

*Opinion Article*

## An overview of eye infection

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### ABOUT THE STUDY

When harmful micro-organisms bacteria, fungi and viruses invade any part of the eyeball or surrounding tissues, including the clear front surface of the eye and the thin membrane lining the outer and inner eyelids, eye infections occur. There are many different types of eye infections.

#### Causes and classifications of eye infections

**Pink eye or conjunctivitis:** Conjunctivitis, also known as “pink eye” is a common highly contagious retinal infection spread among children in day care centres, classrooms, and other similar environments (Shatzkes, et al. 2016). Instructors and day care workers are also more likely to get pink eye if they work in close quarters with young children. The most common types of infectious conjunctivitis have viral or bacterial origins (Jiang, et al. 2009). When a mother has a sexually transmitted disease, infants can develop conjunctival eye infections during birth.

**Fungal keratitis:** This type of eye infection gained notoriety in 2006, when a now-withdrawn contact lens solution was linked to an outbreak among contact lens wearers (Than, et al. 2018). Fusarium fungi, which are commonly found in organic matter, were linked to the fungal eye infection (Streilein, et al. 1996). This and other fungi can enter the eye through other channels, such as a penetrating injury caused by a branch of a tree.

**Trachoma:** Trachoma, a serious eye infection caused by *Chlamydia trachomatis*, is a leading cause of blindness in some parts of the world. In unsanitary environments, the infection is spread by flies, and reinfection is a frequent problem (Bharathi, et al. 2008). Trachoma usually infects the inner eyelid, which scars. Scarring then causes the eyelid to “invert,” and the eyelashes begin to touch against and destroy corneal tissue, resulting in permanent blindness. Controlling trachoma needs good hygiene and the availability of treatments such as oral antibiotics (Heichel, et al. 2016).

**Acanthamoeba keratitis:** Contact lens wearers are more likely to come into contact with parasites that can invade the eye and cause *Acanthamoeba* keratitis, a serious sight-threatening infection. As an outcome, contact lens wearers should follow certain precautionary measures, such as refraining from swimming while wearing contacts. If you wear contact lenses while swimming or relaxing in a hot tub, make sure to remove and disinfect them right away (Kumar, et al. 2004). Indeed, contact lens wearers are at an increased risk of fungal and bacterial eye infections in general, and proper contact lens care must be followed. To help reduce the risk of eye infection, Food and drug administration guidelines recommend that manufacturers include a dispose of waste schedule on contact lens cleaning and disinfecting products.

#### Complications

Infection can also lead to inflammation and obstruction of the tear drainage system in the eye, resulting in dacryocystitis. Infection can also be the underlying cause of a corneal ulcer, which looks like an eye abscess. A corneal ulcer, if left untreated, can cause severe vision loss (Tay-Kearney, et al. 1996).

#### Treatments

Many common viral eye infections are self-resolving. An antiviral eye drop may be prescribed in cases of severe viral eye infections. Some viral eye infections necessitate the use of steroid eye drops to decrease inflammation.

#### Prevention

If you are near someone that has a red eye, do not touch your own eyes until you have washed your hands. You can also reduce your chances of getting common bacterial or viral eye infections by just not rubbing your eyes, washing your hands frequently throughout the day, frequently cleaning towels and bed linens, and using anti-bacterial cleaning products on counter and other public areas.

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## REFERENCES

1. Bharathi MJ, Ramakrishnan R, Maneksha V, Shivakumar C, Nithya V, Mittal S (2008). Comparative bacteriology of acute and chronic dacryocystitis. *Eye*. 22(7): 953-960.
2. Heichel J, Wilhelm F, Kunert KS, Hammer T (2016). Topographic Findings of the Porcine Cornea. *Med Hypothesis Discov Innov Ophthalmol*. 5(4): 125-131.
3. Jiang J, Moore JS, Edelhauser HF, Prausnitz MR (2009). Intrasceral drug delivery to the eye using hollow micro needles. *Pharm Res*. 26:395.
4. Kumar S, Tamura K, Nei M (2004). MEGA3: Integrated software for molecular evolutionary genetics analysis and sequence alignment. *Briefings in bioinformatics*.5:150-163.
5. Shatzkes K, Singleton E, Tang C, Zuena M, Shukla S, Gupta S, Dharani S, et al. (2016). Predatory bacteria attenuate klebsiella pneumoniae burden in rat lungs. *M Bio*. 7(6): e01847.
6. Streilein JW (1996). Ocular immune privilege and the Faustian dilemma. The Proctor lecture. *Invest Ophthalmol Vis Sci*.37:1940.
7. Than A, Liu C, Chang H, Duong PK, Cheung CMG, Xu C, Wang X, et al. (2018). Self-implantable double-layered micro-drug-reservoirs for efficient and controlled ocular drug delivery. *Nat Commun*.9: 4433.
8. Tay-Kearney ML, Jabs DA (1996). Ophthalmic complications of HIV infection. *Med Clin North Am*. 80 (6):1471.