

ASTIGMATISM

and Contact Lenses

**Information about astigmatism, its effect on vision,
and ways to correct it with toric contact lenses**

Educational Leaflet About Contact Lenses



Reviewed by



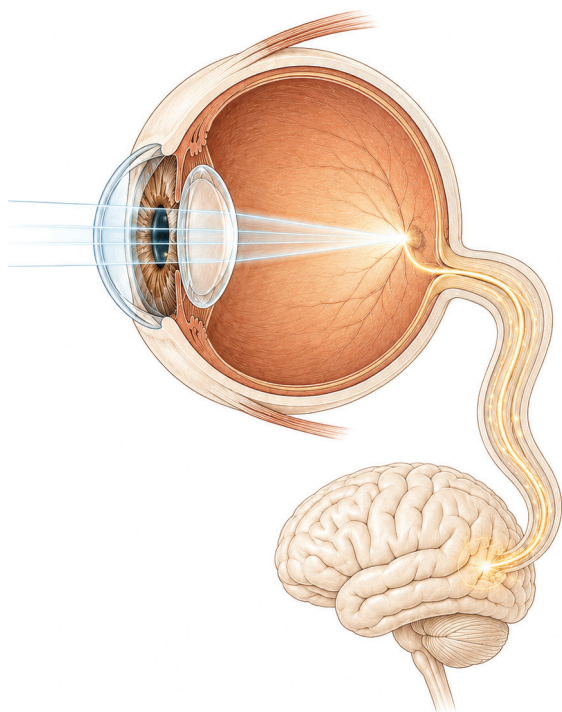
الجمعية السعودية للبصريات
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Why Is Vision Important?

Vision provides us with much of the information we receive about the world. The eye focuses incoming light onto the retina, and the brain then processes the signals to form an image. Clear vision depends on light being focused precisely on the retina.

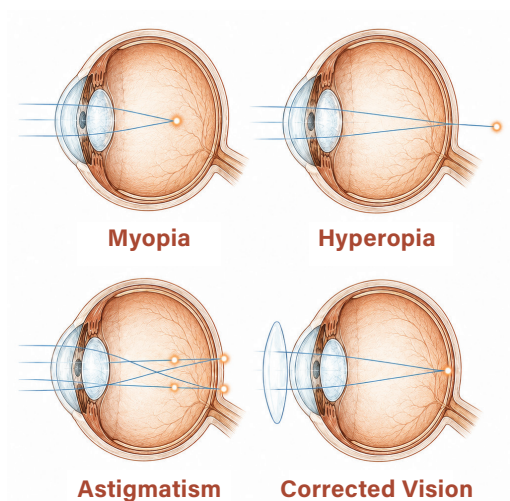


When Light Is Not Focused Correctly

When light is not focused precisely on the retina, vision is affected.

Myopia usually causes blurred distance vision, while hyperopia may cause difficulty with near vision. Presbyopia leads to age-related difficulty focusing at near, whereas astigmatism may cause blurred or distorted vision at different distances.

Glasses or contact lenses can be used to help focus light more precisely on the retina.



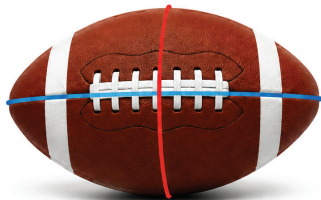
What Is Astigmatism?

Astigmatism is a common refractive error, not a disease in itself. It occurs when light is not refracted evenly within the eye and therefore does not focus at a single point on the retina, which may cause blurred or distorted vision.

The cylinder (CYL) value in the prescription indicates the amount of power needed to correct astigmatism, while the axis (AXIS) specifies the direction of this power. Toric contact lenses are designed to provide the required cylindrical correction, whereas spherical lenses are generally used when no cylindrical correction is needed.



Equal Curvature
Clear Vision



Unequal Curvature
Blurred or Stretched Vision



How Does Astigmatism Occur?

Astigmatism occurs when the curvature of the cornea or the eye's internal lens varies from one meridian to another. As a result, light is refracted by different amounts and does not focus precisely on the retina, which may cause blurred or distorted vision.

Astigmatism may occur on its own or alongside myopia or hyperopia, and its severity varies from person to person.

When properly fitted, soft toric contact lenses may provide clearer and more stable vision for people with astigmatism accompanied by myopia or hyperopia.



What Does Vision Look Like with Astigmatism?

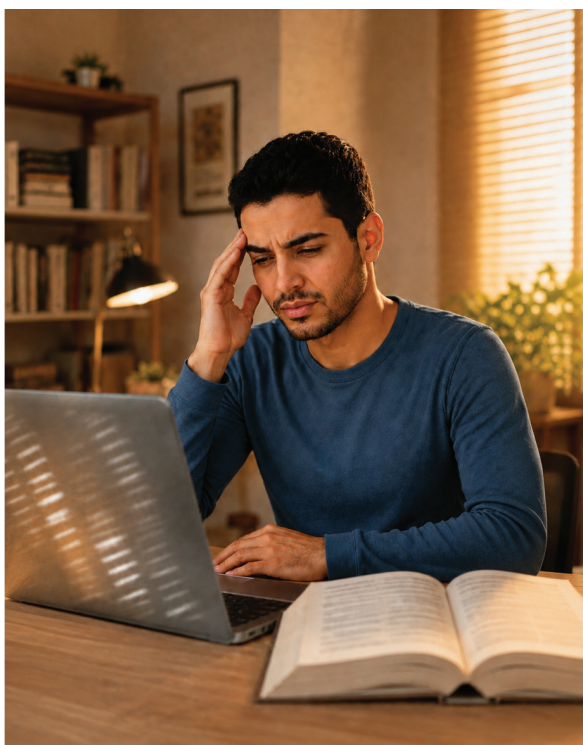
The effect of astigmatism on vision varies depending on its degree and axis. Some details or orientations may appear clearer than others, while objects may appear blurred or elongated at different distances.



How Does Astigmatism Affect Daily Activities?

The direction of blur may vary depending on the axis of astigmatism. When it is not properly corrected, details may appear blurred or elongated in different directions.

Inadequately corrected astigmatism may increase visual strain while using a computer, watching television, or driving, which may lead to eye fatigue or headaches.



How Do I Know If I Have Astigmatism?

Some people may not notice mild astigmatism, and its presence cannot be confirmed based on symptoms alone. Therefore, regular eye examinations are important.

Astigmatism is diagnosed through a comprehensive eye examination that includes an assessment of visual acuity and refraction testing. After determining its degree and axis, the optometrist recommends appropriate glasses or contact lenses and schedules follow-up visits based on age, eye health, and visual needs.



Why Should I Use Glasses or Contact Lenses?

Glasses with cylindrical correction or toric contact lenses can provide clearer and more stable vision. This correction differs from standard spherical correction because it includes a specific cylinder power and axis based on the prescription.

Appropriate correction may help reduce visual strain and headaches associated with uncorrected astigmatism.



How Can Astigmatism Be Corrected?

The optometrist determines the most appropriate correction option based on the degree of astigmatism, eye health, and visual needs.

Correction options include glasses with cylindrical power and toric contact lenses. Refractive surgery may also be suitable for some cases following a specialist evaluation.

Soft toric contact lenses are available for daily use or with different replacement schedules. When properly fitted, they may provide clear and stable vision. Their use is similar to that of soft spherical contact lenses.



Are Spherical Lenses Enough?

Spherical correction may improve vision in cases of myopia or hyperopia. However, it may not fully correct astigmatism when cylinder power is required.

Toric contact lenses provide different optical powers in specific meridians to correct astigmatism. An optometrist determines whether they are needed based on the degree of astigmatism and the individual's visual needs.



Advantages of Contact Lenses

Contact lenses may provide a wider and less restricted field of peripheral vision compared with eyeglass frames, which may be practical when driving or playing sports.

They are also not affected by fogging or frame slippage, as glasses may be, and may offer greater freedom of movement at work, during leisure, and in outdoor activities.



Stable Vision During Activity



Properly prescribed and fitted contact lenses may provide stable vision correction and greater freedom during many physical activities. Follow the wearing and care instructions provided by your optometrist.

Contact lenses do not protect the eyes from injury. Use appropriate eye protection for sports, and remove your contact lenses before swimming or showering.

Which Lenses Are Suitable for Astigmatism?

Toric lenses are designed differently from spherical lenses. They must maintain the correct orientation on the eye so that the astigmatism correction remains in the correct position. Stabilized designs use eyelid movement, lens geometry, or other features to help control lens rotation.

Options include daily disposable toric lenses and scheduled-replacement toric lenses, available in different materials and corrective powers. Lenses vary in comfort, oxygen permeability, ease of handling, and replacement schedule. The optometrist selects the appropriate lens and assesses its fit based on the prescription, eye health, and lifestyle.

Some lenses contain a material that blocks part of the ultraviolet (UV) radiation. However, they do not fully cover the eye and the surrounding area and are not a substitute for UV-protective sunglasses.

What Should Be Considered When Choosing Contact Lenses?

Each person's needs are different, and each eye may differ from the other. Therefore, contact lenses should be prescribed by an optometrist, who should assess their fit after a comprehensive eye examination.

When choosing contact lenses, factors to consider include the prescription, eye health, comfort, the wear and replacement schedule, as well as time spent using digital devices, sports, and daily activities. Following the recommended replacement schedule may help reduce the buildup of deposits.

Use contact lenses that have been prescribed and fitted for your visual needs, and follow the recommended wearing, replacement, and care instructions.



Clear vision supports everyday life

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