

Astigmatism



Description

Astigmatism is a refractive error where the eye is not able to focus sharply due to the irregular shape and curvature of the corneal surface.

In astigmatism, as the cornea is not a uniform shape (may be spoon shaped), it refracts light irregularly across the axes with the optical anomaly causing refractive error.

Therefore, multiple light rays enter the eye unequally and prevent the formation of one sharp focus point on the retina. Clear vision is not achieved.

Astigmatism may be caused by slight tilting of the lens inside the eye.

The condition may be a genetic characteristic or a normal variation accompanying growth.

Implications

Astigmatism causes different amounts of blurring in different directions, resulting in images appearing to be distorted, or sometimes doubled. A large amount of astigmatism may result in significant blurring.

Blurred near and distant vision will be present.

Eye strain and headaches, especially after completing intensive visual tasks such as reading, may also occur.

Uncorrected (not wearing prescribed glasses or contact lenses) astigmatism may cause visual fatigue, headaches, frowning and squinting.

Astigmatism may be simple, mixed or complex depending on whether it is combined with hyperopia (long sightedness) and myopia (short sightedness).

Accessing the curriculum

Consider enlarging print.

Consider the provision of dark lined paper.

Provide appropriate lighting within the learning environment from above or behind.

Reduce classroom environmental glare. Avoid whiteboards, reflective white paper (buff may provide better access), and instruction next to windows. Reduce glare on work surfaces.

Use additional verbal descriptions to support instruction and understanding.

Use contrasting colours on surfaces.

Consider the impact of visual fatigue and offer eye rest time.

Click to see an [Interactive Eye Diagram](#) (web link)

As this document contains generic information, please consult with the Vision Education Program in regard to individual educational needs.

References

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For further information

Phone: 08 9402 6409

Email: sensory@education.wa.edu.au

Web: www.ssens.wa.edu.au