AMPHIBIEN

Axolotl

Ambystoma mexicanum

🇫🇷 Axolotl · 🇩🇪 Axolotl

📜 **REGULATIONS**

CITES Appendix II

Captive-bred allowed with proof of origin; CITES permits required for import/export. Swiss OPAn: minimum standards for amphibians (water quality, temperature, stocking). Release strictly prohibited (invasive species rules).

⏳ **LIFESPAN**
10–15 years

⚖️ **ADULT WEIGHT**
60–150 g

📏 **ADULT SIZE**
20–30 cm

🌙 **LIFESTYLE**
Crepuscular to nocturnal; sensitive to strong light

🌡️ **BODY TEMPERATURE**
14–18 °C

🧬 **SEXUAL MATURITY**
9–18 months

🥚 **INCUBATION**
10–14 days

🪹 **LITTER / CLUTCH SIZE**
100–800 eggs

🏡 Habitat & environment

🏠 **Type —** Cool-water aquarium (cold freshwater, gentle flow)

🌱 **Substrate —** Very fine non-sharp sand (0.2-0.5 mm) in a layer <3-5 cm OR bare bottom. Avoid any gravel >0.5 mm (ingestion/impaction risk). Smooth decor.

🏃 **Exercise —** Requires calm swimming space; avoid strong currents

🧰 Equipment

- Chiller or fan with fine control (essential in summer)
- Mechanical and biological filtration sized at 3-5× volume/hour with broken outflow to limit current
- Water tests (NH3/NH4, NO2, NO3, pH, GH/KH)
- Smooth hideouts (PVC tubes, terracotta pots, smooth roots)
- Floating/shade plants (Lemna, Salvinia, Ceratophyllum)
- Lid (axolotls can jump)

📐 Technical parameters

🔥 Hot spot	**16–18 °C** Ideal range 14-18 °C; tolerance 10-20 °C
❄️ Cool spot	**10–14 °C** Seasonal cooling possible; avoid prolonged <8 °C
🧪 PH	**6.8 – 8.0 (idéal 7.2–7.6)**
🧪 GH	**7 – 14 °dGH (modérément dur)**
🧪 KH	**3 – 8 °dKH**
🧪 NOTES	**Cyclage complet du filtre 4–6 semaines avant introduction; changements 20–30%/semaine, eau à même température.**
🧪 NO2	**0 mg/L**
🧪 NO3	**< 20 mg/L (idéal < 10 mg/L)**
🧪 NH4	**0 mg/L (ammoniaque non ionisée NH3 doit rester indétectable)**

🧪 PO4	< 0.05 mg/L
🧪 CONDUCTIVITY	200–600 µS/cm

💡 Lighting

⏱️ **Photoperiod —** Low to moderate, 8–12 h/day

Indirect light; avoid heating from the fixture.

🐾 Behaviour

Permanent neoteny; branchial and accessory pulmonary respiration. Prefers calm waters and shaded areas. Sensitive to heat stress and currents.

👥 **Social life —** Cohabitation possible between similarly sized individuals; bite/amputation risk during feeding if overcrowded.

🔄 **Activity cycle —** Nocturnal/crepuscular; more active in low light.

🧩 Enrichment

- Multiple hideouts and shaded areas
- Targeted tong feeding to limit aggression
- Variety of smooth textures/decor

🥗 Nutrition

Strict carnivore, prefers whole freshwater prey. High protein, moderate fat; avoid thiamine/calcium deficiencies.

🍽️ Daily base

🪱 **Earthworm**
Gold-standard food; rinse to remove soil.

🟤 **Pellet**
Axolotl/carnivore-specific pellets (Hikari Sinking Carnivore, JBL NovoLotl, NorthFin Axolotl).

🐟 **Freshwater fish**
Small captive-bred cyprinids (guppy/danio) or lean freshwater fish fillets, occasionally.

🦪 **Freshwater Mussel**
Freshwater mussel/clam meat, without byssus/shell.

🪱 **Bloodworm / Blackworm**
Chironomid larvae, tubifex/blackworms from controlled cultures; microbial risk if source is unreliable.

🥜 Pellets & supplements

Balanced sinking pellets, sized appropriately (6–8 mm for adults). Alternate with whole prey for enrichment.

🟤 **Pellet**
2–4% of body weight per meal depending on frequency and temperature

⏰ FREQUENCY

- Larvae <5 cm: 1–2 small meals/day
- 5–10 cm: 1 meal/day or every other day
- 10–15 cm: 3–4 times/week
- 15–20 cm: 2–3 times/week
- >20 cm (adults): 1–2 times/week
- Adjust to temperature (less when water is cold). Remove leftovers to maintain water quality.

⛔ TO AVOID

🥩 **Mammal Meat**
Poultry is unbalanced (high fat, micronutrient deficient); avoid.

🍗 **Chicken**
Same reason; risk of lipidosis/hyperphosphataemia.

🐟 **Goldfish**
Goldfish and some cyprinids are thiaminase-rich; risk of B1 deficiency and parasitoses.

🦐 **Marine seafood**
Salt/iodine inappropriate; possible osmotic imbalance.

Health & prevention

Preventive medicine

30–45-day quarantine for new arrivals. Weekly water tests. Water changes 20–30%/week. Minimise handling; use moistened, gloved hands.

Surgery & neutering

Aquatic anaesthesia (buffered MS-222 100–200 mg/L) or sealed isoflurane baths; assisted ventilation for prolonged procedures; recovery in clean, isothermal water.

⚠ WARNING SIGNS

- Anorexia, weight loss
- Abnormal buoyancy, forced ascending
- Skin erythema, fungal fuzz (Saprolegnia)
- Ulcerations, necrosis of toes/gills
- Generalised oedema (dropsy)
- Partial metamorphosis (often linked to high temperature, stress or iodine)

If any of these symptoms appear, prompt veterinary care is essential.
Contact an exotic-pet vet as soon as possible.

First aid

1. Immediately measure NH3/NH4, NO2, NO3, pH and temperature
2. If overheated, gradually cool down (1–2 °C/hour) to 14–16 °C
3. Isolate in a cycled hospital tank with low flow
4. Remove ingestible substrates

Common conditions

Nitrogen-cycle disease

SYMPTOMS Lethargy, pale or reduced gills, respiratory distress, loss of appetite
CAUSE Toxic NH3/NO2 from incomplete filter cycling or biological overload
PREVENTION Fully cycle the tank 4–6 weeks before introduction; weekly water tests; 20–30%/week water changes

Skin and fungal infections (Saprolegnia)

SYMPTOMS Cotton-like white patches on skin or gills
CAUSE Stress, injuries, deteriorated water quality or excessive temperature
PREVENTION Maintain optimal cool water quality; systematic quarantine of new arrivals

Bacterial infections

SYMPTOMS Skin ulcers, erythema, septicaemia, rapid mortality
CAUSE Aeromonas, Pseudomonas – opportunistic on damaged skin
PREVENTION Strict tank hygiene, minimal handling with moistened gloved hands

Parasitoses

SYMPTOMS Weight loss, anorexia, digestive disorders, sometimes no visible signs
CAUSE Protozoa and helminths introduced via uncontrolled prey
PREVENTION Controlled food sources (healthy cultures) and quarantine of new arrivals

Gastrointestinal impaction

SYMPTOMS Anorexia, bloating, abnormal behaviour, mortality risk
CAUSE Accidental ingestion of gravel or substrate >0.5 mm
PREVENTION Use only very fine sand (<0.5 mm) or a bare bottom

Heat stress

SYMPTOMS Anorexia, lethargy, weakened immunity, opportunistic infections
CAUSE Prolonged water temperature >20–22 °C (summer, chiller failure)
PREVENTION Maintain 14–18 °C; chiller or fan in summer; daily checks during hot periods

Hibernation

Support this phase carefully and gradually.

Good to know — In axolotls (Ambystoma mexicanum), 'fridging' (cooling to 5–8 °C) is not true hibernation and is not a routine practice. Reserve it short-term (3–7 days, up to ~14) for heat/stress-related anorexia, early gill fungus, or constipation/bloat, while addressing root causes (water quality/temperature). Key parameters: cool, stable water 14–18 °C (ideal ~16 °C), undetectable NH3/NH4+ and NO2–, NO3– <20–40 mg/L, pH ~7.0–7.6, high oxygenation, low flow, ample hides. Contraindications to fridging: severely debilitated animals, suspected systemic infections, extensive open wounds (prefer hospital tank at ~16 °C with pristine water). If used: gradual acclimation 1–2 °C/hour to 8–10 °C, bare hospital tub, daily conditioned water changes, monitor gills/appetite; then warm back to ~16 °C gradually. Avoid >20–22 °C, ingestible substrates (fine gravel), and aggressive co-housing.

Temperature — 10–14 °C

Method — Cycled hospital tank, 10–14 °C, low light; monitor NH3/NO2; gentle aeration; gradual return to 14–18 °C.

Full 5-step plan on nacvet.ch

🌐 Even more on nacvet.ch

The online sheet is updated regularly with enriched content: new photos, refreshed recommendations, related advice articles. Scan this code to open the web version of this sheet.

↗️ **Open the online sheet** — nacvet.ch/en/species/axolotl