

Endophthalmitis

What is endophthalmitis?

Endophthalmitis is a bad infection inside the eyeball. The inside of the eye is usually closed off and sterile which protects it from infections like bacteria, viruses or fungi. Because eye's inside parts are small and easily harmed, endophthalmitis can lead to blindness or even loss of the eye. On the other hand, infections on the outside of the eye like conjunctivitis (pink eye) or keratitis (or corneal ulcer) are more common and less serious than endophthalmitis.

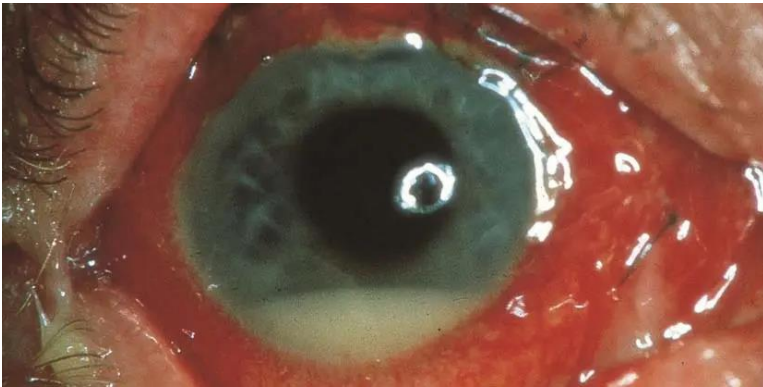


Fig. 1: Endophthalmitis can look like a red and irritated eye with cloudy fluid inside the eye. (Source: <https://www.aao.org/education/editors-choice/rates-of-post-surgical-endophthalmitis-have-decrea>, last accessed 11/2/2023)

How does endophthalmitis occur?

There are two ways to get endophthalmitis.

Exogenous endophthalmitis is the most common form and happens 3 main ways: 1) when something cuts through the wall of the eyeball (trauma, injury), 2) after surgery where the eye is cut on purpose or 3) when an infection spreads and eats through the wall of the eye. It is one of the worst complications of eye surgery.

Endogenous endophthalmitis happens when an infection in the blood gets inside the eye. This mainly happens in very sick people with infections in other parts of the body.

What types of eye surgery result in endophthalmitis?

Even with careful surgeries, any eye surgery can lead to endophthalmitis. Endophthalmitis is more common (1 in 1000) in surgeries like [cataract](#), cornea transplant and glaucoma surgery. Other surgeries, like eye muscle surgery, have a much lower chance of endophthalmitis. about 1 in 30,000 cases).

What are the symptoms of endophthalmitis?

Symptoms of endophthalmitis include blurry vision/vision loss, light sensitivity, eye pain and swelling around the eye. Inside the eye there is inflammation and it gets cloudy. [See figures 1 and 2]. It is important to call the ophthalmologist right away if there is pain and vision loss after eye surgery.

Endophthalmitis usually happens 2 and 5 days after surgery but more mild forms can show up weeks later. Patients with certain glaucoma surgery have a life-long higher risk of getting endophthalmitis.

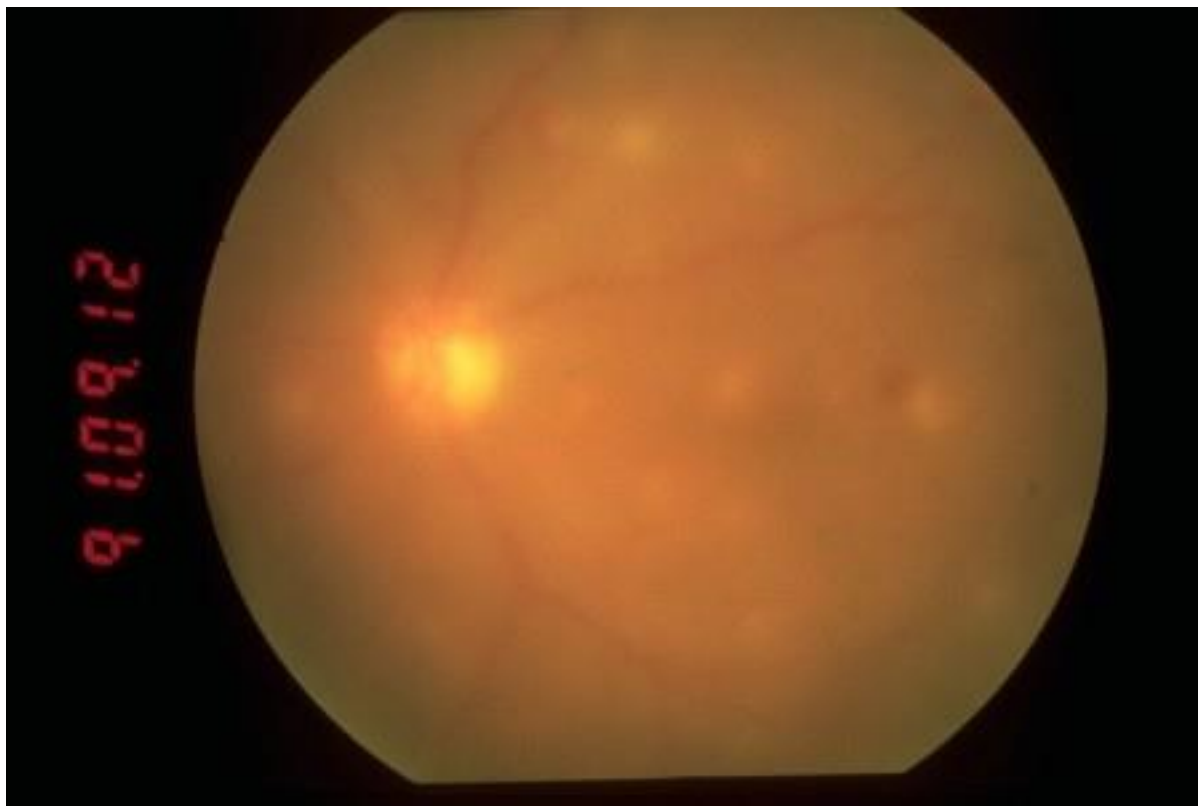
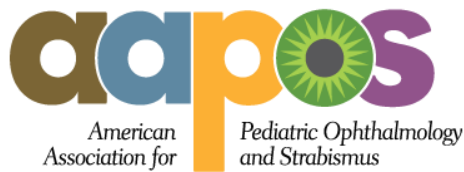


Fig. 2: Endophthalmitis. This photo shows the inside back of the eye. It is a fuzzy picture because of the inflammation and the white spots are areas of infection.

How is endophthalmitis diagnosed and treated?

An ophthalmologist can diagnose endophthalmitis with an eye checkup. Besides a regular eye exam, an ultrasound test may be used to see the inner parts of the eye better. Often, a sample of the fluid from inside the eye is taken to look for what is causing the infection.



There are different treatments based on how bad the infection is. Treatments often include antibiotic, anti-fungal, and/or anti-viral medications in different forms. They can be given as eye drops, medicines by mouth, by an IV (in an arm or leg vein), or eye injections. Sometimes steroids are used. In severe cases, a surgery called a vitrectomy may be needed to remove the infection from inside the eye.

What is the prognosis of endophthalmitis? How well do people do?

How well people heal from endophthalmitis is different from person to person. It depends on cause of the infection, how bad the infection gets, and the amount of damage done to the eye. Catching the infection early is very important. Mild cases of endophthalmitis can heal well and have good vision, but severe cases may lead to blindness or loss of the entire eye.

More scientific information can be found:

- <https://eyewiki.org/Endophthalmitis>

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