Blind and painful eyes are a common and unfortunate reality for ophthalmologists. If your pet has a chronic, painful disease which cannot be treated, we may recommend removal of the eye to make them more comfortable. There are 2 commonly used techniques to surgically remove the eye. One is enucleation (see leaflet on ‘Enucleation’), the second is evisceration with an intrascleral prosthesis.

**What is an intrascleral prosthesis?**

An intrascleral prosthesis involves removing the internal contents of the eye via an incision in the sclera (the white part). This is called evisceration. A black silicon ball is placed within the ‘shell’ of the eye after the contents have been removed. The incision is closed with dissolvable sutures and the eyelids are temporarily sutured together to allow the surgical site to heal.

Because the contents of the eye have been removed, so has the supply of oxygen and nutrition to the cornea (the clear ‘windshield’ at the front of the eye). The cornea then grows its own blood vessels in order to provide itself with nutrients. This can take a couple of weeks and is one of the reasons we suture the eyelids together to promote this healing. When these sutures are removed, the initial sight of the intrascleral prosthesis can be a shock, as the cornea is red with engorged blood vessels. Once these vessels have reached the centre of the cornea they begin to regress, and in time, the eye will appear to have a grey/black appearance.

**How do I decide if my pet would benefit from an intrascleral prosthesis?**

Not all dogs are suitable candidates for this surgery. If there is significant corneal disease then this surgery would not be appropriate. If a tumour is present, then it is important to remove the whole globe to ensure the cancer is fully excised and can be sent to an external laboratory for histopathological testing. It is also important to consider post operative care, as these cases require frequent check ups and an increased level of post operative care in comparison to enucleations. Enucleation may be a better alternative to intrascleral prosthesis as after 2 weeks the healing is complete and no further care is needed.

**Complications**

Intrascleral prostheses are not without their potential complications. There is risk of corneal ulceration, reduced tear production and even rejection of the prosthesis. Healing times are longer compared to enucleation however it produces a far more cosmetic result. Because the extraocular muscles remain in place and the silicon ball is placed within the ‘shell’ of the eye, it will continue to move in synchrony with the other eye. Your pet will require life long lubrication to ensure the cornea remains healthy and annual check ups will be required to monitor any corneal disease. The fully healed ‘grey-black’ colour of the prosthesis takes time to achieve (up to a year) and can occasionally result in a slight ‘reddish tinge’ once healing is complete.

1 year post surgery. © A. Peers
The progression of healing following evisceration and intrascleral prosthesis.

**Picture 1:** 2 weeks post surgery. The eyelids have been sutured together for the past 2 weeks and are ready for removal. © A. Peers

**Picture 2:** 2 weeks post surgery. With the eyelid sutures removed, there is a visible red ring of vascularisation around the perimeter of the prosthesis. © A. Peers

**Picture 3:** At 4 weeks post surgery the red ring of vasulcarisation has extended towards the centre of the cornea. © A. Peers

**Picture 4:** At 7 weeks post surgery the vascularisation has regressed and the prosthesis begins to turn a grey colour. © A. Peers