astigmatism have been available since 1976, although hundreds of thousands have been told "soft lenses for astigmatism" cannot be made! They are now even made from materials suitable for most patients to sleep-in.

The most important requirement of a soft lens to correct astigmatism accurately is to ensure that it always stays precisely aligned with the irregular cornea. If a lens "swings" or "twists" on the eye then it's efficiency in correcting the astigmatism will be reduced. There are dozens of designs of soft lenses to correct astigmatism and many different methods of stabilisation are used to ensure the lens sits in precisely the correct position to provide the best visual result. Some lenses are weighted, being thin at the top and thick at the base, so they rotate into the correct place because of the effects of gravity. Others have special constructions so that the top and bottom eye lids hold the lens in the required position. Indeed, to look at special soft lenses to correct astigmatism do not appear different to simple lenses, but technologically they are incredibly complex hence the fact that they can be more expensive.



## **LENTICULAR ASTIGMATISM**

Occasionally it is not just the front corneal surface of the eye that is irregular but also the actual "refracting lens" within the eye. In these circumstances even using a normal astigmatic lens to correct the corneal astigmatism there will still be some RESIDUAL error uncorrected. This inherently means an even more complex lens design called a BI-TORIC. Such a lens, as the name implies, has a TORIC front and back surface both of which must be painstakingly designed by us for each patient's particular ocular requirements.

As a Specialist Practice we regularly have patients referred to us by Professional colleagues because of our expertise in fitting all forms of special lenses for astigmatism.

IN FACT OUR SPECIALISATION IN COMPLEX LENS FORMS IS OUR STRENGTH. WE FEEL SAD SO FEW PEOPLE ARE, FOR COMMERCIAL REASONS, ALLOWED TO DISCOVER THE BENEFITS OF SUCH COMPLEX LENSES.

Because of the time and expense of fitting our complex lenses we not infrequently actually lose money fitting some more demanding eyes. Thankfully this is more than repaid by the gratitude, goodwill and numerous extra recommendations generated.