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18/ENG08/010
BIOMEDICAL ENGINEERING
Human Physiology II - PHS 212

Question

Write short notes on any two defects.

Solution

① MYOPIA or NEARSIGHTED? 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. If you're nearsighted, the first number ("sphere") on your eyeglasses prescription will be preceded by a minus sign (-). The higher the number, the more nearsighted you are.

② ASTIGMATISM? Instead of the Cornea having a symmetrically round shape (like a tennis ball), it is shaped more like a rugby ball, with one meridian being significantly more curved than the meridian perpendicular to it. Astigmatism usually causes vision to be blurred or distorted to some degree at all distances. Symptoms of uncorrected astigmatism are eye strain and headaches, especially after reading or other prolonged visual tasks. Astigmatism is usually combined with myopia or hyperopia.