

ASTIGMATISM AND CONTACT LENSES



ACUVUE



EYE HEALTH
ADVISOR[®]

WHY IS VISION SO IMPORTANT?

Vision is essential for the perception of the world since around 80% of all information we receive about it is through vision.

Vision isn't only down to our eyes. The eye optically focuses our surroundings onto the retina but it is our brain that processes the light signals into an image. The complexity of this whole process though begins with the eye that needs to focus images of our surroundings accurately on to our retina (Figure 1).

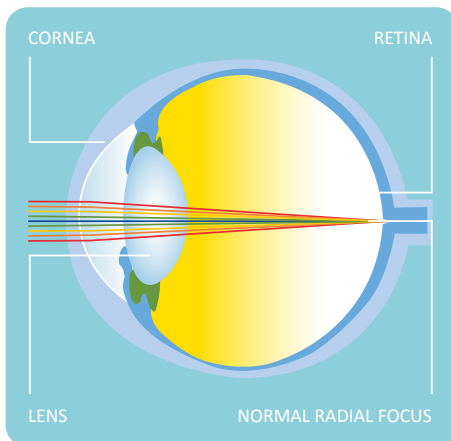


Figure 1: Focusing of light rays on the retina

If, for some reason, rays are not focused to a point or are being focused beyond or in front of the retina, then the vision is affected. The most common eye problems are:

- MYOPIA (short-sightedness): distant objects appear blurred or fuzzy
- HYPEROPIA (long-sightedness): vision is poor for nearby objects
- PRESBYOPIA (age-related): difficulty focusing on objects that are close to you
- ASTIGMATISM: blurred vision at all distances

People with eye problems should wear a visual aid to get rays focused to one point on the retina.

The solution: glasses or contact lenses can be worn.



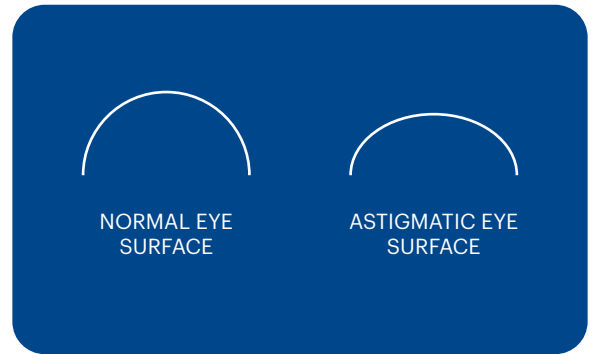
WHAT IS ASTIGMATISM?

First of all, astigmatism is not a disease, it just means that you have blurry vision.

And you're not alone: astigmatism affects nearly half the population that needs any vision correction. †

You may have heard about toric contact lenses or about 'having a cylinder' in your glasses prescription or 'correction with a cylinder'. When people talk about 'cylinders', they are simply referring to the correction of an astigmatic prescription.

Toric contact lenses are contact lenses designed to correct astigmatism, while spherical lenses are used to correct short- or long-sightedness.



What causes astigmatism?

All astigmatism means is that your eye surface, or the lens within the eye, has different shapes in different directions in the eye.

Some people have a rounded eye surface, while in others the shape of the cornea is irregular or more 'oval'. It is often likened to having 'rugby ball' shaped eyes although it should be noted that this is in reference to the curvature of the cornea - and not the shape of the eyeball!

The higher the asymmetry or irregularity, the more advanced the astigmatism.

Typically, a steeper more curved front surface is found with short sightedness (myopia) and a flatter less curved cornea is seen with long sightedness (hyperopia). As astigmatism is simply a result of a change in the regularity of the contour - it can occur in both short - or long-sightedness!

A well-fitting pair of soft, toric contact lenses can be a comfortable and convenient way for you to correct your astigmatism along with any near-or far-sightedness.

HOW DO PEOPLE WITH ASTIGMATISM SEE?

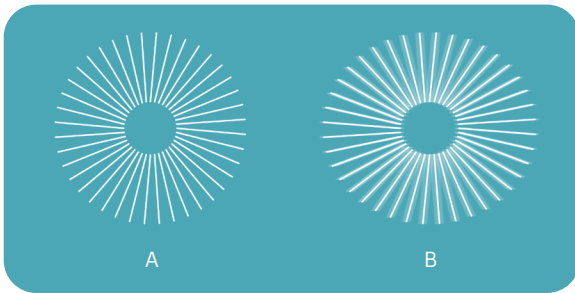


Figure 2: This is how a non-astigmatic eye (A) and an astigmatic eye (B) see the radiant figure.

When looking at the radiant figure above, non-astigmats will see horizontal and vertical line sun equally. This is because the regular shape of the cornea means that light coming in in any meridian is equally focused.

Astigmats may perceive objects as extended or stretched. The asymmetry in astigmatism means that different orientations of light are focused in different positions relative to the retina. Those meridians which focus on the retina will appear clearer, whereas those that don't will appear more blurred. The combined effect of these differences can result in this 'stretched' appearance.

The images of the tree in figure 3 illustrate this perception. In image A - all meridians are equally focused so the image appears clear.

In image B and C, horizontal and vertical elements of the image are focused differently leading to the 'stretched' appearance.

When not wearing glasses or contact lenses that correct astigmatism, the image is blurred.

Nowadays, in the era of continuing technical development, our eyes experience everyday overloads during computer work, watching TV, or driving a car. People with poor vision are likely to get tired eyes, especially with inadequate vision correction. They have to strain more, which is also why they suffer headaches.

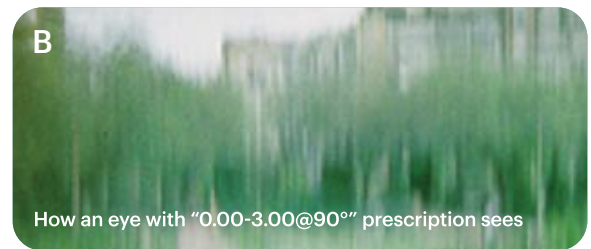


Figure 3: This is how people with normal vision (A) and with astigmatism (B,C) see.

How can I find out if I have astigmatism?

Our vision can change over time, which is why regular eye examinations – **every year** are essential, this might be more frequent depending on your vision needs.

Only eye care professionals can define and assess your prescription, and if you have astigmatism, they can fit you with the most appropriate glasses or contact lenses according to your individual needs.

Astigmatism can usually be assessed using a simple test. Professional eye care practices are equipped with modern instruments for the detection of all levels of astigmatism along with your overall vision correction needs.

Why should I wear glasses or contact lenses for astigmatism?

Clear, stable vision for astigmats can be achieved with glasses or contact lenses that are designed specially for the correction of astigmatism.

These are different from spherical glasses or contact lenses. Maybe you have heard about ‘toric’ glasses or contact lenses. They provide clear, stable vision and may minimise the occurrence of eye strain or frontal headaches that may occur if astigmatism is not corrected.

What can be done to correct my astigmatism?

Eye care professionals are equipped with equipment to understand if your vision correction needs include that for astigmatism.

Besides glasses, soft toric contact lenses for astigmatism are now widely available in daily disposable and reusable modalities, with a range of materials; and they are just as convenient as regular spherical contact lenses and provide clear, stable vision just as your glasses can.





Can spherical glasses or contact lenses be used for astigmatism?

If spherical glasses or contact lenses are used for people with astigmatism, then 100% clear vision cannot be achieved.

If you have astigmatism, spherical lenses will partially improve your vision. You will certainly see an improvement, but it will not be as good as it could be. This is because lenses designed for astigmatism focus the light rays in your eyes differently from spherical lenses – and that is exactly what you need.

So, if you want to be able to see clearly, consider lenses designed specifically to correct astigmatism.

What are the advantages of contact lenses?

The advantages of contact lenses are highly appreciated by millions of wearers all over the world:

- Compared to glasses, contact lenses provide not only clear and stable vision, but a full field of vision. This can be helpful when driving a car or playing sport, for example
- Contact lenses do not limit freedom of movement since they can't mist up or slip and fall down. They are good for working, leisure, and especially for taking part in sports and outdoor activities
- Contact lenses do not mask the natural beauty of the eyes



Which contact lenses are suitable for people with astigmatism?

There are different brands of contact lenses for astigmatism. They are not all the same.

ACUVUE® contact lenses for ASTIGMATISM feature unique technologies to keep your vision clear and stable, and to keep your eyes comfortable. So what makes ACUVUE® lenses unique?

You can choose reusable or daily disposable lenses from ACUVUE® — **ACUVUE® OASYS for ASTIGMATISM, ACUVUE® OASYS 1-Day for ASTIGMATISM or 1-DAY ACUVUE® MOIST for ASTIGMATISM.**

All of them have a number of benefits. They are **smooth, flexible and moist**, and allow adequate oxygen to pass to the eye. They are easy to handle, put on and take off, and because of their symmetrical design, you can't make a mistake of putting them on upside down as you could with many other toric contact lenses.³ They also have **UV block***, which helps to protect your eyes from harmful UV-rays.

Toric lenses have a different design than spherical contact lenses. It is important that they maintain their correct position and do not rotate on the eye, regardless of your activities – whether you are playing sports, working on a computer or lying on the sofa watching TV.

All **ACUVUE® contact lenses for ASTIGMATISM** utilise the same EYELID STABILISED Design. It works with your eyelid's natural movements, helping to keep your lenses in the right position even with eye and head movements. This will help you to have crisp, clear and stable vision.¹

WHAT SHOULD I TAKE INTO CONSIDERATION

WHEN CHOOSING CONTACT LENSES?

- It is important to remember that every person and each eye is unique and the most appropriate lenses should always be fitted by an Eye Care Professional
- Ask your Eye Care Professional for a detailed eye examination and their professional consultation
- Remember, the more often you replace your contact lenses with a fresh pair, the more likely you are to experience higher levels of comfort and healthier lens wear, such as with daily disposable lenses
- Choose contact lenses that match your individual vision needs – if convenience is your preference, ask for daily disposable lenses. If your daily schedule includes a number of different activities and you frequently look at digital screens such as your smart-phone, computer or laptop, try the ACUVUE® OASYS lenses.⁴ If you experience sensitive or irritated eyes, then try 1-DAY ACUVUE® MOIST lenses, which were designed to help keep moisture in and irritation out.²



SHARE THE KNOWLEDGE

If you have learned something by reading this leaflet, there's a good chance that a family member or a friend could also benefit, so spread the word to the people you care about, it's worth it!

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References:

1. JJV Data on File 2020. ACUVUE® contact lenses for ASTIGMATISM - Overall Fitting Success, Orientation Position, Rotational Stability, and Vision Performance.
2. JJV Data on File 2018. Dual Action Technology and "cushion of moisture" description for 1-DAY ACUVUE® MOIST Brand Family of Contact Lenses
3. JJV Data on File 2016. Single-masked, 2-visit, bilateral wear, single arm 1-week DW dispensing study of 162 US habitual toric soft contact lens wearers in both eyes with a spherical distance refraction of -1.50D to -4.00D (inclusive), cylinder correction of 0.75D to 1.50D after vertex correction (inclusive) and refractive cylinder axis within 180+/-15 degrees or 90+/-15 degrees.
4. JJV Data on File 2020. ACUVUE® OASYS Family Digital Device Claims.

*All ACUVUE® contact lenses have UV-blocking to help provide protection against transmission of harmful UV radiation to the cornea and into the eye. UV-absorbing contact lenses are NOT substitutes for protective UV-absorbing eyewear such as UV-absorbing goggles or sunglasses because they do not completely cover the eye and surrounding area. You should continue to use UV-absorbing eyewear as directed by your Eye Care Professional.

† Prevalence of astigmatism in relation to soft contact lens fitting

ACUVUE® Contact Lenses can be used for vision correction. An Eye Care Professional will determine whether contact lenses are right for you. Although rare, serious eye problems can develop while wearing contact lenses. To help avoid these problems, follow the wear and replacement schedule and instructions on proper lens care. Do not wear contact lenses if you have an eye infection or experience other eye problems or if you are allergic to any ingredient. For more information, including warnings and precautions, read the Instructions for Use available on the ACUVUE® website acuvue.com/en-me/terms-of-use/. If you experience eye discomfort or if any condition occurs, remove the lens and contact your Eye Care Professional immediately.

ACUVUE®, ACUVUE® OASYS with HYDRACLEAR® Plus, ACUVUE® OASYS for ASTIGMATISM, ACUVUE® OASYS 1-Day with HydraLuxe™, ACUVUE® OASYS 1-Day for ASTIGMATISM, 1-DAY ACUVUE® MOIST, 1-DAY ACUVUE® MOIST for ASTIGMATISM, 1-DAY ACUVUE® MOIST MULTIFOCAL, ACUVUE® OASYS MAX 1-DAY and ACUVUE® OASYS MAX 1-DAY MULTIFOCAL are trademarks of © Johnson & Johnson Middle East 2025.

For more information on proper wear, care and safety, talk to your Eye Care Professional and read the Instructions for Use available on the ACUVUE® website www.acuvue.com/en-me

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ACUVUE® contact lenses are available for short-sighted, long-sighted, astigmatism and presbyopia (multifocal) vision needs.

Find out more at
www.acuvue.com/en-me

