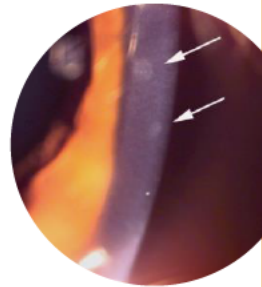


CORNEAL INFILTRATIVE EVENTS: THE *FACTS, FIGURES* AND HOW TO *REDUCE THE RISKS*

Corneal infiltrative events (CIEs) are typically self-limiting inflammatory responses of the cornea

22x More common than full corneal infection ¹

Up to **50%** May be asymptomatic



SOFT CONTACT LENS WEAR INCIDENCE

20-25%

Symptomatic & asymptomatic CIEs extended wear ²

2.5-6%

Symptomatic CIEs extended wear ²

3%

Daily reusable ³

Near 0%

Daily disposable ³

RISK FACTORS

CIE risk is influenced by the contact lens and the patient, with many risk factors being modifiable



EXTENDED WEAR

2-7x

higher risk vs. daily wear ^{4,6}



REUSABLE MATERIAL

Around 2x

higher risk for silicone hydrogel vs. hydrogel ^{4,6-8}



BACTERIAL BIOBURDEN

2.78x higher risk per 1 log increase in colony forming units/mL on lens ⁹



YOUNGER AGE

15-29 yrs

highest risk, but lower risk with 7-17 years ^{4,8,10}



PREVIOUS CIE

4-7x

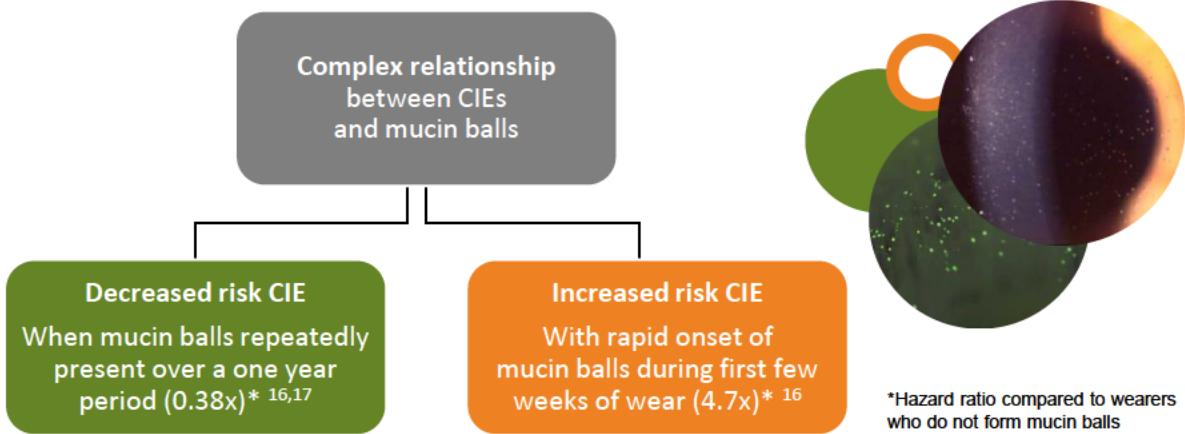
higher risk of a repeated event ^{11,12}

Further risk factors:

- current or past **smoker** (**around 1.7x**), ¹³
- **use of MPS** vs. hydrogen peroxide (**around 3x**, one report of 18x), ^{4,10,11,14,15}
- continual reuse of the contact lens case (**nearly 8x**) ¹¹

MUCIN BALLS

Small, spherical, translucent balls of mucin created by shear forces from mechanical interaction between the contact lens and ocular surface



REDUCING RISK

CIEs are linked to bacterial bioburden, so recommend steps to help patients reduce their exposure

Lid Hygiene

If signs of staphylococcal blepharitis are seen instigate lid hygiene measures to reduce bacterial load on lid margins

Compliance

Educate patient at fitting and every follow up on the importance of good hand hygiene, contact lens care, lens case cleaning and replacement habits

Early Mucin Balls

Considered a marker for CIE risk. Would suggest patient is not a good candidate for extended wear

Daily Disposables

Present a **12.5x** reduced risk of CIE compared to reusable lenses
Incidence: 0% hydrogel, and 0.4% silicone hydrogel per year³

Research continues to further understand and reduce risks, including work on novel materials with antibacterial properties

1. Szczotka-Flynn L. et al. Eye & CL. 2009;35(2):69-75. 2. Steele K. et al. Clin Exp Optom. 2017;100(5):473-481 3. Chalmers RL. et al. Invest Ophthalmol Vis Sci. 2015;56(1) 654-663. 4. Chalmers RL. et al. Invest Ophthalmol Vis Sci. 2011;52(9):6690-6696. 5. Morgan PB. et al. Invest Ophthalmol Vis Sci. 2005;46(9):3136-3143. 6. Radford CF. et al. Ophthalmology. 2009;116(3):385-392. 7. Szczotka-Flynn L. et al. Optom Vis Sci. 2007;84(4):247-256. 8. Chalmers RL. et al. Optom Vis Sci. 2010;87(10):725-735. 9. Ozkan J. et al. Optom Vis Sci. 2010;87(11):847-853 10. Zimmerman AB. et al. Optom Vis Sci. 2016;93(1):42-49. 11. Richdale K. et al. Invest Ophthalmol Vis Sci. 2016;57(1):47-55. 12. McNally JJ. et al. Eye & CL. 2003;29(1 Suppl):S153-S156; discussion S166, S192-154. 13. Cutter GR. et al. Cont Lens Ant Eye. 1996;22(1):30-37. 14. Carnt NA. et al. Arch Ophthalmol-Chic. 2009;127(12):1616-1623. 15. Lazon de la Jara P. et al. Optom Vis Sci. 2013;90(4):344-350. 16. Szczotka-Flynn L. et al. Optom Vis Sci. 2017;94(4):448-457. 17. Szczotka-Flynn L. et al. Cornea. 2011;30(5):535-542.

