

## Genetics or Poor Lifestyle Habits Can Make Children Prone to Astigmatism! Here Are 3 Treatment Methods for Astigmatism



Astigmatism can cause blurred or distorted vision, affecting eyesight. The primary cause of astigmatism in children is related to genetic factors, but it can also be due to poor lifestyle habits, such as engaging in activities in poorly lit environments or lying down while reading, which may lead to astigmatism. Learn more about the symptoms, treatment, and prevention methods for astigmatism in children.

### Definition of Astigmatism

Astigmatism is a common refractive error. A normal cornea is a perfectly round hemisphere, while an astigmatic cornea has an oval shape. When the cornea or lens cannot evenly focus light coming from all directions onto the retina, it results in blurred or distorted images, leading to astigmatism.

### Regular Astigmatism vs. Irregular Astigmatism

Astigmatism is mainly divided into regular and irregular types.

- **Irregular Astigmatism:** This occurs when the shape of the cornea is unevenly curved, causing light to scatter in all directions and preventing it from focusing on the retina, leading to image distortion.
- **Regular Astigmatism:** This occurs when the curvature of the cornea is inconsistent in one direction compared to its perpendicular direction. The varying curvature causes light to focus at different positions on the retina, resulting in different types of regular astigmatism, including:

1. **Myopic Astigmatism:** One main light ray focuses on the retina while another focuses in front of it; or both main light rays focus in front of the retina but at different points.
2. **Hyperopic Astigmatism:** One main light ray focuses on the retina while another focuses behind it; or both main light rays focus behind the retina but at different points.
3. **Mixed Astigmatism:** One main light ray focuses in front of the retina while another focuses behind it.



### What Symptoms Indicate That a Child Might Have Astigmatism?

1. **Decreased Vision:** Astigmatism usually causes blurred or distorted vision, affecting the ability to see both distant and nearby objects. When the degree of astigmatism is mild, it may not significantly impact vision. However, as it worsens, vision may decline noticeably, and in severe cases, double vision may occur.
2. **Eye Fatigue:** Children may experience eye fatigue due to the ciliary muscles straining to see clearly. In severe cases, this can lead to headaches and discomfort in the eyes and eye sockets, impacting daily life.

## Causes of Astigmatism

1. **Genetics:** One of the primary causes of astigmatism is the inherent shape of the eyeball, which may be related to genetic factors. When the eyeball does not grow perfectly round, light cannot focus on the same spot on the retina, resulting in astigmatism. Congenital astigmatism may gradually decrease as the eyeball develops.
2. **Poor Lifestyle Habits:** The likelihood of astigmatism developing due to acquired factors is low. Reports suggest that improper eye usage, such as frequently engaging in activities in poorly lit environments, lying down while reading, squinting, and rubbing the eyes, can exert pressure on the cornea, changing its curvature and increasing the degree of astigmatism.
3. **Previous Eye Injuries:** Additionally, a small number of people may experience corneal trauma, such as ulcers or injuries. Scarring that occurs after healing can result in an uneven cornea with varying curvature, leading to astigmatism.

## Methods for Detecting Astigmatism

If you notice that your child has difficulty seeing distant or nearby objects or frequently feels eye fatigue, it is important to schedule an appointment with an ophthalmologist for a comprehensive eye health examination.

Many eye clinics and hospitals offer one-stop eye health programs for children, which may include the following services:

- Comprehensive examinations (with detailed reports)
- Recommendations for myopia control from optometrists: myopia control lenses and frames / orthokeratology lenses (OK lenses) for overnight wear / daily wear soft contact lenses for myopia control / atropine eye drops, etc.

## 3 Treatment Methods for Astigmatism

1. **Eyeglasses or Soft Contact Lenses:** These correct astigmatism by allowing light to refract properly and focus on the retina.
2. **Rigid Gas Permeable Contact Lenses:** Wearing rigid contact lenses at night can reshape the cornea, providing normal levels of vision after removal in the morning. This method is commonly used to control the progression of myopia and astigmatism in children and teenagers.
3. **Laser Vision Correction (for Adults Only):** Adults over the age of 18 with stable astigmatism may consider laser vision correction surgery to correct astigmatism.

Since age and adaptability of the eyes vary from person to person, vision correction plans can differ. Before undergoing vision correction, a detailed eye health examination and consultation with an ophthalmologist should be conducted to find the most suitable correction method.