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The information supplied in this booklet is intended to assist veterinary practitioners in providing initial care and first aid to wild amphibians. The information provided has been sourced from and reviewed by qualified veterinarians. Amphibians requiring ongoing hospitalisation will require input from experienced rehabilitators to address husbandry and housing needs. Amphibians no longer requiring veterinary care should be transferred to an appropriate rehabilitator as soon as possible.

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Amphibians Veterinary Triage & Assessment



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Triage & Assessment of AMPHIBIANS

Handling

- Always wear moistened, powder-free nitrile or vinyl (not latex) disposable gloves when handling frogs.
- Smaller and more active species can be placed in a clean, chemical free container or snap lock bag to assist with your assessment, or when taking radiographs.
- Wet paper towel can also assist when handling, to help with grip.
- To hold, use the cupping technique: restrain the frog by enclosing its body into your grasp without squeezing (a).
- Alternatively use the thigh hold technique: grasp both legs just above the knee joint (b).



Fluid therapy

- For administering fluids in frogs the absorption route through the skin is preferred.
- Mix 4 parts Hartmann's Solution to 1 part 5% glucose and soak frog in a shallow dish for 20 mins, 1 – 2 times daily until rehydrated.

Feeding

- Amphibians can go days without food if hydrated, but not if severely emaciated.
- A few appropriately sized live insects such as crickets, wood cockroaches or mealworms can be offered in the enclosure and replaced daily.
- If after a few days the frog isn't responding to the insects provided, hand feed using a pair of tweezers, moving the live insect diagonally around near its face. Still offer a few live insects after this process as it may self feed after stimulating its appetite.
- If weak and emaciated after hydrating, you will need to assist feed; use a spoon, tongue depressor or similar instrument to open the mouth, and pay careful attention not to damage this sensitive area.

Be aware

- Frogs have very sensitive and delicate skin. Keep handling to a minimum, and avoid exposure to chemicals that can be absorbed through their skin.
- Always wear gloves as secretions from frog skin can cause eye and skin irritation, with some secretions toxic.
- Frogs are escape artists, and can injure themselves attempting to escape through gaps. Ensure housing is secure.
- Misadventure in banana boxes from QLD is common. It is important to know your local frog species and only release frogs from their known rescue locations.
- Risk of disease transmission between frogs should be minimised as much as possible; do not house frogs together, and only return a frog to the area it was found.

Housing

- House in a small, smooth plastic container with a secure and well vented lid (c).
- Ensure the enclosure is clean and has been washed of any chemicals.
- If recumbent, place the frog on damp paper towels and use a spray bottle to keep the enclosure moist.
- Create a wet and dry area by providing a shallow water bowl – use dechlorinated, rain or boiled-then-cooled water, and change daily.
- If the frog does not have obvious toepads for climbing (i.e. is not a tree frog) it is essential that the water dish is shallow so that they can climb out easily and can't drown.
- Provide a non-toxic native leaf/browse to hide under, or if unsure, cover the enclosure to help provide security.
- When cleaning equipment, use an appropriate disinfectant, rinse well and allow to dry.



Anaesthesia

- Frogs can be premedicated with a benzodiazepene or opioid.
- Induction methods include inhalation, topical or parenteral routes. A commonly used parenteral drugs is Alfaxan® (IM).
- Topical application or inhalation of isoflurane is often used and can be delivered via a bath, induction chamber or via a topical preparation. These methods may cause discolouration of the frog.
- For induction chamber method see image below (d); use a sealed container that has 2 chambers with air holes in between. The frog is placed in the top chamber, with isoflurane in the bottom chamber, and is removed when an adequate plane of anaesthesia is achieved.
- Once induced, maintain on isoflurane with an oxygen flow rate of 1 L/min.
- To intubate, use an uncuffed endotracheal tube or catheter tip and insert into the glottis located on the tongue. Avoid or limit the use of tape when tying in to reduce damage to the skin (e). Utilise tongue depressors to secure the ET tube in place.
- For recovery, swap to an ambu bag for respiration and slowly drizzle warm fluid solution (4 part Hartmann's to 1 part 5% glucose) over its body to aid in recovery.



Euthanasia

Fauna must be euthanised immediately when:

- Death is imminent or highly likely, regardless of the treatment provided.
- It is suffering from chronic, un-relievable pain or distress.
- It is carrying or is suspected to be carrying an incurable disease that may pose a health risk to wild animals.
- Its ability to find and consume food unaided is permanently impaired (e.g. injured jaw, loss of vision).

Anaesthesia is always required prior to euthanasia. Euthanasia can be performed by IV or intracardiac injection of sodium pentobarbitone. The most suitable IV site in amphibians is under the tongue or mid line ventral vein (this can be difficult in small species).

Examination

- Always observe patient from a distance prior to restraining it for a physical examination. Pay attention to mentation, respiration, and locomotion, whilst looking for evidence of traumatic injuries (as these will influence your restraint method).
- Once restrained, examine the patient thoroughly, assessing for more subtle injuries, abnormalities and fractures.
- A cool, bright light and magnification are essential for a thorough examination.
- Assess hydration by looking for tacky or dry skin, mucous membranes with ropery mucus, or sunken eyes.
- Examine the colour and shininess of the skin, looking for sloughing skin or raised lumps.
- Assess the eyes for abnormalities.
- Open the patient's mouth using a tongue depressor, the edge of a plastic card or similar to inspect.
- Palpate the coelomic cavity to assess for retained egg masses, bladder stones, foreign bodies or tumours.
- Radiographs will be required if trauma is suspected as broken bones are common.
- **Chytridiomycosis** (chytrid) is a widespread amphibian fungal disease that has caused declines in frog populations worldwide. It is highly contagious amongst individuals.
- Clinical signs of chytrid in juvenile and adult frogs may include erythema of ventral surfaces, abnormal posture such as splayed limbs, depression, slow righting reflex, abnormal skin shedding and ulceration and tetanic spasms upon handling.
- If chytrid infection is suspected, consult government hygiene guidelines and disease strategy, and inform an expert wildlife veterinarian for guidance.

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