Myopia Key Facts

- Myopia is blurred far (distance) vision due to excessive growth of the eye.
- The myopic eyeball is too big so that images focus in front of the retina rather than on it.
- Myopia frequently gets progressively worse once diagnosed in a school aged child.
- Myopia also frequently develops in students at university or in young adults working with computers.
- A child with two myopic parents is at a six times greater risk of becoming myopic than a child with no myopic parents. A child with one myopic parent is at three times greater risk.
- There has been a worldwide increase in the prevalence of myopia in children over the last 20 years. Increased computer use and less outdoor time are likely contributory factors.

What is myopia control?

Myopia control means taking an active approach to yours or your child’s shortsightedness (myopia), by looking at what can be done to slow down the progressive worsening of vision over time, rather than just accepting that nothing can be done about the increase in prescription every few months. There are many options to look at depending on your child’s myopia profile (see below). This is important for children, young adults working in computer-based jobs (including University students), and children of myopic parents who are at risk of either developing or worsening myopia.

Why bother?

- Higher degrees of myopia are associated with an increased risk of significant eye diseases such as retinal detachment, glaucoma and myopic macular degeneration.
- People with high degrees of myopia can be visually impaired without their glasses, e.g. when waking up in the night.
- Stronger spectacle lenses tend to be thicker and less attractive.
- The need to change glasses every few months can be expensive, especially as thinner, more expensive lens materials are usually required.

Why is my child’s vision getting worse?

Family history aside, recent research has highlighted two main theories linked to the development and progression of myopia:
1. Peripheral Defocus

In a child who is becoming myopic, the central focus part of the retina is myopic (image in front of the retina), but the peripheral retina is actually hyperopic, or longsighted (image behind retina).

It is the opposite in children who are not myopic, whose eyes may have a normal central focus but show a myopic peripheral focus. When we correct vision with normal glasses or contact lenses, we correct central vision, but in doing so we push the peripheral image back behind the retina again. This is now believed to trigger eye growth back to that focus leading to a longer eye and increased myopia. There are new spectacle and contact lens designs which correct or reverse this peripheral defocus so that the peripheral focus is on, or in front of, the retina — just as it is in a normally sighted child whose vision isn’t getting worse.

2. Binocular vision problems

This term relates to the way the eyes move and work together in a coordinated way to focus from near to far, from far to near and maintain the correct focus on an object. In myopic children, or children of myopic parents, there are two specific binocular vision problems (near esophoria and accommodative lag) which have been shown in research to be a risk factor for increasing myopia. Some treatments for myopia control use this theory.

What can I do to control my / my child’s myopia?

Taking an active approach means:

1. **Understanding your / your child’s “myopia profile”**.

   This involves a full assessment of binocular vision and management of any identified risk factors.

2. **Discussing the best type of vision correction**.

   Glasses, contact lenses and eye exercises (or any combination of these) can be used to halt the development or slow the worsening of myopia. The best option involves discussion with and recommendations from our Optometrist in view of your child’s myopia profile.

3. **Getting advice on lifestyle factors**.

   Our Optometrist will discuss lifestyle factors and give recommendations on visual tasks which could have a positive or negative impact on myopia progression.

Putting the brakes on myopia – words of caution

1. No intervention is likely to stop myopia progression, just to slow it down.
2. Most interventions slow progression by about 50%. These are *average* results and cannot be guaranteed in an individual case.