



**VETERINARY VOICE:
Tips of the Trade**

Ophthalmology- Traumatic Proptosis	
When does proptosis occur?	Proptosis occurs when the globe is displaced rostrally from the orbit and the eyelid margins become entrapped caudal to the equator of the globe. Spasm of the orbicularis oculi muscle further entraps the eyelid margins at the orbital rim and compromises the vascular circulation of the globe.
In which species/breeds is it most commonly seen?	It occurs most frequently in dogs with a brachycephalic skull conformation, shallow orbits, and macropalpebral fissure (enlarged eyelid opening). The force of trauma necessary to proptose the globe in nonbrachycephalic breeds and cats is substantial and is usually associated with severe intraocular, craniofacial, and central nervous system trauma.
What are some prognostic indicators in cases of proptosis?	<p><u>Unfavorable:</u> nonbrachycephalic breed or cat, transection of the optic nerve, avulsion of more than 3 extraocular muscles, no visible pupil, extensive hyphema, facial bone fractures, duration of >6-12 hours with no corneal protection.</p> <p>Absence of PLR and either large or small pupil size DO NOT correlate with visual outcome and should not be used as prognostic indicators for vision.</p> <p><u>Favorable:</u> Brachycephalic breed, sighted proptosed globe, positive direct and consensual PLR, normal posterior segment, short duration.</p>
Procedure for replacement?	Patient should be anesthetized if stable. A lateral canthotomy is suggested to relieve pressure and allow easier replacement of the globe and release of the entrapped eyelid margins. After the globe is repositioned and the eyelid margins are pulled over the globe, temporary tarsorrhaphy sutures are placed (either 2 or 3) and a small opening is left at the medial canthus to allow for medications to be placed into the eye. The temporary tarsorrhaphy is placed using 4-0 or 5-0 nonabsorbable monofilament with stents of IV tubing or rubber bands to prevent pressure necrosis. These sutures may be preplaced at split-thickness through the eyelids entering 5 mm from the margin, and emerging parallel to the meibomian gland openings at the eyelid margin. The lateral canthotomy incision is closed in 2 layers. Tarsorrhaphy sutures are left in place for 7-28 days and are usually removed in a staged fashion as swelling diminishes.
Post-operative management?	<p>Broad-spectrum antibiotic drops every 8-12 hours.</p> <p>Prednisone 1 mg/kg/day PO for 7 days with decreasing dosage over the subsequent 14 days.</p> <p>Dependent on cause of proptosis, oral administration of a broad-spectrum antibiotic may be necessary for 7-10 days.</p>
Questions? Ophthalmology Expert: Caroline Betbeze, DVM, MS, DACVO	The Veterinary Specialty Center of Tucson has a board-certified ophthalmologist available for questions and consultations on ophthalmic diseases and surgeries during the weekdays. She is also on call to provide consultations to VSCT emergency doctors and to perform emergency procedures for patients seen by the VSCT emergency service. Board-certified ophthalmologists have four additional years of training after veterinary school and are certified by the American College of Veterinary Ophthalmologists' to assure competency in advanced veterinary ophthalmology.