

Brushtail & Ringtail POSSUMS



Species

The Common Ringtail and the Common Brushtail Possums are the most likely species to present for care. Ringtails have a tapering prehensile white-tipped tail, short ears and are smaller and darker in color than the longer-eared Brushtail, whose brushy tail can be sparsely furred.

Admission and Handling

Complete SAVEM *Wildlife Admission Form*. Capture & handling is very stressful for possums, and they may bite & scratch. *Unless euthanasia or analgesia is immediately indicated*, place in a quiet warm dark area for about 1 hr before exam. Covering with a towel can be helpful. Restrain by grasping base of tail and scruffing back of the neck. *Pictured right*

Examination

Weigh, & assess body condition by palpating muscles at base of tail & over scapula & spine. Cloacal temperature should be 35-36°. Check the fur for alopecia, ectoparasites, trauma or infection. Pupil size should be symmetrical. Ensure there is a tail reflex (absence is a very poor prognostic indicator for survival back in the wild). The cloaca should be clean. Check females' pouch for young.

Blood collection

Blood can usually be collected from the ventral coccygeal, jugular, femoral or saphenous veins. The cephalic vein can be used in the common brushtail possum.

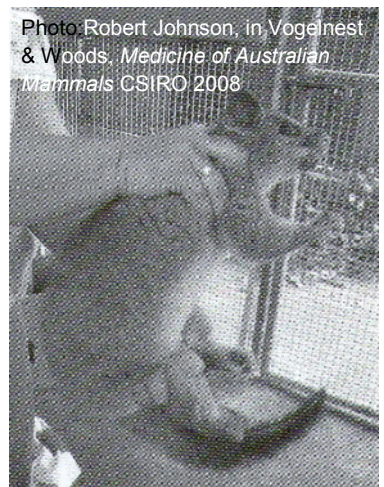
Anaesthesia & Sedation

Induction: Mask with up to 5% Isoflurane in Oxygen, or IM Tiletamine/Zolazepam (Zoletil®), Medetomidine/Ketamine, Xylazine/Ketamine, or Alfaxalone/Alphadolone (Alfaxan®). **Maintenance** Mask with oxygen and Isoflurane at 1.5 - 2.5%. Recovery time is quick, so restrain the possum as above once Isoflurane is turned off. *Right: intubation in a Brushtail Possum*

Housing and Diet in Hospital

If hospitalised, minimise stress by placing the possum's cage in a quiet room away from domestic animal patients, and cover with a towel. Provide a **nesting box** (eg wooden box) for security, with towels or leaf litter inside. Use newspaper or leaf litter on the floor of the cage which must be cleaned daily. Possums need to maintain their fear of humans—minimise handling of & talking to possums while in hospital.

Ringtail possums are classified as folivorous, but will also eat native flowers and fruit. Ideally 90% of their diet should be native feed such as eucalyptus and leptospermum (tea tree) branches, and eucalyptus and banksia flowers. Supplements can include apple, pear, carrot, banana and sprouted seed. **Brushtail possums'** diet in the wild includes foliage, flowers and fruit. Ideally 90% of their diet should be native feed such as eucalyptus and acacia (wattle) branches, and eucalyptus and banksia flowers. Supplements can include apple, pear, carrot, banana and sprouted seed. Collecting food from site of rescue is to be preferred. Limit fruit and vegetables to avoid bloat.



Common presentations to the Vet Clinic

Drugs used in feline medicine are appropriate. Possums, especially juvenile RT's, can be very sensitive to antibiotics. Use with care. Use penicillins if indicated, but avoid giving by mouth. GIT problems can be treated with Trimethoprim Sulphur. **White Muscle Disease** is common in wild caught possums. Give empirical **Vitamin E** early to reduce associated clinical effects.

Fluid therapy is often indicated. Give **crystalloids** at shock rates (20-80ml/kg/hr), then at maintenance (40-60ml/kg/day) + replacement as for domestic animals. **Hypertonic saline** (7-7.5% NaCl) at 4-6ml/kg IV may be given over 5-10 minutes if severely dehydrated.

PREDATOR ATTACK The prognosis is usually guarded to poor. Bite & puncture wounds often occur over the neck, shoulders and dorsum with minimal external signs of injury. Look for subtle signs e.g. moist matted fur, which can mask serious internal injuries requiring thorough workup. Sepsis due to *Pasteurella* from **cat bites** carries a grave prognosis and euthanasia should be considered. **Dog attack wounds** require broad spectrum antibiotics. Debride wounds and lavage with sterile saline, then chlorhexidine or iodine. Dress wounds as for domestic animals.

BRUSHTAIL POSSUM EXUDATIVE DERMATITIS (above right) Patients present with a mild to severe necrotic exudative dermatitis over face, feet, limbs, ventrum or lumbosacral region. Etiology possibly involves bites from fighting possums establishing territory, but could be associated with underlying disease processes. Treat with Penicillin IM EOD for 14d or Clavulox SID IM 10-14 days. Release with care and monitor if possible, as may re-present.

TRAUMA Prognosis is often poor, especially limb, joint & neurologic deficits. Stabilise & assess the patient, splint or bandage reduced luxations. Fractured ribs require analgesia and cage rest, +/- compression bandages, but beware pneumo- or haemo-thorax. Monitor feet for pododermatitis associated with compensatory weight bearing.

BURNS to more than 10-15% of the body should be considered cases for euthanasia. BTP'S may burn foot pads on hot roofs. Treat burns as for domestic animals, and monitor serum potassium levels, as K^+ is released from damaged cells in severe/exudative burn wounds. The prevalent pathogen is *Pseudomonas aeruginosa*. Electrical burns tend to become progressively more severe and exudative.

OCULAR INJURIES Hyphaema, asymmetrical pupils and blood in the oral cavity indicate significant cranial trauma. Without full ocular function, euthanasia may be indicated. **POISONS** Possums are susceptible to household and garden poisons such as vitamin K antagonists and pyrethrins. Treat as in domestic animals.

Recovery Good food intake, maintaining a healthy body weight, and a bright and alert demeanour are indications of health. Before the animal is released, all its initial presenting injuries should be resolved. It needs to be physically fit and healthy for the demands of life in the wild.

Release within 50m of the site of rescue. Survival is enhanced by feeding food collected from rescue/release site while in hospital. Ringtails benefit immensely from being released in a nesting box at dusk, as they are strictly nocturnal animals. Evidence suggests without a nest box Brushtails may die within a week, especially as their territory is likely to have gone by this time.



Brushtail Possum Exudative Dermatitis, Photo: David Schultz



Dermatitis in a juvenile possum. Photo: Nicky Sluczanski



Mite, *Petrogalochirus dycei*, infestation in a brushtail possum. First report in South Australia. Photo: Philip Stott

Drugs*	Dose mg/kg	Route
Diazepam	0.5-1.0	IM
Tiletamine/Zolazepam	5 - 15	IM
Xylazine / Ketamine	2-5/2-3	IM (dose can increase to 6/30)
Medetomidine/Ketamine	0.02-0.1/1-3	IM antagonise with atipamazole 0.05-0.4 IV or IM
Alfaxalone/Alphadolone	2-5/5-8	IV/IM
Amoxicillin/Clavulanic acid	12.5	SC for 3-5d
Amoxicillin/Clavulanic acid	20-25 BTPED	NOT FOR RINGTAILS (? Fatal dose)
Penicillin LA	1ml/10 kg	q48hrs 2-3 doses
Enrofloxacin	5	SC 5d
Trimeth/Sulphur	40	SC q24hr up to 5d
Nystatin(for Candidiasis) while on Antibiotics	5000-10000 IU/kg	TID 5d to prevent, 10,000 IU/kg TID 7d to treat Candidiasis
Butorphanol	0.4	IM/SC
Buprenorphine	0.005-0.02	SC or IV, BID
Meloxicam	0.2 once/0.1	SC PO/PO SID 3-5d
Vitamin K	2.5	PO q12hr w fatty food, e.g. cheese

*Doses are extrapolated from clinical experience &/or use in domestic animals, and not from pharmacokinetic studies in possums.

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This Treatment Sheet (First Edition August 2011) has been compiled by the SA Veterinary Wildlife Advisory Group and is published by SAVEM Inc. It is intended to assist veterinarians, nurses and students in the assessment and treatment of injured and ill native possums.

When is euthanasia indicated?

This is a clinical judgement, but could include:

- *Feline inflicted wounds, especially if greater than 24hrs old
- *Trauma with limb, joint or neurologic deficits.
- *Amputation of limb or tail required
- *Burns to > 10-15% body
- *Ocular injuries or blindness in one or both eyes
- *BTP Exudative Dermatitis in > 10% body or compromising closing of eyes or mouth