

# Lens Luxation

## What is Lens Luxation?

The lens is a clear, solid structure situated in the centre of the eye which focusses light onto the retina. It is suspended in place by numerous fibres known as 'zonules' which can also alter the shape of the lens to accommodate for near and far vision.

Lens luxation occurs when the zonules snap and the lens becomes displaced.

This can either be *complete luxation* where the lens is free to move within the front or back of the eye, or *partial subluxation* where some zonules remain intact and the lens appears wobbly.

## What causes lens luxation?

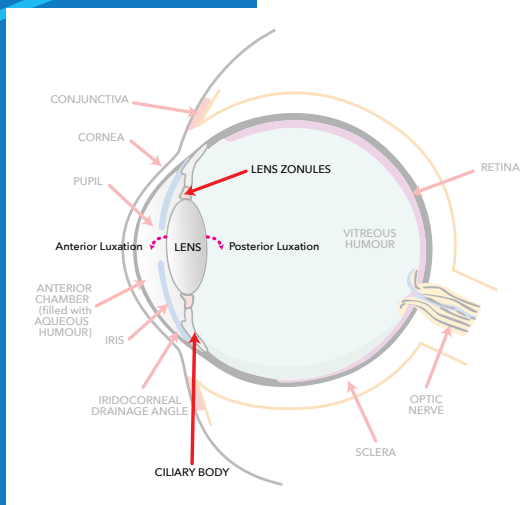
In dogs lens luxation can either be primary or secondary.

- **Primary** lens luxation is an inherited condition seen most commonly in the *terrier* breeds. Hereditary abnormalities of the zonules are responsible.
- **Secondary** lens luxation can also occur due to chronic inflammation within the eye, trauma to the eye or glaucoma (increased pressure within the eye).

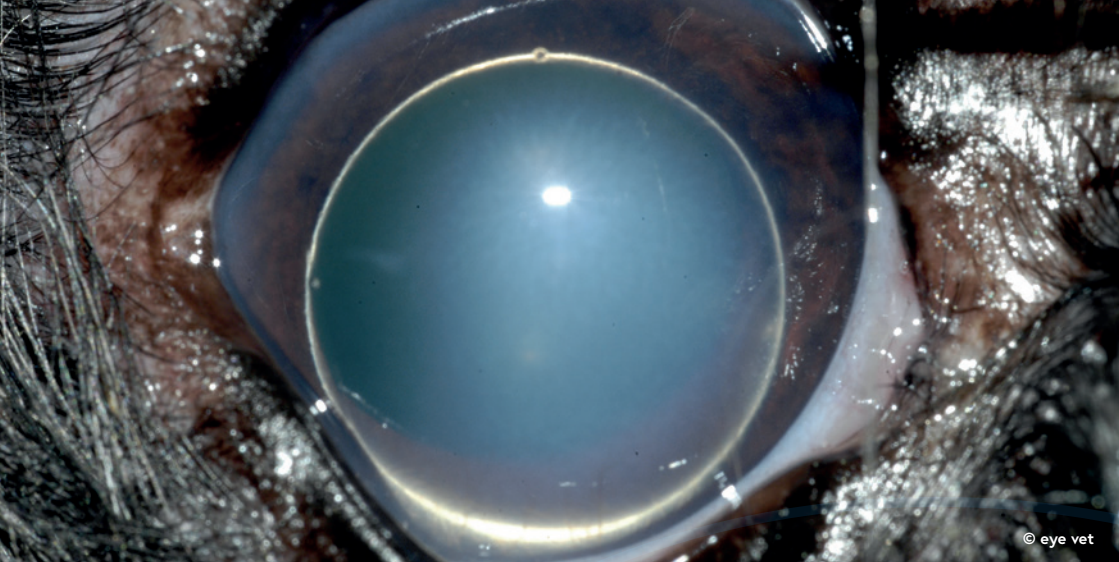
In cats secondary lens luxation is more common due to chronic uveitis.

## Clinical Signs

- Ocular pain
- Ocular redness and cloudiness
- Reduced vision/blindness
- If the luxated lens is *anterior* it can be visualised within the front of the eye.



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## Types of lens luxation

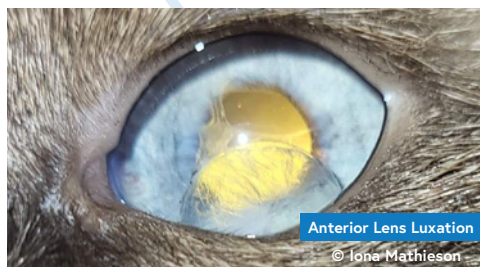
We classify the luxation depending on which direction the lens falls. If the lens falls forward in to the anterior chamber and sits in front of the iris we call it an anterior luxation. This causes acute pain because the lens suddenly blocks the drainage route of the fluid inside the eye, causing raised intraocular pressure (glaucoma). It is this increase in pressure which permanently damages the retina and causes blindness. The pressure rise also makes the front of the eye cloudy as the damage to the corneal cells stop the tiny drainage pumps from moving water out of the cornea.

If the lens falls backwards and sits behind the iris we call it a posterior luxation. This tends not to cause an acute problem but can allow the gel in the back of the eye (the vitreous) to move through the pupil and block the drainage route. The lens damages the retina and can cause it to detach from the eye wall.

## Treatment

- **Lens retropercussion** - This involves repositioning an anteriorly luxated lens from the front of the eye through the pupil and into the back of the eye. General anaesthetic is required however the procedure only requires manual pressure without having to surgically enter the eye.
- **Surgical lens extraction** - This procedure also requires general anaesthesia and is more invasive as the luxated lens is surgically removed from inside of the eye.

Potential complications of both procedures include inflammation, glaucoma and retinal detachment with the potential for blindness in the long term. Eye drops are also usually required long term including the 'normal' eye, as if primary disease is suspected anterior luxation of the remaining lens needs to be prevented.



Anterior Lens Luxation

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Posterior Lens Luxation

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Please do not hesitate to contact Eye Vet should you have any concerns following treatment.