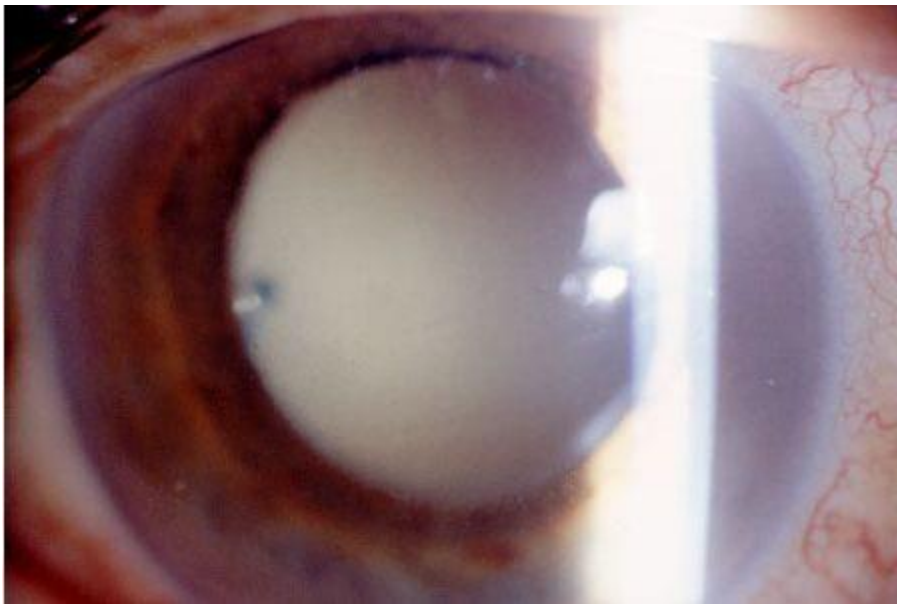


# Endophthalmitis

## What is endophthalmitis?

Endophthalmitis is an infection inside the eyeball (globe). The inside of the eye is sealed and sterile and typically not exposed to external organisms, such as bacteria or fungus. Because the tissues within the eyeball are very delicate, endophthalmitis is very serious and can lead to blindness and even loss of the eye itself. The outside of eye is in constant contact with viruses, fungi and bacteria and infection of this part of the eye is conjunctivitis or keratitis



**Fig. 1:** Endophthalmitis

## How does endophthalmitis occur?

There are two ways to contract endophthalmitis. Exogenous endophthalmitis is the most common form and occurs after penetration of the eyeball from trauma, surgery or spread of an external eye infection into the eye. It is among the most serious complications of eye surgery. In contrast, endogenous endophthalmitis occurs when infectious organisms invade the inside of the eye from the bloodstream. This occurs most commonly in very sick individuals with certain types of infections.

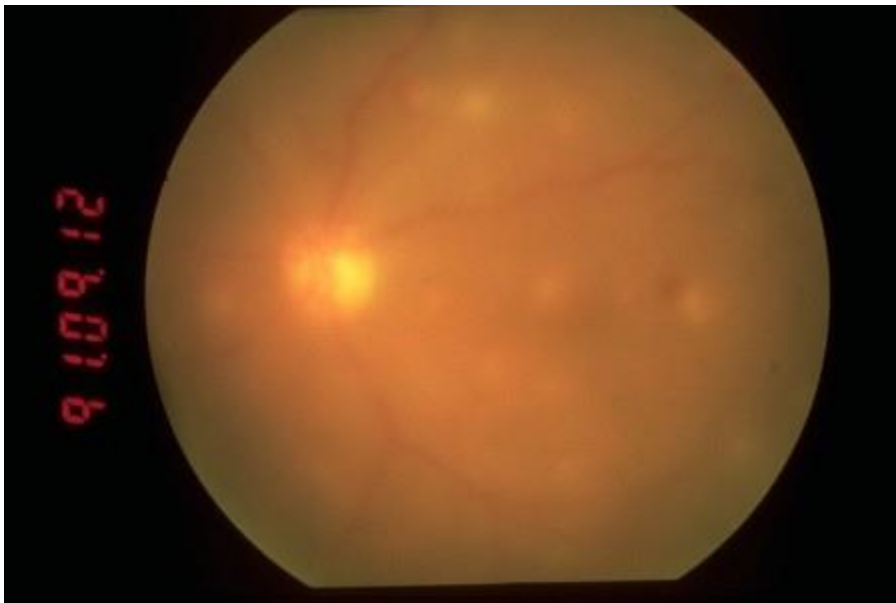
## What types of eye surgery result in endophthalmitis?

Despite careful sterile technique, any eye surgery may lead to endophthalmitis. Endophthalmitis is most common (1 in 1000) following intraocular surgery such as [cataract](#), cornea transplantation and glaucoma filtering. Other types of surgery, such as eye muscle surgery, can

also lead to endophthalmitis. Fortunately, endophthalmitis following eye muscle surgery is very rare (about 1 in 30,000 cases).

### **What are the symptoms of endophthalmitis?**

The symptoms of endophthalmitis include progressive deterioration of vision, light sensitivity, pain and swelling around the eye [See figures 1 and 2]. If there is loss of vision after eye surgery, especially accompanied by pain, a physician should be notified immediately. Endophthalmitis typically occurs between 2 and 5 days after surgery but some mild forms may occur weeks after surgery. Patients that have undergone a glaucoma "filtering" procedure are at life-long increased risk for developing endophthalmitis.



**Fig. 2:** Endophthalmitis

### **How is endophthalmitis diagnosed and treated?**

Prompt diagnosis of endophthalmitis is essential. In addition to a regular eye exam, evaluation may include ultrasound to better visualize the inner structures of the eye such as the vitreous and retina, a needle into the eye to obtain samples for microbiologic studies to identify organisms causing the infection. Depending on the severity of the infection, treatment includes administering antibiotic, anti-fungal, and/or anti-viral medications either topically, orally, intravenously, or via direct injection into the eye. Steroids are sometimes used as well. If the infection is severe, a surgery called a "vitrectomy" may be performed to remove infectious material from the inside of the eye.

### **What is the prognosis of endophthalmitis?**



Prognosis of endophthalmitis varies widely depending upon the cause of the infection, the severity, and the amount of damage done to the eye by inflammation and scarring. Mild cases of endophthalmitis can have excellent visual outcomes. Severe cases may result not only in loss of sight, but eventually in loss of the entire eye.

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