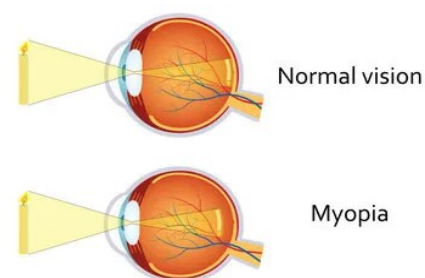


Myopia

Myopia is also called “short-sightedness” or “near-sightedness”. It is a refractive defect of the eye in which an image is focused in front of the retina. People with myopia see near objects clearly, but distant objects are blurred. With myopia, the eyeball is too long, so images are focused inside the eye rather than on the retina.



Diagnosis

A diagnosis of myopia is typically confirmed during an eye examination by an ophthalmologist or an optometrist. A “phoropter” is an ophthalmic testing device, and contains different lenses used for refraction of the eye during sight testing, to measure an individual's “refractive error” and therefore determine their “prescription”.

Epidemiology

- A recent study in the United Kingdom found that 50% of British whites and 53.4% of British Asians were myopic.
- In Brazil, a 2005 study estimated that 6.4% of Brazilians between the ages of 12 and 59 had myopia, compared with only 2.7% of the indigenous people in northwestern Brazil.
- In India, the prevalence of myopia in the general population has been reported to be only 6.9%.
- In the United States, the prevalence of myopia has been estimated at 20%. Nearly 1 in 10 (9.2%) of American children between the ages of 5 and 17 have myopia. About 25% of Americans between the ages of 12 and 54 have the condition.

Ethnicity and race

- The prevalence of myopia has been reported as high as 70-90% in some Asian countries, 30-40% in Europe and the United States, and 10-20% in Africa.
- Myopia is less common in African American and African people.
- Asians have the highest prevalence (18.5%), followed by Hispanics (13.2%).
- Caucasians have the lowest prevalence of myopia (4.4%).
- African Americans also have a low prevalence (6.6%).

Education, intelligence, and IQ

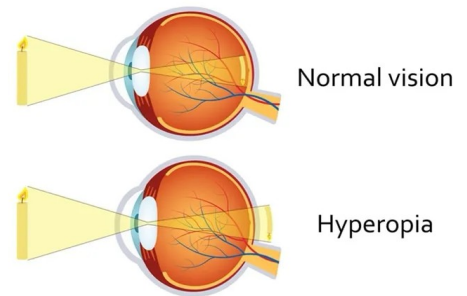
A number of studies have shown that the prevalence of myopia increases with level of education and many studies have shown a relationship between myopia and IQ. Some studies show that people with myopia average about 8 IQ points higher than other people. Some scientists believe that myopia and IQ are influenced by the same genes.

Treatment, management, and prevention

Myopia can be corrected by the use of lenses, such as glasses or contact lenses. It may also be corrected by refractive surgery, such as LASIK. There is no known method of preventing myopia.

Hyperopia

The opposite defect of myopia is hyperopia, hypermetropia, "long-sightedness" or "far-sightedness". It is a refractive defect of the eye in which an image is focused behind the retina. People with hyperopia see far objects clearly, but near objects are blurred. With hyperopia, the eyeball is too short, so images are focused beyond the eye rather than on the retina. People with mild hyperopia may complain of eye strain during prolonged reading. If the hyperopia is severe, there will be defective vision for both distance and near objects. Newborns are usually hyperopic, but it gradually decreases as they get older.



Diagnosis

Diagnosis of hyperopia is based on an eye examination similar to that for myopia.

Epidemiology

Hyperopia primarily affects young children, with rates of 8% at 6 years old and 1% at 15 years old. It then becomes more common again after the age of 40, and is known as "presbyopia", affecting about half of all people.

Risk factors for hyperopia include a family history of the condition, diabetes, certain medications, and tumors around the eye.

Treatment, management, and prevention

Management can occur with glasses, contact lenses, or refractive corneal surgeries. Glasses are easiest while contact lenses can provide a wider field of vision. Surgery works by changing the shape of the cornea. There is no known method of preventing hyperopia.