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LEVEL: 200

COURSE CODE: PHS 212

WRITE SHORT NOTES ON ANY TWO EYE DEFECTS

* MYOPIA (SHORTSIGHTEDNESS): This is a defect of vision in which far objects appear blurred but near objects are seen clearly. The image is focused on the retina rather than on it usually ecause 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.
* **Types of myopia**

Various forms of myopia have been described by their clinical appearance

* Simple myopia: Myopia in an otherwise normal eye, typically less than 4.00 to 6.00 [diopters](https://en.wikipedia.org/wiki/Dioptre%22%20%5Co%20%22Dioptre). This is the most common form of myopia.
* Degenerative myopia, also known as malignant, pathological, or progressive myopia, is characterized by marked [fundus](https://en.wikipedia.org/wiki/Fundus_%28eye%29%22%20%5Co%20%22Fundus%20%28eye%29) changes, such as posterior [staphyloma](https://en.wikipedia.org/wiki/Staphyloma%22%20%5Co%20%22Staphyloma), and associated with a high [refractive error](https://en.wikipedia.org/wiki/Refractive_error) and subnormal visual acuity after correction. This form of myopia gets progressively worse over time. Degenerative myopia has been reported as one of the main causes of [visual impairment](https://en.wikipedia.org/wiki/Visual_impairment).
* [Pseudomyopia](https://en.wikipedia.org/wiki/Pseudomyopia) is the blurring of distance vision brought about by [spasm](https://en.wikipedia.org/wiki/Spasm) of the [accommodation](https://en.wikipedia.org/wiki/Accommodation_%28eye%29) system.
* Nocturnal myopia: Without adequate stimulus for accurate accommodation, the accommodation system partially engages, pushing distance objects out of focus.
* Nearwork-induced transient myopia (NITM): short-term myopic far point shift immediately following a sustained near visual task. Some authors argue for a link between NITM and the development of permanent myopia.
* [Instrument myopia](https://en.wikipedia.org/wiki/Instrument_myopia): over-accommodation when looking into an instrument such as a [microscope](https://en.wikipedia.org/wiki/Microscope).
* Induced myopia, also known as acquired myopia, results from various medications, increases in [glucose](https://en.wikipedia.org/wiki/Glucose) levels, [nuclear sclerosis](https://en.wikipedia.org/wiki/Nuclear_sclerosis), [oxygen toxicity](https://en.wikipedia.org/wiki/Oxygen_toxicity) (e.g., from diving or from oxygen and hyperbaric therapy) or other anomalous conditions. [Sulphonamide](https://en.wikipedia.org/wiki/Sulfonamide_%28medicine%29) therapy can cause ciliary body edema, resulting in [anterior](https://en.wikipedia.org/wiki/Anterior) displacement of the lens, pushing the eye out of focus. Elevation of [blood-glucose](https://en.wikipedia.org/wiki/Blood_sugar_level) levels can also cause edema (swelling) of the [crystalline lens](https://en.wikipedia.org/wiki/Lens_%28anatomy%29) as a result of [sorbitol](https://en.wikipedia.org/wiki/Sorbitol%22%20%5Co%20%22Sorbitol) accumulating in the lens. This edema often causes temporary myopia. [Scleral buckles](https://en.wikipedia.org/wiki/Scleral_buckle%22%20%5Co%20%22Scleral%20buckle), used in the repair of [retinal detachments](https://en.wikipedia.org/wiki/Retinal_detachment) may induce myopia by increasing the axial length of the eye.
* Index myopia is attributed to variation in the index of refraction of one or more of the ocular media. Cataracts may lead to index myopia.
* Form deprivation myopia occurs when the eyesight is deprived by limited illumination and vision range,[]](https://en.wikipedia.org/wiki/Near-sightedness#cite_note-Young_FA-45) or the eye is modified with artificial lensesor deprived of clear form vision. In lower vertebrates, this kind of myopia seems to be reversible within short periods of time. Myopia is often induced this way in various animal models to study the [pathogenesis](https://en.wikipedia.org/wiki/Pathogenesis) and mechanism of myopia development.
* SYMPTOMS OF MYOPIA

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)
* TREATMENT

### Glasses and contact lenses

Glasses and contact lenses are the [most common treatment options](https://www.aoa.org/patients-and-public/eye-and-vision-problems/glossary-of-eye-and-vision-conditions/myopia) for myopia. An optometrist will order custom lenses that have the right prescription for that person. These will fit into the frame of the glasses and correct any nearsightedness.

Contact lenses are clear discs that sit on the surface of the eye. Like glasses, contact lenses are also customizable for different prescriptions.

### Orthokeratologys

People with mild forms of myopia may benefit from a nonsurgical process called orthokeratology, or corneal refractive therapy. This treatment involves wearing a series of rigid contact lenses to reshape the cornea. These lenses put pressure on the cornea to flatten it. This, in turn, changes how light focuses as it enters the eye. People tend to wear these contact lenses while sleeping. This process can help people experience clear vision temporarily. However, it also carries a risk of eye infections.

### Surgery

There are a couple of different types of surgery available to people who would rather not wear glasses, who want a more permanent solution, or who have severe forms of myopia.

One form of surgery is laser surgery, wherein an eye doctor will use a powerful beam of light to change the shape of the cornea. Laser surgery adjusts how the eye focuses light, meaning that images that were once blurry should now be clear. The surgery takes around [10 minutes per eye](https://www.urmc.rochester.edu/eye-institute/lasik/faq.aspx#howlongdoesittake). This option can be expensive, but it is usually painless. Vision should return to normal [within a day or so](https://www.aao.org/eye-health/treatments/laser-surgery-recovery) of the surgery.

However, it is normal to have occasional blurred vision or dry eyes for weeks or months afterward. Attending follow-up appointments after this procedure is important to make sure that the eyes are healing properly.

Other forms of surgery can involve placing a corrective lens inside the eye, either in front of the person’s lens or in place of it. Eye doctors tend to recommend this form of surgery for more severe forms of myopia.

* 1. HYPEROPIA (LONGSUGHTEDNESS): 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. Hyperopia can be corrected by wearing glasses/contacts that contain convex lenses.