

## What is Child Myopia?

Myopia, also known as short-sightedness or near-sightedness, is a common condition that causes blurred distance vision. It usually starts in childhood and can get progressively worse until the child stops growing.

Myopia is a condition in which light is focused in front of the retina, resulting in blurred vision. Short-sighted people can often see reasonably clearly at short distances, but will not be able to see distant objects clearly.<sup>1</sup>

Evidence is mounting that myopia is growing around the world.<sup>2</sup> Alarmingly, if current prevalence rates don't change, it is estimated that by 2020, 2.56 billion people will be affected.<sup>3</sup> By 2050, it is estimated that more than 50% of the world's population will have myopia and 10% will have high myopia.<sup>4</sup>

This is of significant concern given that high myopia is also associated with comorbidities including retinal detachment, glaucoma, cataracts and myopic macular degeneration. The risk of developing any of these conditions increases along with any increase in myopia.<sup>5</sup>

The predicted increase in the number of people with vision loss by 2050 means that myopia, if not managed, is set to become a leading cause of permanent blindness worldwide.<sup>6</sup>

It has been established that managing myopia in its early stages can slow its progression, reducing the potential risk of developing high myopia and its associated conditions later in life.<sup>7</sup> This not only involves correcting the blurred distance vision associated with myopia but also employing treatments and strategies proven to reduce the amount of eyeball growth.

## What can cause child myopia?

There are two main risk factors for a child developing myopia: lifestyle and family history.

Lifestyle: modern lifestyles may influence the development of myopia. These include:

- Low levels of outdoor activity<sup>8</sup> and associated factors including:
- Low levels of light exposure<sup>9</sup>
- Prolonged near tasks<sup>10</sup> such as reading and gaming on portable devices

Family history: The likelihood of developing myopia, particularly high myopia increases when one or both parents are myopic.<sup>11</sup> However the exact link between a family history of myopia and the development of childhood myopia remains uncertain.<sup>12</sup>

## What to look out for

In many cases, there will be no signs of myopia at all. However, if there are signs<sup>13, 14</sup>, they might include:

- Your child's distance vision becomes blurred
- They move closer to see the television
- Your child may not be performing as well at school<sup>15</sup>
- They complain of headaches
- Your child has tired eyes
- They are squinting or screwing up their eyes.

## What you can do

Managing myopia early can slow its progression, reducing the potential risk of developing future eye health issues.<sup>16</sup> It is therefore important to have your child's eyes tested regularly by an Optometrist.

If you think your child might be short-sighted, ask your Optometrist about approaches that can be used to manage myopia and slow its progression. There are a number of recognised management options with more being developed. All of these are available to Optometry and are already in regular use.

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<sup>1</sup> <http://www.optometry.org.au/your-eyes/your-eye-health/eye-conditions/myopia> Accessed 17 April, 2019

<sup>2</sup> Holden B; Fricke T; Wilson D; Jong M; Naidoo K; Sankaridurg P; Wong T; Naduvilath T; Resnikoff S. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. *American Academy of Ophthalmology* 2016

<sup>3</sup> *The impact of myopia and high myopia: Report of the Joint World Health Organization – Brien Holden Vision Institute Global Scientific Meeting on Myopia. University of New South Wales, Sydney, Australia. 16-18 March 2015*

<sup>4</sup> *Ibid*

<sup>5</sup> Holden B; Fricke T; Wilson D; Jong M; Naidoo K; Sankaridurg P; Wong T; Naduvilath T; Resnikoff S. Global prevalence of myopia and high myopia and temporal trends from 2000 through 2050. *American Academy of Ophthalmology* 2016

<sup>6</sup> *Ibid*

<sup>7</sup> Sankaridurg PR, Holden BA. Practical applications to modify and control the development of ametropia. *Eye* 2014; 28:134-141

<sup>8</sup> He M, Xiang F, Zeng Y et al. Effect of time spent outdoors at school on the development of myopia among children in China: A randomized clinical trial. *JAMA* 2015; 314:1142-1148

<sup>9</sup> Read SA, Collins MJ, Vincent SJ. Light exposure and eye growth in childhood. *Investigative Ophthalmology and Visual Science* 2015; 56(11):6779-6787

<sup>10</sup> Ip JM, Saw SM, Rose KA, Morgan IG, Kifley A, Wang JJ, Mitchell P. Role of near work in myopia: Findings in a sample of Australian school children. *Investigative Ophthalmology and Visual Science* 2008;49(7):2903-2010

<sup>11</sup> Lim LT, Gong Y, Ah-Kee EY, Xiao G, Zhang X. Impact of parental history of myopia on the development of myopia in mainland China school-aged children. *Ophthalmology and Eye Disease*. 2014;6:31-5

<sup>12</sup> Ip J, Huynh S, Robaei D, Rose K, Morgan I, Smith W, Kifley A, Mitchell P. Ethnic differences in the impact of parental myopia: Findings from a population-based study of 12-year old Australian children

<sup>13</sup> <http://visionsource.com>

<sup>14</sup> <http://aao.org>

<sup>15</sup> *The impact of myopia and high myopia: Report of the Joint World Health Organization – Brien Holden Vision Institute Global Scientific Meeting on Myopia. University of New South Wales, Sydney, Australia. 16-18 March 2015*

<sup>16</sup> Sankaridurg PR, Holden BA. Practical applications to modify and control the development of ametropia. *Eye* 2014; 28: 134-141