

# Hyperopia

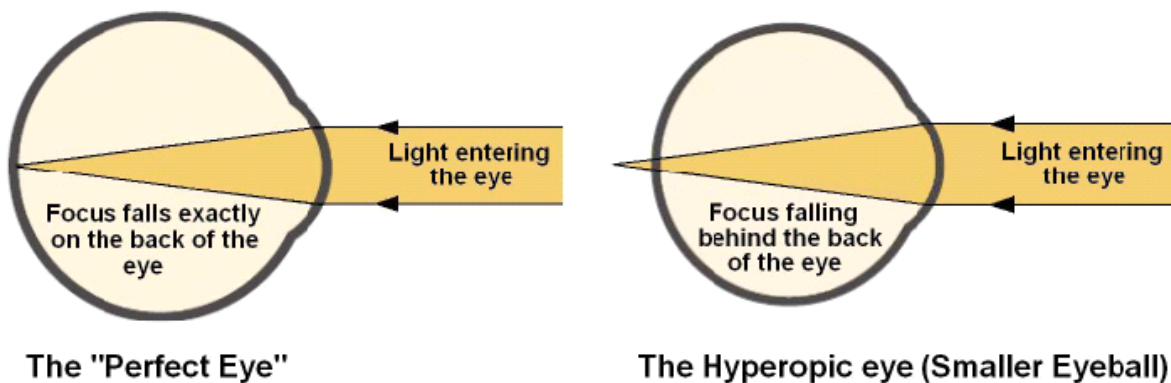
A young “normal” eye looking into the far distance sees clearly with little or no focusing effort. A “long-sighted” hyperopic eye looking into the far distance can see clearly only with the assistance of the muscular focusing system inside the eye.

A normal eye uses increasing focusing effort as the object being viewed comes closer. A long-sighted eye has to make the same extra focusing effort for near work as a normal eye, but this is in addition to the effort it makes to keep distance vision clear. Overall, the hyperopic eye has to work harder than a normal eye to maintain clear and comfortable vision.

## What causes hyperopia?

In most cases hyperopia is due to the eyeball being smaller than normal. Smaller size means that when the eye is fully relaxed, light entering the eye does not focus on the back of the eye (retina) and vision is blurred.

### Cross section of the human eye



To have clear vision, the power of the optical system is increased either by the eye increasing its focusing effort, or by using spectacles or contact lenses. For low amounts of hyperopia, young eyes will often make the necessary focusing effort without any eyestrain or discomfort. The greater the hyperopia the greater the effort needed for clear vision, especially for close work.

### The person with hyperopia may notice:

- Vision is poor unless they make an effort to see
- Vision is blurred when looking up from close work
- Concentration and comprehension are difficult when doing intense visual work such as reading
- They experience frequent eyestrain symptoms
- They suffer from headaches
- They experience double vision from time to time.

### Does hyperopia change over time?

Eighty per cent of children are born slightly long-sighted and most develop normal vision as they grow. Eyes continue to grow until about age 25 and since the size of an eye is the main factor governing focus, long-sighted eyes tend to become less long-sighted as a person grows. Despite this, some people remain hyperopic throughout life. Hyperopic eyes are capable of good vision and normally require no treatment apart from an optical correction.

Because vision disorders caused by poor focussing are usually inherited they happen regardless of factors such as the amount of close work done, rest, use of vitamins and exercises. Spectacles do not strengthen or weaken vision in adult eyes. They do allow the wearer to see more clearly and comfortably, improving visual efficiency, reducing fatigue effects and optimizing visual performance.

All eyes slowly lose their focusing ability with increasing age. Because of this most people (even those with perfect distance vision), need reading spectacles sometime in their forties. Later in life a person with hyperopia will also need spectacles to give clear and comfortable distance vision.

### **When should I seek the advice of my optometrist?**

If the quality of your vision detracts from enjoyment of life and makes it difficult to see or you experience symptoms such as blurred vision, eye strain, headaches, early fatigue or rereading for comprehension, you should see your optometrist for a comprehensive eye examination.

### **What are the Treatment Options?**

The aim in treating hyperopia in children is to optimize visual development; in adults it is to reduce symptoms, improve visual performance, and improve quality of life. Corrective lenses change the refraction of the image by augmenting the focussing mechanism of the eye. Refractive surgery may be used to reshape the surface of the eye. Wearing spectacles or contact lenses will not cause eyes to become 'weaker', although people often feel they need them more as they become used to the sharper focus and more comfortable vision the lenses provide.

**Spectacles:** Prescription lenses help focus light inside the eye improving the comfort and clarity of vision. You may need a different degree of correction in either eye and your optometrist will be able to discuss this with you as part of evaluating treatment options best suited to your hyperopia.

**Contact Lenses:** A wide range of lens technologies are available in both hard (rigid gas permeable) and soft (usually disposable) materials, including options for extended wear and multifocal prescriptions. Ask your optometrist which ones will be best for you.

**Refractive Surgery:** Refractive surgery can permanently reshape the surface of your eye using methods such as LASIK, PRK, and LASEK. Ask your optometrist for more information; he or she will be able to assist with an assessment and referral if appropriate.

### **Regular Eye Exams**

The NZ Association of Optometrists recommends a regular eye examination every 2 – 3 years for healthy adults. After age 65 more frequent exams are a wise precaution to ensure early diagnosis and treatment of sight threatening conditions such as glaucoma and age-related macular degeneration (ARMD).