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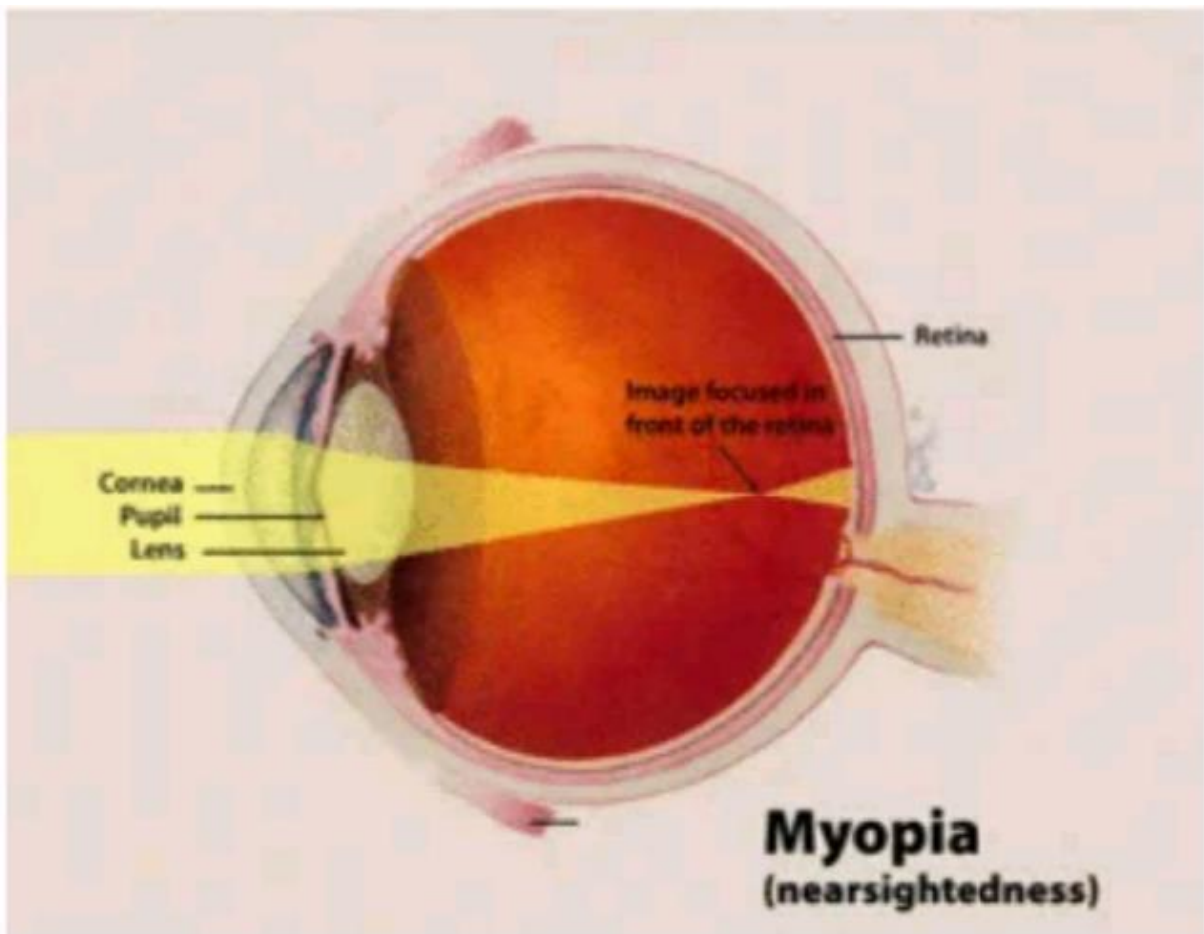
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Discuss two eye defect

Myopia: (nearsightedness) This is a defect of vision in which far objects appear blurred but near objects are seen clearly. The image is focused in front of the retina rather than on it usually because the eyeball is too long or the refractive power of the eye's lens too strong. Myopia can be corrected by wearing glasses/contacts with concave lenses these help to focus the image on the retina.



Causes

Your eye has two parts that focus images:

- The cornea is the clear, dome-shaped front surface of your eye.

- The lens is a clear structure about the size and shape of an M&M's candy.

In a normally shaped eye, each of these focusing elements has a perfectly smooth curvature, like the surface of a marble. A cornea and lens with such curvature bend (refract) all incoming light to make a sharply focused image directly on the retina, at the back of your eye

Symptoms

Nearsightedness symptoms may include:

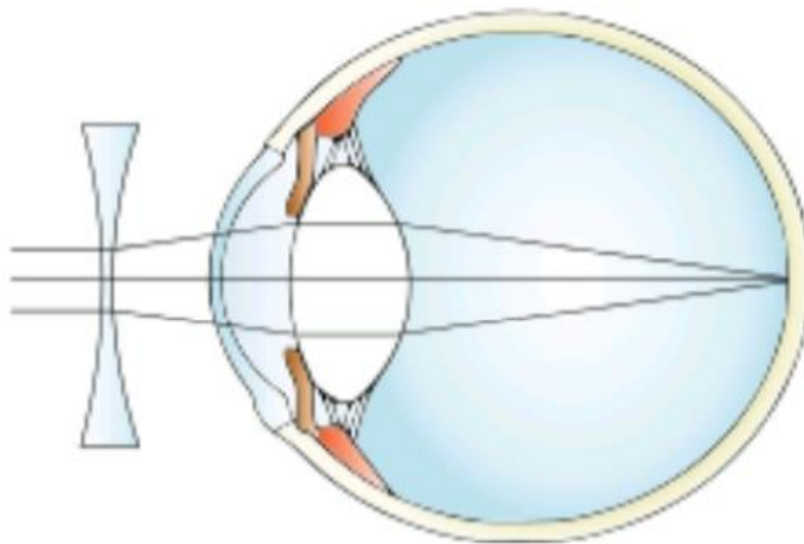
- Blurry vision when looking at distant objects
- The need to squint or partially close the eyelids to see clearly
- Headaches caused by eyestrain
- Difficulty seeing while driving a vehicle, especially at night (night myopia)

A child with nearsightedness may:

- Persistently squint
- Need to sit closer to the television, movie screen or the front of the classroom
- Seem to be unaware of distant objects
- Blink excessively
- Rub his or her eyes frequently

TREATMENT

Nearsightedness can be corrected with eyeglasses, contact lenses or refractive surgery .



Compensating for myopia using a corrective lens.

Depending on the degree of your myopia, you may need to wear your glasses or contact lenses all the time or only when you need very clear distance vision, like when driving, seeing a chalkboard or watching a movie.

Good choices for eyeglass lenses for nearsightedness include high-index lenses (for thinner, lighter glasses) and lenses with anti-reflective coating . Also, consider photochromic lenses to protect your eyes from UV rays and high-energy blue light and to reduce the need for a separate pair of prescription sunglasses outdoors.

If you're nearsighted, the first number ("sphere") on your eyeglasses prescription or contact lens prescription will be preceded by a minus sign (–). The higher the number, the more nearsighted you are.

Refractive surgery can reduce or even eliminate your need for glasses or contacts. The most common procedures are performed with an excimer laser.

- In PRK the laser removes a layer of corneal tissue, which flattens the cornea and allows light rays to focus more accurately on the retina.
- In LASIK — the most common refractive procedure — a thin flap is created on the surface of the cornea, a laser removes some corneal tissue, and then the flap is returned to its original position.

2. **Hyperopia: (farsightedness)** This is a defect of vision in which there is difficulty with near vision but far objects can be seen easily. The image is focused behind the retina rather than upon it. This occurs when the eyeball is too short or the refractive power of the lens is too weak.

CAUSES

As hyperopia results from the visual image being focused behind the retina, it has two main causes:

- Low converging power of eye lens because of weak action of ciliary muscles
- Abnormal shape of the cornea
- Far-sightedness is often present from birth, but children have a very flexible eye lens, which helps to compensate.

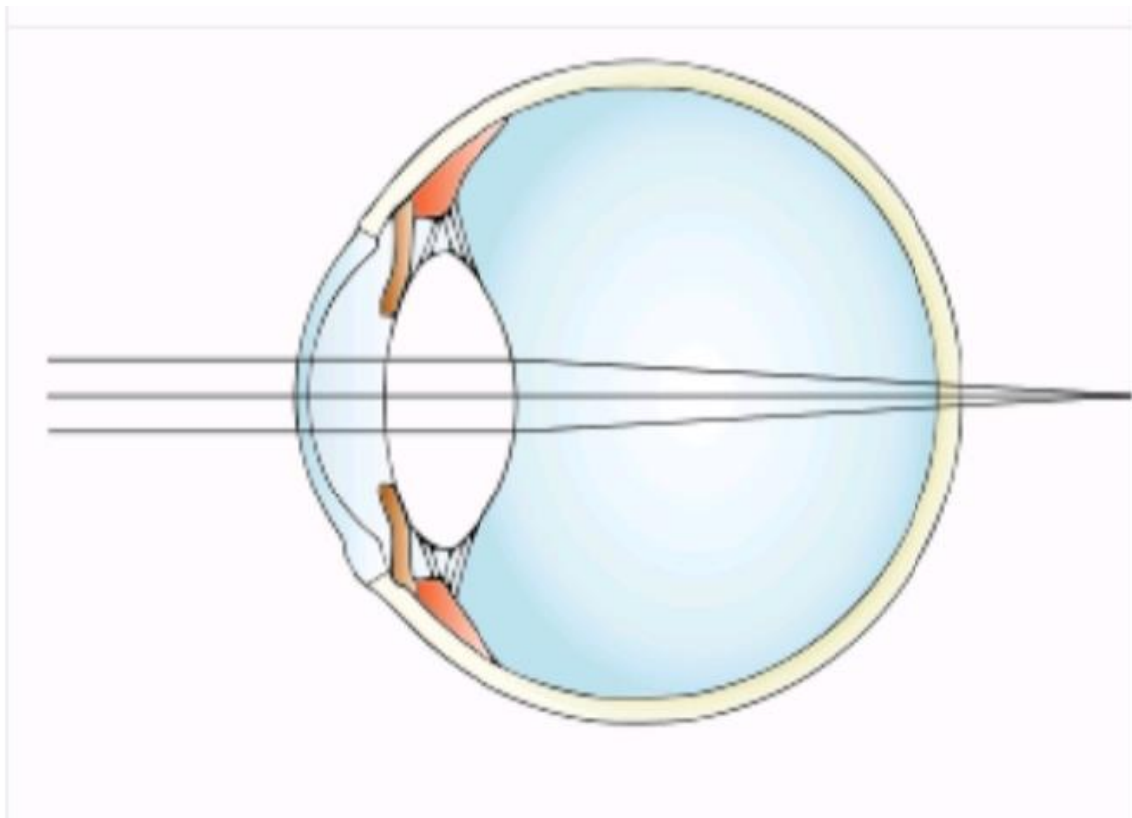
In rare instances hyperopia can be due to diabetes, and problems with the blood vessels in the retina.

CLASSIFICATION

Hyperopia is typically classified according to clinical appearance, its severity, or how it relates to the eye's accommodative status .

There are three clinical categories of hyperopia.

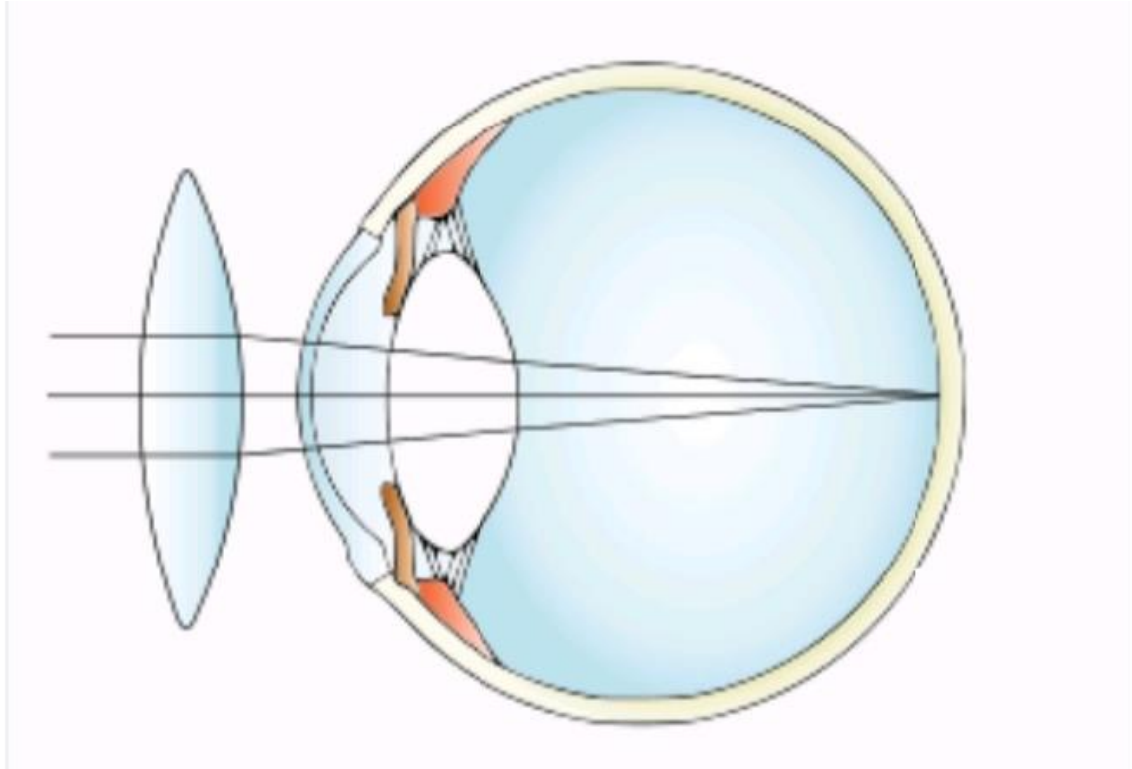
- Simple hyperopia: Occurs naturally due to biological diversity.
- Pathological hyperopia: Caused by disease, trauma, or abnormal development.
- Functional hyperopia: Caused by paralysis that interferes eye's ability to accommodate.



TREATMENT

Corrective lenses

The simplest form of treatment for far-sightedness is the use of corrective lenses, eyeglasses or contact lenses. Eyeglasses used to correct far-sightedness have convex lenses.



Surgery

There are also surgical treatments for far-sightedness:

- Photorefractive keratectomy (PRK): Removal of a minimal amount of the corneal surface
- Laser assisted in situ keratomileusis (LASIK): Laser eye surgery to reshape the cornea, so that glasses or contact lenses are no longer needed.
- Refractive lens exchange (RLE): A variation of cataract surgery where the natural crystalline lens is replaced with an artificial intraocular lens ; the difference is the existence of abnormal ocular anatomy which causes a high refractive error.
- Laser epithelial keratomileusis (LASEK)
Resembles PRK, but uses alcohol to loosen the corneal surface.