

## 1. Myopia or Nearsightedness

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.

### Causes

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 has a higher risk if parents are nearsighted. In most cases, nearsightedness stabilizes in early adulthood but sometimes it continues to progress with age.

### Treatment

If myopic, the first number ("sphere") on the eyeglasses prescription or contact lens prescription will be preceded by a minus sign (-). The higher the number, the more myopic.

Refractive surgery can reduce or even eliminate the 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 surface.

## 2. Long sightedness

Long-sightedness affects the ability to see nearby objects. It may enable victims to see distant objects clearly, but closer objects are usually out of focus.

It often affects adults over 40, but can affect people of all ages – including babies and children.

The medical name for long-sightedness is hyperopia or hypermetropia.

## **Causes of long-sightedness**

Long-sightedness is when the

eye does not focus light on the retina (the light-sensitive layer at the back of the eye) properly.

This may be because:

- the eyeball is too short
- the cornea (transparent layer at the front of the eye) is too flat
- the lens inside the eye is unable to focus properly

The main treatments are:

- prescription glasses – these have lenses that are made specifically for which ensures light is focused onto the back of your eyes correctly
- contact lenses – some people prefer these to glasses because they are lightweight and virtually invisible
- laser eye surgery – a laser is used to change the shape of the cornea, which may mean you don't need to wear glasses or contact lenses