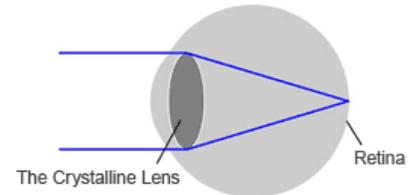


Hypermetropia, Myopia and Astigmatism

Normal Vision (Emmetropy)

Normal vision, or emmetropy, refers to a state in which parallel light rays entering the eye form images on the retina when the eye is in a completely unregulated state (when staring off into the distance, for example). People with "good vision" are categorized as having normal vision.

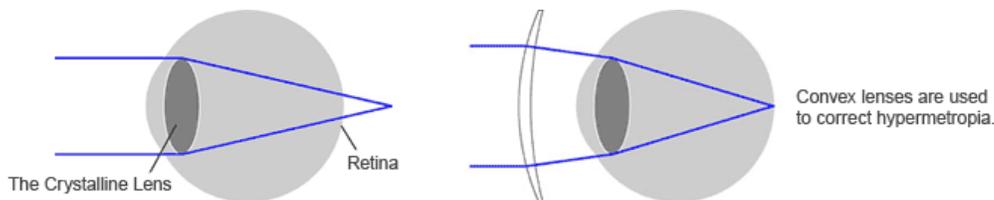


However, because people suffering from hypermetropia, or farsightedness can also use the regulatory function so that parallel light rays from the distance form images on the retina, it cannot simply be stated that "people able to see distant objects automatically have normal vision."

Hypermetropia (Farsightedness)

Hypermetropia, or farsightedness, refers to a state in which parallel light rays entering the eye form images behind the retina when the eye is in a completely unregulated state.

In people with only a slight degree of farsightedness or in the younger population, the regulatory function is capable of training the focal point on the retina, but this exposes the eye to stress due to constant use of the ciliary muscle, causing extreme eye fatigue. Although some people mistakenly believe that good results from an eye test automatically mean that they have normal vision, caution must be exercised since, in some cases, even people with normal vision may be suffering from farsightedness (latent hypermetropia).

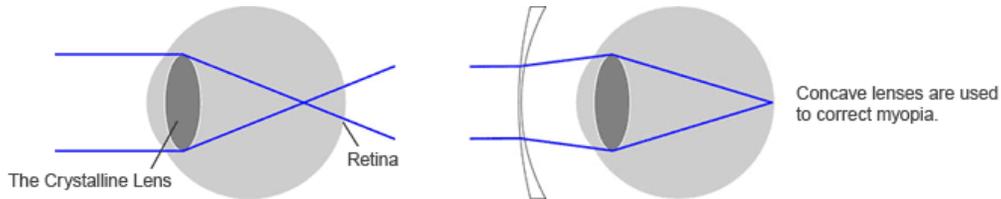


Myopia (Nearsightedness)

Myopia refers to a state in which parallel light rays entering the eye form images in front of the retina when the eye is in a completely unregulated state.

In addition, working continually at repetitive tasks over extended periods of time can cause extreme stress to the ciliary muscle that fulfills the regulatory role and workers may find that this stress remains even after finishing work.

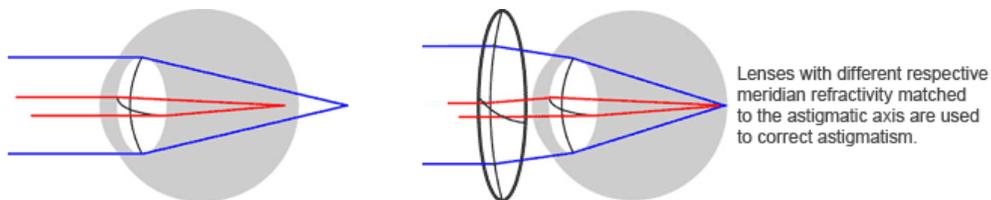
Temporary nearsightedness caused in this way is referred to as "pseudomyopia" or "false nearsightedness."



Astigmatism

Astigmatism refers to a state in which the light-ray image formation position changes depending on the angle of light entering the eye. For example, the figure below shows that vertical light forms an image behind the retina (in the same way as farsightedness) while horizontal light forms an image in front of the retina (in the same way as nearsightedness). Naturally, the points of image formation of both are located in front of the retina (myopic astigmatism) in some cases and behind the retina (hyperopic astigmatism) in others.

While regular astigmatism can be corrected by spectacles, means such as hard contact lenses are usually used to correct irregular astigmatism.



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