**Quality Anesthesia in Exotic Small Mammals**

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Exotic small mammals, formally known as “pocket pets”, can be challenging to safely induce, maintain and recover from general anesthesia. When working with dogs and cats, it is generally easy to intubate, place an intravenous catheter, provide fluid therapy, hook up an ECG, place a blood pressure cuff, and keep track of the core body temperature. This can be much more difficult in many exotic small mammals. How do we compensate for the potential lack of monitoring? In some cases, we may not be able to, but as anesthetists we can do our best to monitor the patient under anesthesia by looking at trends, using visual assessments and be able to anticipate the needs of the patient.

1. Preparing for general anesthesia
2. Perform thorough physical examination:
3. Have supplies out within arms reach before starting
4. Exotic compatible supplies:
	1. Pediatric or infant sized stethoscope
	2. Oral speculum with light source
	3. Gram scale
5. Perform necessary diagnostics prior to anesthesia
6. Venipuncture
	1. What blood tests are needed?
	2. Microtainer tubes
	3. 1 to 3 cc syringe with 27 to 22 gauge needles
	4. Important to be familiar with species you are working with and common venipuncture sites
	5. Most exotic small mammals are small therefore you must think about blood volume when taking a sample.

2. Urinalysis

3. Radiographs

 4. Ultrasound

 C. Common supplies needed for general anesthesia

 1. Catheter supplies

 a. 26 to 20 gauge IV catheters

b. 25 to 20 gauge spinal needles for IO catheter placement

c. Pre-cut small roll gauze and elastic wrap

d. Pediatric T-port

 2. Masks

 a. Variety of traditional dog/cat masks

 b. Specialty masks made from syringe cases

 3. Endotracheal tubes

 a. Cuffed and non-cuffed ETT 2.0mm to 5.0mm

 b. Large bore IV catheters adapted for ETT

 c. V-gel supraglottic airway device

 4. Maintenance fluids

a. Anesthetic rate IV/IO is 5 to 10 ml/kg/hr for crystalloids

 b. Colloids – rate varies by type

 c. If no catheter present fluids given SC

 i. 50 to 60 ml/kg/day

 ii. Butterfly catheter attached to syringe

 5. Monitoring equipment

 a. Stethoscope – infant or pediatric

 b. Thermometer

 c. Doppler and sphygmomanometer vs. Oscillometric

 d. Pulse oximeter

 e. Capnograph

 f. ECG

 g. Multiparameter monitor

 h. Arterial catheterization

 i. ABG collection and direct BP

 6. Anesthetic Drugs

 a. Common pre-medications

 i. Anticholinergics

 ii. Opioids

 iii. Benzodiazepines

 iv. Alpha2-agonists

 b. Common induction agents

 i. Inhalants

 a. Isoflurane

 b. Sevoflurane

 ii. Injectable anesthetics

1. Propofol
2. Ketamine
3. Etomidate
4. Benzodiazepines
	1. Maintenance
		1. Isoflurane
		2. Sevoflurane
	2. Post-operative Analgesia
		1. Opioids
		2. NSAIDS

7. Multimodal Anesthetic Techniques

 a. Epidural anesthesia/analgesia

 i. Opioids

 ii. Local anesthetics

 b. Constant rate infusions

 i. Opioids

 ii. Ketamine

8. Local Blocks

 a. Line block

 b. Testicular block

 c. Ring block

 d. Splash block