



Optical instruments

Risk of transmission of infection

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Risk of transmission of infection in devices used in clinic

The ophthalmologist's office is an environment with significant potential for the transmission of infections.

Pathogens are regularly introduced into the office by patients with systemic or ocular infections and the eye is particularly susceptible to infection with Gram-negative bacilli, adenoviruses, Herpes simplex and fungi, transferred by contaminated ophthalmic instruments.



Types of transmitted infection devices

- 1. Tonometry**
 - 2. Diagnostic contact lenses**
 - 3. Contact lenses**
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Diagnostic contact lens



Infection by using tonometry

Tonometer heads used for measuring intraocular pressure come into direct contact with the cornea

The direct contact may contribute to the risk of cross infection, especially of viral particles, from one patient to another.

A systematic review was conducted to address the likelihood of human immunodeficiency virus (HIV), hepatitis B virus, hepatitis C virus, and prion diseases transmission through the use of tonometer.



Tonometry



Infections transmission

The most frequently reported infections transmitted by contaminated ophthalmic equipment have been those with adenoviruses

Whereas some ocular infections, such as adenoviral conjunctivitis, are self-limiting, some agents are responsible for sight threatening courses.

It has been demonstrated that hepatitis B infection can be transmitted after infectious exposure of the ocular surface alone



Sever infections

Some infections can be responsible for infection cases enough severe to require penetrating keratoplasty or even enucleation as treatment