

## Are soft contact lenses safe for children? Risks seem no higher than in adults

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Available evidence suggests that soft contact lenses can be safely prescribed to children and adolescents, with no increase in adverse effects compared to adults, according to a review in the June issue of *Optometry and Vision Science*, the official journal of the American Academy of Optometry.

The risk of safety problems from soft contact <u>lens</u> wear may even be lower in younger <u>children</u> compared to teens—possibly reflecting a lower rate of behaviors associated with increased risk for complications, suggests the report by Mark A. Bullimore, MCOptom, PhD, FAAO, of University of Houston College of Optometry.

## **Data Support Safety of Soft Contact Lenses for Children**

"In the past decade, there has been increasing interest in fitting children with contact lenses," Dr. Bullimore writes. Recent studies have shown that <u>multifocal contact lenses</u> to prevent or slow progression of nearsightedness (myopia) in children. Contact lenses can also improve self-esteem and quality of life in children and teens.

Dr. Bullimore performed a comprehensive research review to identify previous studies on the safety of soft contact lenses for children and adolescents. The analysis focused on signs of possible inflammation/infection called "corneal infiltrative events." Although



these events are usually mild, about five percent are a serious infection called <u>microbial keratitis</u>.

The highest-quality data came from nine prospective studies including 1,800 "patient-years" of soft contact lens wear in patients aged seven to 19 years. Analysis of the assembled data from nine prospective studies found a low rate of corneal infiltrative events: 136 events per 10,000 years. One large retrospective study suggested that the rate of these events was lower in younger children: 97 per 10,000 years in 8- to 12-year-old children, compared to 335 per 10,000 years in teens aged 13 to 17 years.

Microbial keratitis was uncommon, with no cases reported in the prospective studies. A <u>retrospective study</u> reported no cases of microbial keratitis in younger children. In teens, the rate of microbial keratitis was 15 cases per 10,000 years—similar to that reported in adults. The higher risk of complications in older patients seemed to be related to behavioral risk factors, such as showering and napping in soft contact lenses.

All soft contact lenses approved for daily and overnight wear have no age restrictions, suggesting that they are safe in both children and adults. The new review sought to take a closer look at the evidence supporting the use of these products in younger patients.

The available evidence provides reassurance as to the safety of <u>soft</u> <u>contact lenses</u> in children and teens. Dr. Bullimore writes, "The overall picture is that the incidence of corneal infiltrative events in children is no higher than in adults, and in the youngest age range...it may be markedly lower." He adds, "[G]reater parental supervision may also help to mitigate risks."

But the review also highlights some significant limitations of the evidence on contact lens safety in younger patients. Dr. Bullimore



emphasizes the need for more complete and rigorous research—particularly with the trend toward increased use of contact lenses for myopia control.

**More information:** Mark A. Bullimore. The Safety of Soft Contact Lenses in Children, *Optometry and Vision Science* (2017). DOI: 10.1097/OPX.000000000001078

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