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DEPT: NURSING  
LEVEL: 200L  
COURSE CODE: PHS 212 (PHYSIOLOGY)  
ASSIGNMENT TITLE: SPECIAL SENSES**

**QUESTION**

Write short notes on any two eye defects

**ANSWERS**

1. **HYPEROPIA (FAR SIGHTEDNESS)**

**What Is Hyperopia?**

Hyperopia, or farsightedness, is when you see things that are far away better than things that are up close. Your eyes focus better on distant objects than on nearby ones. Children who have mild to moderate farsightedness can see both close and far away without glasses because the muscles and lenses in their eyes can squint very well and overcome the farsightedness.

**HYPEROPIA CAUSES**

Your eyes focus on light rays and send the image of what you’re looking at to your brain. When you’re farsighted, the light rays don’t focus the way they should. The cornea, the clear outer layer of your eye, and the lens focus images directly on the surface of your retina, which lines the back of your eye. If your eye is too short, or the power to focus is too weak, the image will go to the wrong place, behind your retina. That’s what makes things look blurry.

**HYPEROPIA SYMPTOMS**

1. Trouble focusing on nearby objects
2. Headaches
3. Blurry vision
4. Eye strain
5. Fatigue or headache after you do a close-up task such as reading

**HYPEROPIA DIAGNOSIS**

All it takes to diagnose farsightedness is a basic eye exam. The doctor will have you read a chart across the room. If that test shows hyperopia, they’ll use a device called a retinoscope to look at how light reflects off your retina. They’ll also use a phoropter – a testing device -- to help them decide on the best prescription for glasses or contacts.

**HYPEROPIA TREATMENT**

1. Glasses
2. Contact lenses
3. Vision correction surgery such as LASIK
4. With farsightedness, your prescription is a positive number, such as +3.00. The higher the number, the stronger the lenses.

**HYPEROPIA COMPLICATIONS**

Adults don’t usually have complications from hyperopia. Some children may have problems such as:

1. Lazy eye (amblyopia)
2. Eyes that aren’t aligned (strabismus)
3. Delays in development
4. **MYOPIA (NEAR SIGTHTDENESS)**

Myopia (also called nearsightedness) is the most common cause of impaired vision in people under age 40. In recent years, its prevalence is growing at an alarming rate. Globally, research suggests that in the year 2000, roughly 25 percent of the world's population was nearsighted but by the year 2050, it's expected that roughly half the people on the planet will be myopic.

**MYOPIA SYMPTOMS**

If you are nearsighted, you will have difficulty reading road signs and seeing distant objects clearly, but will be able to see well for close-up tasks such as reading and computer use. Other signs and symptoms of myopia include squinting, eye strain and headaches. Feeling fatigued when driving or playing sports also can be a symptom of uncorrected nearsightedness.

**WHAT CAUSES MYOPIA?**

Myopia occurs when the eyeball is too long, relative to the focusing power of the cornea and lens of the eye. This causes light rays to focus at a point in front of the retina, rather than directly on its surface. Nearsightedness can also be caused by the cornea and/or lens being too curved for the length of the eyeball. In some cases, myopia occurs due to a combination of these factors. Myopia typically begins in childhood, and you may have a higher risk if your parents are nearsighted. In most cases, nearsightedness stabilizes in early adulthood but sometimes it continues to progress with age.

**MYOPIA TREATMENT**

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

**DEGENERATIVE MYOPIA**

In most cases, nearsightedness is simply a minor inconvenience and poses little or no risk to the health of the eye. But sometimes myopia can be so progressive and severe it is considered a degenerative condition. Degenerative myopia (also called malignant or pathological myopia) is a relatively rare condition that is believed to be hereditary and usually begins in early childhood. About 2 percent of Americans are afflicted, and degenerative myopia is a leading cause of legal blindness.