**Exotic Small Mammal Anesthesia**

**Part 2**

Jody Nugent-Deal, RVT, VTS (Anesthesia/Analgesia), VTS (CP-Exotics)

January 2023

Preparing for general anesthesia

* Importance of proper [physical examination](https://lafeber.com/vet/physical-examination-of-small-exotic-mammals/)
* Have supplies out within arms’ reach before starting
	+ Emergency drugs
		- 2 doses per drug
		- Doxapram is not used for CPR anymore
			* Reduces cerebral blood flow
			* Increases cerebral oxygen demand
	+ Pediatric or infant sized stethoscope
	+ Oral speculum with light source
	+ Gram scale
* Perform necessary diagnostics prior to anesthesia
	+ [Venipuncture](https://lafeber.com/vet/venipuncture-in-small-mammals/)
		- What blood tests are needed?
		- Microtainer tubes
		- 1 to 3 cc syringe with 27 to 22-gauge needles
		- Important to be familiar with species you are working with and common venipuncture sites
		- Most exotic small mammals are small therefore you must think about blood volume when taking a sample.
	+ Urinalysis
	+ Radiographs
	+ Ultrasound

Catheter placement

* Catheter supplies
	+ 26 to 20-gauge [IV catheters](https://lafeber.com/vet/intravenous-catheter-placement-in-small-mammals/)
	+ 25 to 20-gauge spinal needles for [IO catheter placement](https://lafeber.com/vet/how-to-guide-intraosseous-catheter-placement-in-small-mammals/)
	+ Pre-cut small roll gauze and elastic wrap
	+ Pediatric T-port
* Intravenous catheter techniques and sites
* Intraosseous catheter techniques and sites

Intubation techniques in ferrets, guinea pigs, and chinchillas

* [Endotracheal tubes](https://lafeber.com/vet/how-to-guide-endotracheal-intubation-in-the-rabbit/)
	+ Cuffed and non-cuffed ETT 2.0mm to 5.0mm
	+ Large bore IV catheters adapted for ETT
	+ 2% lidocaine to reduce potential laryngospasm
		- Total 2 mg/kg
		- Don’t overdose your patient
	+ Guinea pigs and chinchillas
		- Difficult to intubate
		- Palatal ostium
* V-gel supraglottic airway device use in rabbits
* Masks
	+ Variety of traditional dog/cat masks
	+ Specialty masks made from syringe cases

Pharmacology of common anesthetic drugs

* Common pre-medications
	+ Anticholinergics
	+ Opioids
	+ Benzodiazepines
	+ Alpha2-agonists
	+ Alfaxalone
* Common induction agents
	+ Injectable anesthetics
		- Propofol
		- Ketamine
		- Etomidate
		- Benzodiazepines
	+ Say NO to mask/chamber induction whenever possible
		- Isoflurane
		- Sevoflurane
* Maintenance
	+ Isoflurane or sevoflurane
	+ Dose-dependent vasodilation

Monitoring equipment

* Blood pressure
	+ [Doppler and sphygmomanometer vs. oscillometric](https://lafeber.com/vet/blood-pressure/)
	+ Non-invasive versus invasive BP monitoring
* [Temperature](https://lafeber.com/vet/monitoring-vital-signs-in-exotic-animal-species/#Temperature)
* [Electrocardiography](https://lafeber.com/vet/electrocardiography/)
* [Pulse oximetry](https://lafeber.com/vet/pulse-oximetry/)
* [Capnography](https://lafeber.com/vet/capnometry/)
* [Heat support](https://lafeber.com/vet/exotic-icu-nursing-care-for-exotic-companion-mammals/#Monitoring_the_critical_small_mammal)

Fluid therapy

* Fluids are selected based on patient needs
* SC: 50-100 ml/kg/day
* IV: 2-10 ml/kg/hour
* IO: 2-5 ml/kg/hour

[Multimodal anesthetic techniques](https://lafeber.com/vet/sedation-and-pain-management-of-exotic-companion-mammals/)

* [Epidural anesthesia/analgesia](https://lafeber.com/vet/epidural-anesthesia-in-small-mammals/)
	+ Opioids
	+ Local anesthetics
* Constant rate infusions (CRIs)
	+ Opioids
	+ Ketamine
* [Local blocks](https://lafeber.com/vet/sedation-and-pain-management-of-exotic-companion-mammals/)
	+ Line block
	+ Testicular block
	+ Ring block
	+ Splash block

Post-operative analgesia

* Opioids
* Continue fentanyl and/or ketamine CRIs
* Non-steroidal anti-inflammatory drugs