

### **Brief Description**

Axolotls (*Ambystoma mexicanum*) are a Mexican species of aquatic salamander that has rapidly come into the pet trade due to their hardy nature and unusual appearance. Axolotls are amphibians meaning that they do go through several stages of metamorphosis before reaching their adult form. Axolotls are unusual in that their adult/reproductive stage is the same as the juvenile aquatic stage. This is called neoteny and is often considered a “backward” step in evolution. Axolotls are closely related to Tiger Salamanders which do eventually morph into a terrestrial form. It should be noted that under extreme stress, an axolotl may morph into a terrestrial form, but their life is significantly shortened.



Being amphibians, axolotls do not tolerate handling well and must stay in the water to breathe. They have sensitive skin and can absorb toxins from the water or your skin. Should you need to transport your axolotl or move it for tank maintenance, do not use a net. Nets can cause abrasions in your axolotl’s sensitive skin or damage the gills. Instead use a plastic cup to scoop your axolotl out of the enclosure.

### **Lifespan**

Providing the correct care to your axolotl will ensure a long life. Average life expectancy is around 10 years, but reports have been found of axolotls living into their 20’s. Their adult size is around 10 to 12 inches; which they typically reach within the first year of their life.

### **Sexing**

Axolotls reach sexual maturity when they are around 6-8 inches long. Males can be identified from females by two large bulges at the base of their tail. Once axolotls reach sexual maturity, it is not recommended to keep males and females together unless you want to have hundreds of offspring as they breed readily in captivity.

### **Tank Setup**

A twenty-gallon aquarium is the minimum size of aquarium that is recommended for axolotls. Larger aquariums are always beneficial to your axolotl and larger volumes of water require less frequent water changes than smaller volumes. Canister filters are beneficial and can help to remove pollutants from your water, but axolotls are stressed by fast moving water so make sure the flow is turned down or a plastic plant is placed at the output to slow down water movement. Stress in an axolotl is visible by having gills curved forward or a sharply curved tail tip. Axolotls will come to the surface to breathe air occasionally, but mostly use their gills for respiration, therefore an air stone connected to an air pump (frequently used for fish) will oxygenate your water.

Axolotls are best kept alone. If housed with other axolotls, they should be the same size and you should still provide approximately 20 gallons per axolotl. Cage-mate aggression can be seen and you may find that you eventually need to separate your axolotls. Similarly, axolotls should not be housed with any other aquarium fish as fish are prone to nibbling on their sensitive gills.

At least one hide per axolotl should be provided to reduce stress and give them a dark area. Axolotls do not have eyelids so they are sensitive to light. If you have live plants and need to keep a light over the tank make sure there are plenty of places for your axolotl to hide.

### **Water Quality**

Water quality is very important to your axolotl’s care as their permeable skin absorbs toxins readily. Water should be treated for chlorine/chloramines before adding to the tank. Your axolotl’s waste releases ammonia into the water which is toxic. Check water quality at least twice monthly to make sure toxin levels are in safe ranges (pH should be 7-8, Ammonia <0.25ppm, Nitrate <30ppm). An aquarium filter will help reduce buildup of wastes but ideally, having an aquarium that has completed a Nitrogen cycle can help avoid this. When your tank “cycles”, beneficial bacteria becomes established in your tank and filter media which allows ammonia (toxic) to convert to nitrite (toxic) and then to nitrates (non-toxic). A new aquarium and filter should be allowed to cycle for several weeks prior to the addition of your axolotl to let water conditions settle and filter bacteria to develop. Change at least 25% of the water on a

weekly basis to remove additional waste and maintain good water quality. If the water quality is still testing poor or appears dirty then changing may be needed more frequently or up to 50-75% of the water volume. You can use the Aqueon siphon vacuum into a bucket to remove water more easily from the large tanks. It really helps to use a smaller separate tank (even a large Tupperware container) with water in it for feeding purposes to help minimize food breakdown and waste buildup in the main tank.

### **Substrate**

Very fine aquarium safe sand or large slate pieces can be used, but many axolotl keepers prefer to not use any substrate at all. Smaller river rock or other small pebbles should not be used due to high risk of ingestion and subsequent gastrointestinal impaction.

### **Lighting and Temperature**

No supplemental light is needed for axolotls as they have sensitive eyes and no eyelids. If a light is added for plant growth in a planted tank, make sure to provide plenty of hiding places like PVC tubes, caves, or other hides designed to be submerged in water.

Axolotls come from cold freshwater lakes. Water temperature of **60-67 degrees** is ideal. Temperatures consistently over 72 degrees will cause stress and shortened lifespans. A chiller may be needed if your tank cannot be easily kept in the appropriate range.

### **Food**

Axolotls primarily feed on worms in the wild which can also be readily found in pet stores or other feeder insect suppliers. Many axolotls are kept on nightcrawlers alone and frozen thawed bloodworms or chopped up earthworms can be used for smaller axolotls. Many axolotls will also readily accept sinking carnivorous fish pellets. Rangen sinking salmon pellets are a good quality brand and can be ordered through Amazon. Calcium/vitamin supplementation for axolotls is not necessary. Feeder fish can be offered, however it does increase the risk of parasites or infectious bacteria in the water.