. *Axolotl care booklet* .

This guide has been made with all the correct and up to date information on axolotl care as of August 2024.

(Made by an Australian so spelling and measurements will be different to US made care guides.)
(US measurements are still included via brackets.)

Axolotl *(Ambystoma mexicanum)* is a member of the *Ambystomatidae* family of salamanders. They are widely famous for two things; a rare genetic trait called neoteny, they retain their larval features into adulthood, so they have all the features of other salamander larvae – from feathery gills to a long, quill-like dorsal fin. Another genetic trait of theirs is to be able to 'regenerate' their injuries and missing limbs, very similarly to Marvel's *Deadpool*.

Axolotls are commonly mistaken to be a type of fish such as being called the Mexican walking fish, due to their appearance and fully aquatic lifestyle. They are amphibians like all other salamanders.

There are cases of axolotls naturally going through the metamorphosis into a terrestrial animal. When morphing occurs around 5 - 10 months old, it is due to the thyroid producing hormones to morph. From personal observation this happens more frequently in the US thanks to hybridization with other salamanders such as the Tiger Salamander (Ambystoma Tigrinum).

Further terrestrial (morphed) axolotl information can be found in this link - https://www.morphedaxolotls.com/morphing-explained

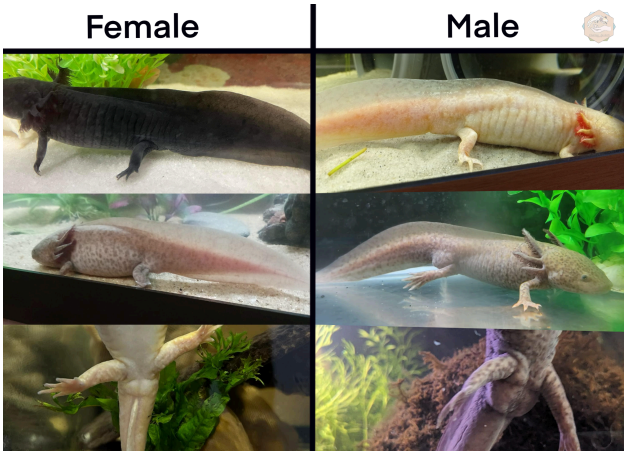
In this care guide we'll cover;

Size

An adult axolotl can grow to between 20-25 centimetres (7 - 9 inches) but some can get upward of 30+ centimetres (11 inches), this is somewhat rare now-a-days due to improper breeding and raising practices.

Axolotls, when raised correctly, grow at the rate of 3 centimetres (1 inch) per month however diet and water changes play major roles to their growth just as much genetics does. The importance of correct feeding is covered more further into this guide under ***Diet.***

Sexual maturity



Between 6-18 months, male axolotls will start to form a large bump at the base of the tail and a female will have a small one or may not have one at all. Females also tend to be chubbier and more rounded than males who are slimmer.

There are some males who have a small set of nuds which can make them appear to be females, I've personally noticed this occurs in the golden albino morph more than in other morphs / colours. Some females may look male briefly as their cloaca does puff up when they need to poop.

If you are unsure about your axolotls sex then take a photo like shown and share to worldwide-friendly facebook group '*All About Axolotls*'.

Axolotl Life Span

Axolotls can live 10-15 years provided the animal is taken care of properly and are not from clutches where they are genetically inbred.

Housing

A 2 foot long, 75 litre (20 gallon) aquarium is a minimum size for a single axolotl, add 1 foot for each additional axolotl. If you want 3 axolotls, you'll need at least a 4 foot long tank. Axolotls need floor space not height when it comes to their ideal tanks.

A lid or aquarium hood is recommended since axolotls have been known to launch themselves out of their tanks and tubs.
We also suggest lids for homes that have children or free roaming pets to avoid accidents and pet fatalities.

Filtration

A filter will help maintain safe water parameters. The most common choice is an external canister filter, but make sure the water outlet to the aquarium is fitted with a spray bar or other flow-spreading outlet. Something as simple as an organic sponge or a body loofah can be used to disrupt water flow.
A filter with an adjustable flow will also work.

You can also use in-tank canister filters, as well as sponge filters since they tend to have less flow. This is necessary because axolotls do not tolerate heavy water flow like fish.
Axolotls that live in noticeable water flow for a few months can stop eating and develop stress-related diseases.

Lack of appetite and forward-curled gills are the most common signs of stress.

Ensure your axolotls tail and gills cannot get caught by the filter's intake as this will result in injury. A strong intake flow can pull and suction the tail and gills, if you need to use a bit of extra force to pull the back of your hand away from the intake then it's too strong.

Tank-mates

FISH AND SNAILS ARE NOT SUITABLE TANKMATES!!

Far too often I see people share photos of their axolotls on facebook forums and the lotls have obvious signs of fish-caused injury. Jade_Axolotls in NSW Australia is one of many breeders who have shared photos of axolotls they've received from these cases.

Unfortunately 80% of the people who keep their lotls in dangerous environments will not change their 'care' simply because their tank would be boring otherwise or can't be bothered.
This is incredibly cruel and irresponsible.
If you wish to have fish + snails then you'll require a separate tank suitable for the species you plan to get.

Ghost and Cherry shrimp as well as freshwater scuds are really the only acceptable tank mates as they act as a clean-up crew that can be eaten by the axolotl. Shrimp and scuds will eat axolotl pellets and leftover frozen foods which helps gut load them.

Feeder fish are to be removed after 6 hours if not eaten. (Axolotl gills look identical to bloodworms after all).

Male and Female axolotls should NEVER be housed together!!
This is due to the fact the males will breed the females to exhaustion and in many cases, death.
Egg laying is incredibly taxing on their bodies, taking months to recover meaning females should be given AT LEAST 8 months between each clutch.

If you do have multiple axolotls that are opposite genders, a separate tank is necessary unless your tank is large enough to be divided with a **solid** divider and 2 separate filters. The male's role in reproduction is leaving 'cones' all over the place, these cones look like white pawns from the board game 'Sorry' and can easily become dislodged and fit between dividers with gaps and surprisingly through many filters too.
A solid divider will also mean another filter is needed otherwise one side will be unfiltered.

Lighting

Due to being dark water animals, axolotls do not require lighting. Lighting is generally for our viewing pleasure and for aquarium plants. New axolotls may be shy if kept under bright lighting, though they can get used to it ***if provided*** with enough hiding places such as caves, wood, plants, etc. Don't keep the light on for longer than 4 hours a day as axolotls don't have eyelids and long exposure to bright lights can cause eye damage (reason hides are necessary). Keeping your light on to a minimum will also help reduce algae growth.

Choose a plant-friendly bulb such as those sold for freshwater aquarium fish. Keep in mind that lighting fixtures can generate excess heat.

My personal favourite light to use since 2021 is the affordable Tylpet LED full spectrum light as not only does it not get hot, it is dimmable and has a timer. I buy them off Ebay and haven't had any issues with the 4 I've got.
(https://www.ebay.com.au/itm/225502257069)

Temperature

Temperatures 10 to 20 Celsius are tolerated by axolotls. The ideal temperature range is 15 - 18 Celsius. Temperatures above 22 Celsius will lead to heat stress, loss of appetite, and in some cases even death.

You can also invest in an aquarium chiller, but they can be pricey depending on your region. Chillers are necessary if you're living in a hot climate such as Queensland in Australia or Arizona in the United States. (10c = 50f | 15c = 59f | 18c = 64f | 22c = 72f)

Axolotl Substrate

Axolotls have a bad habit of ingesting gravel and mouth-sized objects due to the way they intake food. This can lead to impaction within their digestive organs and cause the death of the axolotl. Anything x3 the size of an axolotl's head (or smaller) can and will be consumed!
Axolotls do consume sand however they are able to pass it through their bodies.

This means that bare-bottom, fine sand, slate rock, tile, and adult human palm-sized stones 4 times the size of the axolotls head are suitable for your tank.

A substrate is not required– many keepers use no substrate at all – but it is certainly more pleasing to the eye if a substrate is used. It will also help to keep water parameters stable by providing additional surface area for beneficial bacteria to inhabit, along with giving the animals to grip onto something.

I personally have used sand but now keep my setups bare-bottomed solely for ease of maintenance as my adults are kept in ICB ponds (ground has texture to it).
One of the many things I loved about fine sand is that you're able to see your lotls footprints.

Do not put axolotls under 13 cm (5 inches) onto sand as it's the same as putting an adult onto gravel!

An axolotl's stomach should be smooth and streamlined like the leucistic (top), not weighed down like the wild (bottom). Food will weigh the stomachs down but not as drastically as gravel does.

Substrates such as aqua soil contain slow release fertilisers which are harmful to axolotls. At this point in time (Jan 2025) there are no confirmed axolotl-safe fertilisers other than lotl poop.
If aqua soils are ingested they'll break down and create a settlement layer in their gut. This is both uncomfortable and toxic for these amphibians.

Axolotl Diet

Hatchling (less than 3cm | less than 2 inches) - Listed are all live. Won't eat frozen or pellet foods at this stage.

Food must be available to them 24/7

Baby Artemia Brine Shrimp	Microworms
Whiteworms	Vinegar Eels

Baby (3 - 6cm | 2 - 3 inches) - can start taking small frozen foods.

Food must be available to them 24/7

Adult Artemia Brine Shrimp	Pot Worms (White Worms)
Daphnia	Blackworms (must be chopped)

Juvenile (7 - 15cm | 3 - 5 inches) - can start taking pellets.

Fed 2x a day

Adult Artemia Brine Shrimp	Pot Worms (White Worms)
Daphnia	Blackworms
Earthworms (chop if needed)	Feeder shrimp
Pellets	Gel Food (Repashy, AquaMunch)

Sub Adult + Adult (16 - 22cm + 23+cm | 6 - 8 inches + 9+ inches)

Fed 1x a day to 1x every 3 days (depending of the individual axolotls metabolism)

Earthworms	Gel Food (Repashy, Aquamuch)
Pellets	Feeder Shrimp
Feeder Fish	Frozen Raw Prawn (chopped)

Earthworms:

African Nightcrawlers are favoured by my guys. Earthworms such as red wigglers / tigers can be very bitter resulting in your lotl/s spitting them out and not eating them.

There are a few ways to combat the problem, 2 common methods are to;

1) Cut the worms in half.
This releases the bitter chemical. After this, soak them in water for about an hour, and they should be good to go.

2) Blanche the worms.
Boil some water, hit the worms with some boiling water and then quickly fill with COLD water. If you just boil the worms completely, they lose their nutritional value. Feed immediately after because the worms start falling apart if you leave them soaking in the water.

***Australian owners** - Aquamunch Axolotl excel is a repashy grub pie substitute. I have tried it out with 30+ axolotls and I do recommend it.*
For Nightcrawler worms, Koonik Park Worms is my go to bulk supplier - Sorry Western Australia, Koonik doesn't ship to your state due to quarantine restrictions.
As of early 2024, Repashy Grub Pie became unavailable in Australia.

In a bind for axolotls juvenile and up:
Frozen bloodworms, Frozen brine shrimp cubes.
Australian owners - you can also offer Fish fuel co axolotl cubes however most axolotls won't like it / may spit it out.

Treats (never feed more than once a week):
Krill, raw frozen salmon, raw frozen shrimp, live shrimp, live fish and blackworms (treats for adults due to small size)

As is the case with most salamanders, axolotls have no need for vitamin/mineral supplementation, and it would be hard to deliver this to an aquatic animal.
Salmon is known to help with constipation as it's like a laxative due to high oil content.

Safe feeder fish + shrimp species:
Feeder fish are intended to be an occasional treat for axolotls and not tank mates. Some of these fish may show signs of aggression in groups and / or have a tough time adjusting to the cool temperatures of an axolotl environment.

Mollies	(*Poecilia sphenops*)	Guppies	(*Poecilia reticulata*)
Platies	(*Xiphophorus variatus)*	Swordtails	(*Xiphophorus hellerii*)
Endlers	(*Poecilia wingei*)	Mosquito fish	(*Gambusia affinis*)
Neocaridina Shrimp.	(Neocaridina davidi)	Ghost Shrimp	(*Palaemonetes paludosus*)

All live feeders MUST be quarantined with medications for a minimum of 30 days or bred in house to prevent the spread of diseases and parasites to your axolotls.

Dangerous foods that should never to be fed to axolotls:

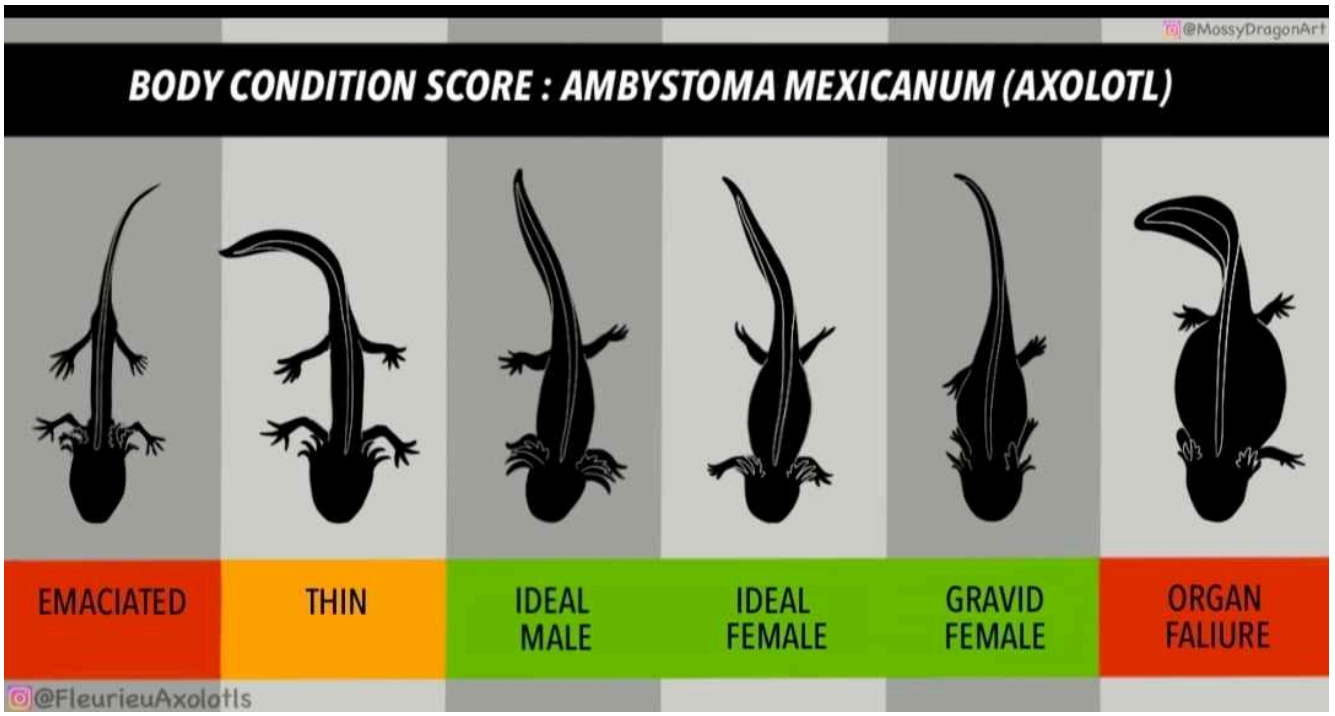
Food	**Why it's unsafe**
Hard bodies insects (Cricket, Mealworms, Roaches etc)	Indigestible exoskeletons that are high impaction risks. Contains chitin.
Fish: Characidae (Tetras)	Filled with sharp bones that lotls cannot digest that can lead to organ damage.
Fish: Loricariidae (Plecos)	Filled with sharp bones and covered in scales that lotls cannot digest.
Fish: Callichthyidae (Armoured Catfishes)	Same as above. Dorsal spines contain toxins and irritants that harm axolotls.
Fish: Cyprinidae (Carps & Minnows)	Contains thiaminase. Antinutrient when consumed. Breaks down vitamin B
Bovinae (Cattle, Buffalo, Antelope etc)	Fibres too strong to digest. Highly fatty. No nutritional benefit for axolotls.
Ovine (Sheep)	Fibres too strong to digest. Highly fatty. No nutritional benefit for axolotls.
Caprine (Goat)	Fibres too strong to digest. No nutritional benefit for axolotls.
Suidae (Pig, Hog, Swine)	Fibres too strong to digest. Highly fatty. No nutritional benefit for axolotls.
Poultry (Chicken, Turkey, Duck, etc)	Fibres too strong to digest. No nutritional benefit for axolotls.
Camelid (Llama, Alpaca etc)	Fibres too strong to digest. No nutritional benefit for axolotls.
Macropodidae (Kangaroo, Wallaby etc)	Fibres too strong to digest. No nutritional benefit for axolotls.

Exoskeletons:
Anything with an exoskeleton should never be fed to axolotls due to the fact axolotls cannot digest the chitin within them therefore leading to impaction. It's like feeding them living gravel.

Fish containing thiaminase:
Thiaminase sucks out all vitamin B from your axolotls body regardless if you're feeding other foods, especially if the thiaminase is fed consistently over a period of time as it will become fatal.
Many cyprinidae fish are sold in stores as feeders so it's important to know which fish are the ones to avoid.
Thiaminase doesn't just affect axolotls, but all other amphibians and reptiles as well.
Cyprinidae fish include goldfish (carp), minnows, barbs, rasboras, sharks and danios.

Other notes involving diet:
Due to having a carnivorous diet, plant matter is hard to digest (not impossible) and has a bad taste to these amphibians. Through personal experience this can cause really fussy eaters to go off food if they eat plants accidentally.
Axolotls have pedicellate teeth* to grip and manoeuvre food into position to eat.

*These teeth are small and cone like, unable to break human skin but instead feeling like the rough side of velcro. Jaw strength is strong enough to leave a light bruise.



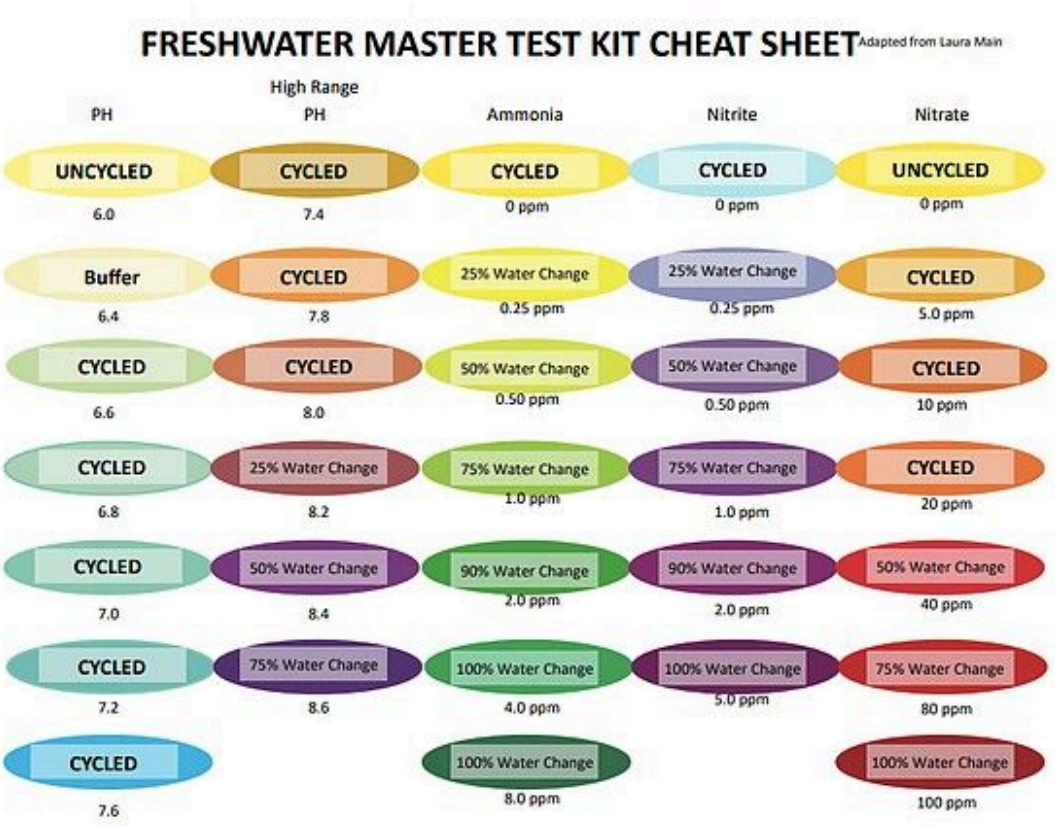
Axolotl Water and Quality

Tap water is fine for axolotls, provided it is first treated with a water conditioner to remove chlorine and chloramines.
Avoid conditioners with aloe or iodine, since those are highly toxic to axolotls.
Seachem Prime is the best one to use for axolotls as it removes both chlorine and chloramine from the water without containing both aloe and iodine.

Ideally, a new aquarium and filter should be allowed to cycle for at least 6-8 weeks prior to the introduction of axolotls.This is to let the water settle and beneficial bacteria to develop. Be sure to keep an eye on water parameters using the liquid freshwater test kits sold at aquarium stores, most popular brands are API and AquaOne.
Test strips have been proved inaccurate and a tank must be cycled **PRIOR** to adding axolotls. This is for their health and wellbeing.

Parameters should have a PH between 7-8 ppm, Ammonia - 0 ppm, Nitrite - 0 ppm, Nitrate - Below 40 ppm.

Even with healthy axolotls, a good filter and regular water changes should be employed, nonetheless. If you've ever kept other fully aquatic animals, follow a similar routine.
The recommendation is weekly 20% water changes, focusing on any waste and debris on the bottom of the tank, combined with spot cleaning throughout the week. Spot cleaning is using a pipette or turkey baster and cleaning up any large waste or debris. A larger water change of 50%-80% may be done once every 4-8 weeks.
DO NOT scrub your tank or decor during your cleaning, as this can harm your beneficial bacteria and cause your nitrogen cycle to crash. This is a common mistake among all aquarists.



Cycling your aquarium - by Elena Lukens

'Cycling is the process of growing this beneficial bacteria in your tank's filter prior to adding the axolotl to the tank. This way, when the axolotl is added to the tank and their waste starts producing ammonia, the beneficial bacteria will consume ammonia and nitrite keeping the levels constantly at 0 ppm (parts per million).' - Elena Lukens

This link will take you to a brilliant cycling guide that is simple and very easy to follow. Also covers cycling troubleshooting if yours goes through a stall.

https://www.jubjubtheaxolotl.com/general-5

Handling

Axolotls are delicate and soft-bodied amphibians with permeable skin. Axolotls should not be handled unless absolutely necessary. Use a net to move an axolotl however avoid nets with mesh that would let an axolotl's fingers get damaged. Use a soft, very fine mesh net.

A popular question is 'can you hold your axolotl?'.
They are scale-less, fully aquatic animals, so holding them out of the water is not good for them, unless it is very very quickly to move them in and out of tanks/tubs. Touching them too much will harm their slime coat and make them vulnerable to bacterial infections and fungus both in the water and what comes off our hands.

If you must hold an axolotl then with clean,soap free hands, lay your hand horizontal in the water and allow your lotl to rest on it like a ledge. Never grab or squeeze them due to the harm it'll cause.

Temperament

Placid, typically inactive, quiet and not overly social however they are inquisitive and can certainly learn to recognise you and become interactive.

Axolotls are known to nip at or bite off the legs and gills of other axolotls.
They will not nip if they have plenty of space between each other and are well fed.
If nipping is observed then increase feeding and ensure the tank is not overstocked.

. Axolotl first Aid .

I like to have on hand:

Decaf black tea bags
Pure Red Rooibos tea
Indian almond leaf (IAL)
Methylene Blue
10L bpa free + food safe container for tubing

At least one of these on hand⬇️:
Methylene blue
Tri sulfa
Furan-2
Tetracycline
Blue Planet Fluke and Tapeworm Tablets

This doesn't include meds to remove anchor worms due to current medications not being axolotl safe. Anchor worms will need to be removed by an exotic animal vet who does work with axolotls.
Fleurieu Axolotls can also treat anchor worms, located in Adelaide's southern suburbs, Australia.

How to use the fluke and tapeworm medication ⬇️

Week 1:
Put the axolotl in a tub of cool dechlorinated water, depending on how much water u use for the tub depends on how much medication. Do 100% dechlorinated daily water changes and add the crushed meds each water change.

Week 2:
Keep the axolotl tubbed with 100% daily dechlorinated water changes but don't use any medications this week.

Week 3:
Do the same as week 1 to make sure any worm/parasite eggs are killed.

Unfortunately treating parasites in axolotls is very hard. A vet is needed to find out which parasite it is and then can give the correct axolotl safe medication for treatment
Most meds available to the public aren't safe for axolotls.
Start with tea baths. It'll help until you can get to a vet.

Tea Baths:
To do tea baths, brew the decaf black / Rooibos tea in water and let cool. Use spring or dechlorinated water and do this 3 times a day for about 15-25 minutes at a time, the tannins of black tea is very similar like how you would do it with IAL, this should clear up the fungus and soothe the skin if there is any irritation. Do tea baths BEFORE trying other methods.

Methylene Blue Baths:
Baths once a day in a separate tub for 30 mins for 4 days in a row, if it's still there take 2 break days.
Get a cotton bud, dip it in the methylene blue, and then try to gently dab it onto wherever the fungus is while the axolotl is in the water. They get mildly irritated by it but nothing too extreme. Try to make sure the entire ball of fungus is dyed blue, and by that point the water should be blue enough that you don't need to add any more of it.
You don't want the water to be too blue, just tinted. Then leave it for 30 mins before returning the axolotl to clean dechlorinated water.
Every time you do this, the fungus would get looser and looser from their frill, and eventually either fall off or just disappear off of them on their break day. It usually takes about 4 days for the fungus to come off.
If left in methylene blue of strong amounts it will stain the skin of your lotl.

Methylene blue is an incredibly strong dye so caution is to be taken to ensure it doesn't end up everywhere, stains can remain on human skin for several days. This is important to know if you're renting or have an important thing to get to such as a job interview.

Salt Baths:
Not to be done for lotls as salt burns their skin. It is incredibly painful for them and their skin is very sensitive. This also goes for scaleless fish species as well.

. Axolotl Tubbing - A Brief Guide .

When should an axolotl be tubbed?

There are many situations where tubbing an axolotl is needed. Some of the most common examples are if the tank is not yet finished cycling, if the tanks cycle has crashed, if illness arises and if the axolotl has gotten an injury. You should always tub an axolotl before thinking about putting an axolotl in the fridge. Fridging an axolotl is only used as a last resort in a life or death situation.

Supplies for tubbing:

- Two or more plastic rectangular tubs with covers. This tub should be large enough for your axolotl, I recommend basing it off of your axolotl‘s length (tail tip to nose). Try to get at least 1x length in one direction and 2x length in the other so that I can see if they need changing at a glance, but any BPA-free food safe container will work.
- Small desk / clip on fan
- Seachem prime water conditioner
- Aquarium thermometer

Instructions on tubbing:

- Fill your tubs with clean water that is temperature matched to your axolotl‘s current environment.

- Change your axolotl into a tub with clean dechlorinated at least once every 24 hours.

- Remove any waste (poop + old uneaten food) throughout the day everyday.

- Always make sure your water is dechlorinated before moving your axolotl. Seachem prime is the best water conditioner for axolotls as it lacks iodine and aloe (both are toxic to axolotls)

- Cooling: have a small fan on a low setting, blowing cool air onto the surface of the water of the tubbed axolotl if they’re kept in warm / hot room temperatures. I personally use a fly screen for a lid so that cool air can get in but the axolotl can’t accidentally jump out of the tub.

Tubbing notes:

- The water level in your tub should always completely cover the axolotl.

- A lid / cover is necessary when tubbing as axolotls can launch themselves out of the water when they ‘spaz out’.

- Clean the tubs with warm water before refilling them, don’t use soap as any residue will critically harm the axolotl.

- Don’t seal the tub with a lid that doesn’t have air holes. You want lots of oxygen to be available and sealing the tub will make keeping the water cool next to impossible hence why I recommend a fly screen lid / cover.

- Limit light that will come onto the tub, I like to keep tubbed lotls in the darkest place in the room with a lid on the tub. Being in a dark, quiet, cool room reduces stress on the axolotl.

- Remember to keep the Axolotls water clean

- When tubbing your axolotl, remember to keep an eye on your tank's water parameters as without an ammonia source the cycle will crash if no source is available longer than 3 days.

- End of care guide - Below: Oops clutches and untraced genetics -

. Oop's clutches and untraced genetics .

PLEASE READ - originally written by Shoni T.

Due to the amount of "oops clutches" I've seen in ALL the facebook axolotl groups I think it's time to talk about it and how it affects axolotls as a whole.

Oop's clutches are when you end up with an unplanned clutch of axolotl eggs from keeping a male and a female together. 9.5 times out of 10 this happens with sibling/related axolotls.

Axolotls are already EXTREMELY (~35%) inbred and breeding unknown genetics isn't safe for them.
Just because you got your axolotls from 2 different breeders does NOT mean they aren't related. Breeders trade and buy from other breeders all the time.
You could get one from Fleurieu Axolotls and one from Ash's Axolotls and you would never know they were related unless you reached out. If you can not reach out and ask the breeder for genetics, then do not breed that axolotl.

Breeding unknown genetics just weakens them that much more. Breeding with unknown genetics leads to a large amount of the clutch being wild types. Wilds are harder to rehome. Another outcome is when someone figures out they bit off more than they can chew, they expect ethical breeders to take them all in which isn't fair on the animals or the breeders.
It's not fair for people to just expect rescues + ethical breeders to take them in because they choose not to cull at the appropriate time due to thinking they'll be able to handle them all.
Ethical breeders spend months and months picking pairs and raising out their own clutches and they don't always have the extra money, time or space to take on another 100-500+ axolotls.

If you wanna try your hand in raising eggs, get them from an ethical breeder with known genetics, please.

Please don't take this the wrong way, if you can't afford to feed 50-500+ axolotls LIVE FOOD for 3+ months, DO NOT BREED. BBS can be hard to hatch and live blackworms are expensive.
If you can't provide the proper food for them to grow 3 cm or more a month DO NOT BREED. Axolotls grow 3 or more centimetres a month with proper food, no 6+ month axolotls will be 7cm, if it is then the axolotl has become stunted due to the lack of nutrients. It could grow to normal size once it's given the correct food or it can stay a mini.

I know I sound like a broken record when I say all this within the fb groups, but people need to put their pride aside and do what's best for axolotls in the pet trade and mass breeding and breeding unknown genetics isn't it.'

Another thing many folks don't realise is the time it takes to care for the bubs. For example, brine shrimp are marine (saltwater) creatures so they need to be rinsed with freshwater prior to feeding them to the axolotls. The bubs will need to be raised in separate containers / tubs to ensure they don't get their limbs bitten off by their siblings, to help prevent the spread of illness (better to treat one than a whole clutch) and so you can ensure each one is getting adequate food without competing with their siblings for it.
They will all need at least 1 water change every day till sold, ideally 1 water change every 12 hours (am+pm). It takes me 1 ½ hours to do 53 tubs including adding food.

- End of Shoni.T's post.

What happens if my lotls breed and they are genetically unknown / related?

I've seen axolotls with 2 heads, ones with 3 eyes, ones with external hearts, ones with severe scoliosis, kyphosis, lordosis, ones with legs coming out of their chests + stomach sides, ones with fused gill stalks (forked is due to injury regrowth), ones with shortened bodies (dwarfs) and ones that end up with severe neurological defects to the point it can't balance itself correctly - much like spider morph ball pythons and some morelia jungle pythons.

Another thing that commonly occurs is a highly weakened immune system which makes the axolotl expensive to keep alive due to near consistent illness or dietary pickiness.
Inbred axolotls also run high chances of the sudden activation of lethal genes that will cause the body's already weakened immune system to start attacking itself causing sudden death even when given the correct environment and care.

These all occur from breeding axolotls with unknown genetics and inbreeding and the best way to prevent these issues is to keep track of genetics and not breed ones that have genetically ill siblings or pair related animals.

Continued below

What do I need to know when asking about an axolotl's genetic history?

The more information you get, the better.
Key points to get are;

- What are the morphs of the parents and grandparents?
- How have they been medically, what issues have they presented?
- Who produced the grandparents + parents of this axolotl?
- How picky are the parents to feed?
- How old are the parents?
- What age did the parents have their first clutch?
- Has any axolotl in this bloodline morphed?

Why are these questions important?

They are important to ask if you're wanting an ethically bred, healthy axolotl or after your own pair to breed. Asking these questions will allow you to know what you can expect out of your amphibian.
9.9/10 aquarium stores will not have this information. 8/10 of these stores won't be willing to give you the suppliers/breeders name as they either wont know who the breeder is or their supplier is a warehouse group such as aquarium industries.

Morphs

The word morph is used to mean colour - there are currently at least 28 variations, 2 of these leave the axolotl infertile.

These 2 infertile morphs are NAG and Melanoid NAG.

NAG = **N**on **A**lbino **G**olden.

Axanthic can be a hit and miss, depending on the gene that the animal carries as there is one axanthic gene out there that messes with their immune system that results in death from bacterial infections prior to reaching 2 years of age. These axanthics have more of a silver matte look as adults therefore they are sometimes called Silvers.
As of 2014 a new gene producing axanthics was found, this one is much more stable health wise and lacks the greyish tint.

Medical History

If an axolotl has been struggling to keep healthy, including frequent food strikes (refusal to eat) then under no circumstances should you breed that lotl.
Constant illness is a sign of immunity issues that shouldn't be passed on as it's not fair for both animal and owner.
8 times out of 10, immunity issues within an axolotl are genetically caused.

Who Produced the Axolotl?
Knowing who produced your axolotl is important to know if you're intending to breed them yourself.
Breeders swap eggs, juveniles and adults all the time so, for example, you may think Fleurieu Axolotls produced a clutch because they hatched in their care but in reality the eggs are from Seaside axolotls and Fleurieu is just raising them to sell.

Unfortunately there are also plenty of mass producers out there who don't really care about genetics and the quality, only quantity, profit and rare expensive morph types such as mosaic.

Examples of mass producers are Ivy Axolotls and Fantaxies - both make up genetic backgrounds, spread detrimental information and become aggressive when lightly questioned. Both have also sent different lotls to what was advertised only for the new owners to receive a sick animal.
Fantaxies has published a highly incorrect and high risk article stating rocks are ideal for lotls and that rocks are part of their diet, this has led to many preventable axolotl deaths and vet trip surgeries.

Goulburn Valley Axolotls Australia has admitted to not using genetically known animals for their breeding program, I've personally bought eggs from them in the past after being given genetic histories, this was before becoming Fleurieu Axolotls. It wasn't until the clutch I hatched out from them had a low hatch rate with high deformity rate that I was more firm and asked for the history of the apparent father again, this time being told the history is unknown as he was bought from a pet store.

Take the time to research the breeder, ask for others what experiences were with the breeder/s you're looking at buying from on community facebook groups such as All About Axolotls and Axolotl Advice. Another place to check credibility is Axolotl Positive Breeder Experience and Axolotl Buyer & Seller Beware.

How easy are the parents to feed?
There can be underlying neurologic or digestive deformities if you're struggling to get your axolotl to eat all the time.
Food strikes are common however it's a cause of concern if your lotl is striking for several days / weeks after every 2 - 5 feeds.

Due to this, I personally don't recommend breeding lotls with feeding issues.

How old are the parents?
Age plays a big part in the health of the offspring. The sweet spot, as many breeders call it, is between 2 - 6 years old.

Females;
Female axolotls must be at least 20 months old however waiting another 4 months does improve the health of both the offspring and the female.
If she is bred prior to 20 months then you risk giving her lifelong defects as egg producing + laying takes a lot out of their bodies, this will then affect all of her future clutches health wise.

It's recommended to only allow a female to have a max of 10 clutches in her lifetime. They do require at **LEAST** 8 months recovery time after laying - it is taxing on them after all.

Remember - females can lay close to 2,000 eggs in one clutch

Males;
Can breed from 18 months however waiting till 20 months improves his fertility.
Like other species, breeding isn't nearly as taxing on males as it is on females.
After 6 years they do start to lose their fertility however they can still breed.

Males and females should **NEVER** be housed together as the males will breed her to the point she'll die as they can lay every 2 weeks..

Has any axolotl in this bloodline morphed?
Not talking about colour but instead a natural amphibian behaviour where they go from aquatic to semi-aquatic.

There are axolotls who can leave their well-known larval stage and become salamanders - these lotls have been referred to as 'Terrestrial Axolotls'.

Axolotls don't morph due to poor conditions like originally thought but instead due to a malfunction with their thyroid. When they are very small and still growing, the thyroid sends out hormones that tell their bodies and bones to grow. As the axolotl nears the end of their growth, the thyroid stops sending these hormones. In the case of a rare morphing axolotl, the thyroid does not stop sending out hormones. As their larval growth slows, they receive the signs to finish their "growth" and metamorphose into terrestrial salamanders. This is why a morphing axolotl often changes at 5-10 months. This is when their growth is slowing down and preparing to leave the larval stage of life.

More information about terrestrial axolotls can be found here
Morphed Axolotls.com