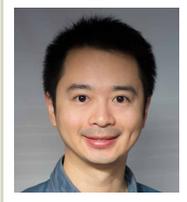


Contact Lens Update

CLINICAL INSIGHTS BASED IN CURRENT RESEARCH

Are contact lenses safe for children?

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Parents often ask eye professionals how old a child needs to be to wear contact lenses and whether it is safe for them to wear contacts. Some children (or their parents) may ask to wear contacts for the perceived improvement in self-esteem and quality of life and some may want them for sports or an active lifestyle. A recent article by Mark Bullimore examined the safety of soft contact lenses for children by reviewing data representing 1800 patient years of wear in 7- to 19-year-olds.

Bullimore MA. The safety of soft contact lenses in children. *Optom Vis Sci.* 2017;94(6): 638-46.

The onset of myopia is now happening at an earlier age worldwide. The prevalence of myopia is 2-7% in six and seven year olds^{1,2} and is above 80% in high school students in Asian countries.³ Eye care practitioners are increasingly recommending contact lenses, not only as a tool for vision correction but also as a method for myopia control.

How early can we start fitting children with contact lenses? A survey of 576 optometrists in the US reported that more than 70% feel that children can be introduced to contacts at 12 years of age or younger, with 21% noting that they were more likely to fit 10- to 12-year-olds in contact lenses than they were a year before. Practitioners may be more comfortable recommending contact lenses to younger patients nowadays due to improved contact lens materials and the availability of daily disposable lenses. The simplicity of the daily disposable lens, with no need to clean and store lenses, make them an excellent option for children and teenagers.⁴

However, even daily disposables carry some risk of infection and complications.^{5,6} Contact lens related adverse event are categorized into serious, notably microbial keratitis (MK), and non-serious complications, which include contact lens induced acute red eye (CLARE), contact lens peripheral ulcer (CLPU), superior epithelial arcuate lesions (SEAL), contact lens papillary conjunctivitis and infiltrative keratitis. What are the risks for children?

All contact lenses approved by the FDA carry no age restriction, implying that they are safe for use in both adults and children. Older literature on contact lens wear indicates that the risk is higher in younger patients, but data from a number of newer studies do not support that narrative. Prospective studies on corneal infiltrative events in youth found that the risk of such events ranges from 0.8% to 1.36% in 7- to 14-year-olds.^{5,7} None of the prospective studies reported any MK. The authors speculated that most of the non-serious contact lens related adverse events were due to subject non-compliance or due to improper lens fit. In one of the major epidemiologic studies, patients aged between 25 and 44 years of age were at 3x increased risk of MK compared with younger wearers (14 to 24 years of age).⁶

Epidemiologic studies and hospital case reviews both found increased risk of MK when wearers use improper solutions, have poor lens case hygiene, neglect to replace their lens case frequently enough or wear lenses while sleeping. In all cases of MK, pseudomonas was the most commonly isolated pathogen. In a large-scale retrospective study of contact lens safety in youth, none of the 8-12-year-olds experienced MK, but it occurred in 0.15% of the 13-17-year-olds.⁸

Overall, the risk for children was no higher than the incidence found in adults, and perhaps the risk is even lower in 8-to 11-year olds. This lower risk in the youngest wearers may stem from the fact that they have the highest percentage of daily disposable fits and highest rate of fits for part-time wear.⁹ The 8- to 11-year-olds were also significantly less likely to sleep or shower in their lenses when compared to the 18- to 25-year-olds.¹⁰

The age at which a child can safely start wearing contacts will vary between individuals. While seven-year-olds can be successfully fit with contacts under the guidance of practitioners and parents, many may prefer to wait until the early teen years to start wearing them. The same tips apply to all contact lens wearers for safe lens wear, regardless of age: Avoid sleeping or napping in lenses, do not swim or shower with lenses and avoid lens wear when sick.

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