

Modern Myopia Management – Shared Misunderstandings and a Common Goal

As the growth of myopia in children continues to accelerate, HOYA explores the global differences in understanding the condition and how new effective management solutions are paving the way towards a brighter tomorrow.

A threat to modern eyes, myopia is rapidly developing into a global epidemic. In 2020, it was estimated that [2.6 billion people were affected by the condition](#)¹ and predictions indicate this is set to rise to [five billion by the year 2050](#).²

Described as a refractive error in which light that enters the eye doesn't focus correctly, myopia causes blurred distance vision. The condition which commonly begins in children around the age of six, progresses by means of axial elongation throughout the teenage years of a patient as the eye continues to grow - affecting various development stages of a child's life along the way.

Despite its global presence, there are clear disparities when comparing the impact of myopia between countries and cultures. In Europe for example, the prevalence of myopia has steadily increased over recent decades and [now affects 45-50% of people aged 25-29](#).¹ The issue begins with the young generation, and in Italy specifically, [1.7 million children now suffer from short-sightedness](#).³

The numbers only continue to rise in East Asia however, where studies have shown that more than [90% of children are affected](#)⁴ by myopia in some East Asian countries. In China, reports highlight that nearly [60% of students aged six to 18 are myopic](#)⁵ - with that number increasing to 80% for those in senior high school.

Epidemic rates aside, the region-specific distinctions concerning myopia continue through to the understanding and treatment of the condition also. Qualitative research conducted by HOYA Vision Care in China and Italy has revealed a divide between parents and carers highlighting different lifestyle, behaviour, and approach on the subject of myopia when it comes to different cultures.⁶

Findings highlight that when it comes to the awareness of myopia and its ophthalmological risks, Chinese parents are actively conscious of the condition's progression. As common sufferers themselves, parents are proactive in gaining information on the subject - using a variety of sources such as optical professionals, friends, or the internet - and with this, are hands on when finding a solution for their children. Currently, research suggests that most parents in China are selecting Ortho-K lenses as the preferred treatment method, with practitioners prescribing this solution as standard practice - despite the method commonly perceived as inconvenient, uncomfortable and ineffective in stopping myopia progression.

Compare this to parents in Italy and there is a clear disconnect in myopia awareness. Most Italian parents possess less understanding on the progressive risks of myopia and how to treat the condition effectively. Not unlike the Chinese market, Italian parents gather most of

their information from optical professionals, but comparatively, this is their only trusted source of information on the subject. Nevertheless, parents in Italy are seldom aware of the latest in available treatment methods, and patients are almost exclusively being treated with refractive correction spectacles, based on the recommendations of their ophthalmologists. Using this solution, even when appropriately corrected, runs this risk of the condition progressing to sight-threatening complications such as glaucoma and retinal detachment - of which Italian parents are also unfamiliar with.

These immediate differences between the two markets suggests a larger, international discrepancy as to how myopia is being tackled. The differing levels of awareness and preferred treatment methods in China and Italy emphasises a growing problem which could in turn, contribute to the rising epidemic rates. Through these shared misunderstandings, parents and carers are seemingly unaware of how to effectively manage the condition - with no common management method that can be collectively relied upon. And if young patients are to be treated effectively, these gaps in knowledge must now be plugged until we're all on the same page. The role of eye care professionals becomes very important in explaining to parents and children why myopia management is so important, what myopia management treatments are currently available and what could be done to effectively manage myopia to close these knowledge gaps.

Clear vision for the future

In response to myopia prevalence reaching new heights in several countries, and after years of development and key clinical trials, a new and effective myopia management method is now ready to provide practitioners, parents and patients alike with a clearer vision for the future. The innovative MiYOSMART spectacle lens has been developed by The Hong Kong Polytechnic University and HOYA, who partnered together to create an easy to prescribe lens that was aesthetically pleasing with the look of a standard single regular lens.

MiYOSMART spectacle lens corrects the myopic refractive error and improves the distance vision and at the same time provides peripheral relative plus power for creating peripheral myopic defocus. A two-year randomised trial has presented promising results, showing on average, a [reduction in myopia progression by 60%⁷](#) in children 8-13. This has since been reinforced by a 3rd year follow up study that showed the slowdown was sustained.⁸

The new generation spectacle lens makes use of the patent protected Defocus Incorporated Multiple Segments (D.I.M.S.) Technology⁹, containing of a 9.4mm central hexagonal zone and a 33mm mid-peripheral treatment, known as the defocus zone, which consists of micro-segments of 3.50 plus power, arranged in a honeycomb structure. The unique design preserves a 50:50 ratio of full prescription to defocus, without dependence of pupil size.

The technology itself has taken the ophthalmic world by storm, winning the Gold Prize, Grand Award & Special Gold Award at the International Exhibition of Interventions of Geneva, Switzerland 2018. More recently, it also won the Silmo d'Or Award in the Vision category at the Silmo Paris Optical Fair 2020.

Technology aside, the MiYOSMART lens offers the wearer a more comfortable solution, and parents with peace of mind. Compared to the most commonly used contact lens treatments, there are no handling or hygiene issues associated with MiYOSMART, adding an extra layer of comfort and safety for the wearer. The lenses themselves are made from lightweight polycarbonate, providing high impact resistance and 100% UV protection, and the addition of anti-reflective coating provides added scratch resistance and enhances the everyday cosmetic of the lens.

Early treatment is critical in reducing the progression of short-sightedness and mitigating the rising global threat of myopia. Almost 1 million patients have already benefited from wearing MiYOSMART lenses.¹⁰ And combined with regular check-ups and natural methods, such as reduced screen time, together, we now have an opportunity to work towards a clearer future for all.

How HOYA Vision Care is Helping

As experts in vision care, HOYA is looking to reduce myopia progression in children by 60 percent with the new MiYOSMART spectacle lens - an effective, non-invasive myopia management method with award winning D.I.M.S. Technology. Find out more here: [\[insert regional link\]](#)

PRODUCT DISCLAIMER – MiYOSMART has not been approved for myopia management in all countries, including the U.S., and is not currently available for sale in all countries, including the U.S.

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About HOYA

For over 60 years, HOYA Vision Care has been a passionate and global leader in optical technology innovation. As a manufacturer of high quality, high performing eyeglass lenses, HOYA continues to drive optical technology innovation with the aim of finding the best vision care solutions for Eye Care Professionals. The company supplies lenses in 52 countries with a network of over 18,000 employees and 45 laboratories around the globe.