

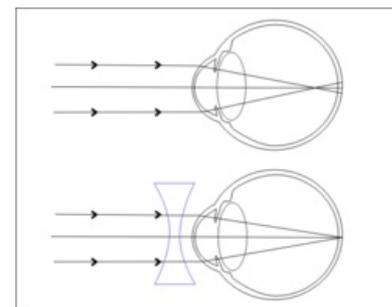
Nearsightedness

Nearsightedness, also called *myopia* is a condition where the nearsighted eye has a distant point, *punctum remotum*, at a final distance in front of the eye. Parallel rays coming to the eye are refracted into the focus point, which is **in front of the retina**. The main manifestation is poor visibility of distant objects.

The correction is performed with glasses with a **divergence lens**, which has a negative dioptric value.

There are two causes that lead to myopia:

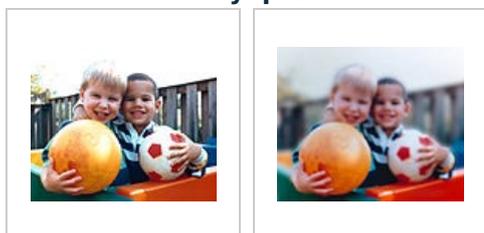
- **axial** - the eyeball is too long (it is a congenital defect, explained by fluctuations in the dimensions of the eye formed in embryonic development);
- **refractive** - the eyeball has a normal length, but greater refraction of optical environments. This cause of myopia is not so common.



Myopic eye, dispersion correction

Presbyopia occurs **later** in myopes and is not so striking because the loss of accommodation is partly compensated by a refractive error.

Myopia



Normal visus

Visus in myopia

Links

Related articles

- Farsightedness (hypermetropia)
- Biochemistry of the vision process
- Eye (biophysics)
- Eye (biophysics)/Disorders of the eye
- Optical apparatus of the eye, oculomotor muscles, eye movements
- Eye (histology)

Source

- KYMPLOVÁ, Jaroslava. *Katalog metod v biofyzice* [online]. [cit. 2012-09-20]. <<https://portal.lf1.cuni.cz/clanek-793-katalog-metod-v-biofyzice>>.