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Write short notes on any two eye defects?

1.

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.

What Causes Myopia?

The structure of your eye is to blame. When your eyeball is too long or the cornea -- the protective outer layer of your eye -- is too curved, the light that enters your eye won't focus correctly. Images focus in front of the retina, the light-sensitive part of your eye, instead of directly on the retina. This causes blurred vision. Doctors call this a refractive error.

High myopia: It's a more serious form of the condition, where the eyeball grows more than it is supposed to and becomes very long front to back. Besides making it hard to see things at a distance, it can also raise your chance of having other conditions like a detached retina, cataracts, and glaucoma.

Degenerative myopia: Also called pathological or malignant myopia, it is a rare type you usually inherit from your parents. Your eyeball gets longer very quickly and causes severe myopia, usually by the teenage or early adult years. This type of myopia can get worse far into adulthood. Besides making it hard to see things at a distance, you may have a higher chance of having a detached retina, abnormal blood vessel growth in the eye (choroid neovascularization), and glaucoma.

Symptoms Of Myopia

Chances are the only symptom is that more distant objects are blurred. You may also notice:

- Headaches

- Squinting
- Eye strain
- Eye fatigue when you try to see objects more than a few feet away
- Children with myopia often have trouble reading the blackboard at school.

Diagnosis and Treatment

An eye exam can show you if you're myopic. Glasses, contacts, or refractive surgery can usually correct the problem.

When you have myopia, your prescription for glasses or contact lenses will be a negative number. The more negative the number, the stronger your lenses will be. For example, -3.00 is stronger than -2.50.

Your prescription helps the eye focus light on your retina. That clears up your vision.

Eye surgery can improve your vision so much you may no longer need to wear glasses or contacts. The most common procedures for myopia are:

- Photorefractive keratectomy: Also called PRK, this surgery uses a laser to sculpt the middle layer of your cornea. That flattens the cornea's curve and lets light rays focus closer to or on your retina.
- LASIK: This is the most common surgery for myopia. The surgeon uses a laser or another tool to create a thin flap on the top layer of your cornea. He sculpts the cornea with another laser and moves the flap back into place.

In the case of high myopia, special contacts or atropine eye drops have been found to be effective in slowing the progression. In some cases, your doctor may suggest cataract or clear lens replacement surgery.

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. Hyperopia can be corrected by wearing glasses/contacts that contain convex lenses.

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.

Causes Of Hyperopia

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

You may have:

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

If you have these symptoms when you wear glasses or contacts, you may need a new prescription.

Hyperopia Diagnosis

All it takes to diagnose farsightedness is a basic eye exam. Your 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.

Adult eye exams

The Adults who haven't had vision problems should get an eye exam at age 40. Have eye tests every 2 to 4 years between ages 40 and 54. Between 55 and 64, get tested every 1 to 3 years. If you're 65 and older, get tested every 1 to 2 years.

If you have diabetes, high blood pressure, or a family history of eye disease, don't wait until you're 40 to have an eye exam. Your doctor also might want you to come in more often.

Children's eye exams

Experts recommend that infants have their eye health checked when they're between 6 months and 1 year old. Children should also have vision tests between ages 3 and 3½, before they start school, and every 1 to 2 years after.

Hyperopia Treatment

For clear vision, you might need:

- Glasses
- Contact lenses
- Vision correction surgery such as LASIK

With farsightedness, your prescription is a positive number, such as +3.00. The higher the number, the stronger the lenses.