

**IRITIS**  
**(UVEITIS)**  
**AN OVERVIEW**

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**IMPORTANT**

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**Definition**

**Iritis** (after Mosby), also called Anterior Uveitis, is an inflammatory condition of the iris of the eye characterised by pain, tearing, photophobia, and, if severe, lessened visual sharpness. On examination the eye looks cloudy, the iris bulges, and the pupil is contracted. The cause is often unknown. The pupil is dilated, and a steroid may be given to reduce inflammation. If the inflammation is allowed to continue and the pupil is left constricted, permanent scarring may occur, lowering vision. See also, Uveitis (below).

According to Mosby, **Uveitis** is the swelling of the uveal tract of the eye. It may be marked by an irregularly shaped pupil, inflammation around the cornea, pus in the anterior chamber, opaque deposits on the cornea, pain, and tearing. Causes include allergy, infection, trauma, diabetes, collagen disease, and skin diseases. A major complication may be glaucoma. See also, Iritis (above).

**Iritis/Uveitis Must Be Diagnosed Precisely Because:**

Ocular complications of Iritis/Uveitis may produce profound and irreversible loss of vision, especially when unrecognized or treated improperly. The most frequent complications include Cataracts, Glaucoma, Glaucomatocyclitic Crisis, Retinal detachment, Neovascularization of the Retina, Optic Nerve, or Iris and Cystoid Macular Edema, the most common cause of decreased vision from Uveitis. Patients suspected of having Iritis/Uveitis should, therefore, be referred immediately for complete ophthalmologic evaluation.

## Iritis/Uveitis Overview

The eye is a hollow, fluid filled, three layered ball, of tissue. The outermost layer is the Sclera (white coat of the eye), the middle layer, the Uvea, and the innermost layer is the Retina (thin light-gathering layer).

Uveitis means, 'inflammation of the Uvea', or the middle layer of the eye. The Uvea consists of three structures (Picture right):

- 1) The Iris
- 2) The Ciliary Body
- 3) The Choroid

1) The **Iris** is the coloured structure surrounding the pupil, visible in the front of the eye.

2) The **Ciliary Body** is a structure containing muscle and is located behind the iris which focuses the lens. The Ciliary Body is also responsible for manufacturing the fluid inside the eye.

3) The **Choroid** is a layer containing blood vessels that line the back of the eye and is located between the inner visually sensitive layer, called the retina, and the outer white eye wall, called the Sclera.

Inflammation in Uveitis may involve any but not necessarily all of these three structures. The Uvea Tract is the structure responsible for the eye's blood supply. Inflammation of the Uvea can affect the Cornea, the Retina, the Sclera, and other vital parts of the eye. Since the Uvea borders many important parts of the eye, inflammation of this layer may be sight-threatening and more serious than the more common inflammations of the outside layers of the eye. Uveitis is the third leading cause of blindness in Europe.

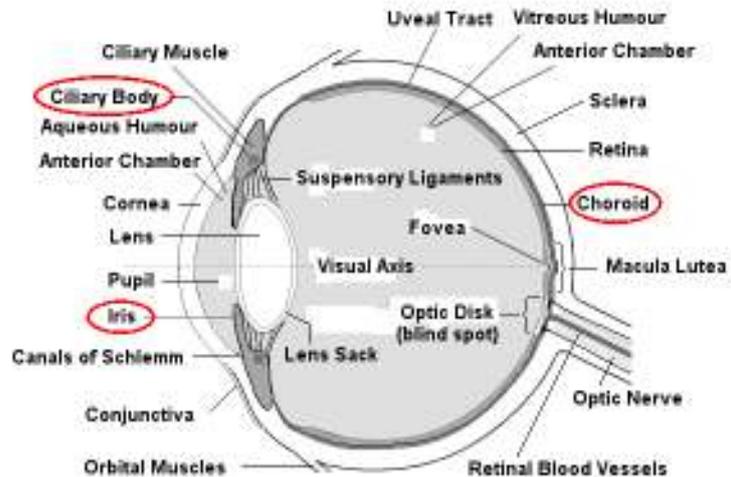
Depending upon which structures are inflamed, Uveitis may be further subcategorized into one of three main diagnoses, these include:

- 1) Anterior Uveitis or Iritis
- 2) Intermediate Uveitis or Iridocyclitis
- 3) Posterior Uveitis or Choroiditis
- 4) Diffuse Uveitis

### 1) Anterior Uveitis or Iritis

(Picture right - Anterior Uveitis)

Anterior Uveitis, Iritis, or Iridocyclitis is inflammation that affects the front of the eye, the Iris which is Iritis or Nongranulomatous Uveitis, or the ciliary body which is Iridocyclitis. The Iris is the coloured part of the eye which contains the Pupil. The Iris is a muscle which dilates or constricts the Pupil, letting light enter into the eye. Behind this is the Ciliary Body a circular structure, which produces the clear fluid (Aqueous Humour) which fills the



eye, passing through the Pupil and draining away near the edge of the Iris. The Ciliary Body also contains the Ciliary muscle attached to the lens responsible for changing its shape to focus.

### Symptoms

Redness, pain, photophobia (sensitivity to light), blurred vision. The Iris may adhere to the Lens, thus increasing the intraocular pressure. There may be nodules on the Iris. Tearing and the Pupil may be constricted and nonreactive. In severe cases of Anterior Uveitis, there may be hypopyon (a small amount of pus or collection of white cells).

### 2) Intermediate Uveitis or Iridocyclitis

Intermediate Uveitis, Middle Uveitis, Cyclitis, Pars Planitis, Peripheral Uveitis, or chronic Cyclitis is inflammation that affects Ciliary between Anterior and Posterior Uvea which can also affect the Vitreous and Retina. There have been some implications of an association with Sarcoidosis, Lyme disease, Juvenile Rheumatoid Arthritis, and Multiple Sclerosis (MS). There are exacerbations and remissions and typically this disorder runs a very long course. Inflammatory mediators will increase vasopermeability of Retinal capillaries resulting in posterior segment inflammatory cells as well as Cystoid Macular Edema (CME). Vision loss occurs due to Cataracts and CME.

(Picture right - Intermediate Uveitis)



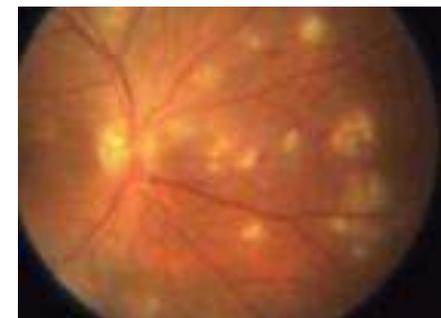
### Symptoms

Painless, blurred vision, and floaters.

### 3) Posterior Uveitis or Choroiditis

Posterior Uveitis, also known as Choroiditis, Granulomatous Uveitis, is inflammation that affects the part of the uvea at the back of the eye. The Choroid is basically a layer rich in small blood vessels and connective tissue which supplies the inner parts of the eye. The inflammation may affect, the Retina (Retinitis, Chorioretinitis) in the blood vessels at the back of the eye (Vasculitis), and Optic Nerve. Cells may be seen in the Vitreous Humour, (transparent gel that fills the eyeball behind the Lens). Yellowish or dark areas of inflammation on the Choroid and the Retina. The blood vessels in the Retina develop a sheath or covering of inflammatory tissue.

(Picture right - Posterior Uveitis)



### Symptoms

Decreased vision, distortion of the size or shape of objects (Metamorphopsia), floaters, pain if Optic Nerve is involved, and photophobia. The resulting scars may impair clear vision and cause dimness of vision (Amblyopia). Vision can be impaired suddenly, or it can gradually reduce over time.

### 4) Diffuse Uveitis

Diffuse Uveitis Panuveitis, or Endophthalmitis is inflammation involving all parts of the eye, including Anterior, Intermediate, and Posterior structures.

(Picture right - Diffuse Uveitis)



### Symptoms

Diffuse Uveitis may produce any or all of the previously

mentioned symptoms.

### **Cause of Uveitis**

Uveitis may develop following eye trauma or surgery, in association with diseases which affect other organs in the body, or may be a condition isolated to the eye itself. Severe and permanent visual loss can result from uveitis. In addition, uveitis can lead to other ocular complications, which may produce vision loss, including glaucoma, cataracts, or retinal damage. Early detection and treatment is necessary to reduce the risk of permanent vision loss.



(Picture right - Indications of Iritis/Uvitis)

Thus, uveitis has many different causes:

- A virus
- A fungus
- A parasite
- An injury to the eye
- Chronic Uveitis is often related to an Autoimmune Disorder

### **Treatment**

Uveitis is treated by an ophthalmologist (Uveitis specialist). Uveitis is usually treated with both a topical eye solution and an oral medication containing corticosteroids. Nonsteroidal anti-inflammatories such as ibuprofen may be used for pain relief. Treatment systemically, that is, the underlying disorder must be controlled in order to halt the progression of the eye disease. This usually requires systemic steroids (e.g., prednisone) during acute stages, and immunosuppressive agents are often required for long-term control.



(Picture right - Indications of Iritis/Uvitis)

Thus, treatment may include steroid eye drops, injections, or pills, as well as eye drops to dilate the pupil and reduce pain. More severe cases of Uveitis may even require treatment with chemotherapeutic agents to suppress the immune system.

### **Complications**

Ocular complications of Uveitis may produce profound and irreversible loss of vision, especially when unrecognized or treated improperly. The most frequent complications include Cataracts, Glaucoma, Glaucomatocyclitic Crisis, Retinal detachment, Neovascularization of the Retina, Optic Nerve, or Iris and Cystoid Macular Edema, the most common cause of decreased vision from Uveitis. Patients suspected of having Uveitis should, therefore, be referred immediately for complete ophthalmologic evaluation.

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