What to Do if Your Axolotl Morphs?

So, you're wondering how to deal with a morphing axolotl.

It's not exactly a common occurrence. But it's possible for your axolotl to morph from its juvenile form to adult form. And in this process, your level of attention could draw the line between their survival or demise.

But what should you do when your axolotl starts morphing?

We can sum up the necessary steps in responding to this change with six steps:

1. Remove the Axolotl From the Tank
2. Prepare a Separate Area for Your Morphing Axolotl
3. Keep a Close Eye on Your Axolotl
4. Consult Your Veterinarian if You Observe Some Health Problems
5. Prepare a Vivarium Suitable for the Morphed Axolotl
6. Feed Your Morphed Axolotl

Although these actions are simple enough to be carried out without much assistance, they still require a deeper level of understanding. In fact, the process itself has to be well understood by axolotl owners to reinforce protection and, by extension, their survival.

So, if you want to learn more about axolotl's morphing process, just keep reading as we lay down all the details you need to know.

Juvenile vs. Adult Axolotl

The common axolotl pets usually sold in stores or by breeders are in their larvae or juvenile phase.

Although this may seem like an uninteresting fact considering pets are usually sold during the same stage, what's curious to know is that axolotls never outgrow their juvenile features – at least within normal circumstances.

During their juvenile or larvae stage, axolotls have feathery gills allowing them to breathe underwater. These external gills pop out on the side of their heads, looking more prominent than any other features they have.

Likewise, they are also directly linked to the aquatic lifestyle programmed to these young salamanders.

Moreover, juvenile axolotl retains their tail and body fin. Also, they don't have movable eyelids and a small defined mouth that often makes them look like they're smiling.

On the other hand, the adult axolotl has an entirely different appearance than its juvenile counterpart.

For one, they lost their external gills, which means they won't be able to survive being submerged underwater. As a result, adult axolotls will need a new home that corresponds to their loss of aquatic survival skills.

Likewise, adult axolotls are land-dwelling which is the polar opposite of the water-dwelling juvenile axolotl.

What Is Morphing?

Morphing is simply defined as the transition of the axolotl from its larvae to the adult stage. This comes with major changes throughout the process. If you're familiar with Pokémon, this would be easy to understand.

Nevertheless, many species in the wild morph into entirely different adult versions. For example, flamingos have several anatomical features that get lost when they turn into adults and are replaced with even more prominent morphology.

It's a normal and natural phenomenon.

However, we can't say the same with axolotls.

Axolotls are not bound to morph to their adult stage and lose their juvenile features.

Somewhere along its evolutionary timeline, most axolotls retained their larvae features which became an advantage bot because they get to look young. But primarily because they are able to fulfill their aquatic lifestyle for the rest of their life.

What Happens if an Axolotl Morphs?

If by any chance, the axolotl morphs into its adult form, the changes are hard to miss. But aside from their physical appearance, axolotls also experience critical changes in other aspects of their survival.

Lifespan

Juvenile axolotls that don't morph live up to 15 years in the tank. However, once they morphed, axolotl owners observe that their lifespan tends to decrease.

Some axolotls fail to survive after a couple of years, days, or even hours after undergoing the morphing process. Unfortunately, this becomes a familiar pattern, especially with axolotls that have morphed in a later age.

Nevertheless, people associate this significant decrease in the axolotl's longevity with the distress of transforming from an aquatic animal to a terrestrial one.

Yet, there are also pet owners who managed to keep their morphed axolotl around within their expected lifespan. And most of them credited their close monitoring during the morphing process as part of the reason why their axolotls survived and adjusted well as land-dwellers.

Regeneration

Salamanders and other species of tetrapodal amphibians and reptiles have a remarkable ability to regenerate severed limbs and other body parts.

However, research has shown that after morphing or undergoing metamorphosis, axolotls tend to have a slower regeneration rate. This has been associated with thyroxine exposure, one of the crucial triggers for metamorphosis.

Researchers say that high levels of thyroxine lower fidelity and regeneration rate.

Eating Habits

Morphed axolotls still eat the same food as they did when they used to have juvenile features.

However, there's a huge chance that your newly transformed axolotl will have trouble eating for days or weeks after metamorphosis.

This could be due to the adjustment in the new living condition. In some cases, the appetite of the axolotl changes significantly. With that, you will have to patient reintroduce food to the axolotl.

Sometimes you'll have to drag the food past their head to assist them in getting accustomed to eating outside the aquatic environment.

Environment

When axolotls morph into adulthood, they begin to lose their external gills. Remember, these gills are used primarily to breathe underwater.

Although axolotls use their lungs, the feathery gills are the ones that reinforce their way of life.

Therefore, losing the gills means it's time to get out of the water and never come back. This is why adult axolotls turn into terrestrial salamanders.

Instead of swimming, they will now be crawling on their little feet.

Physical Appearance

One of the most notable changes you can observe with metamorphosed axolotls will have to be their overall look.

For example, a brown axolotl can retain its color or change into having a black exterior covered with yellow, golden, or white spots.

Is It Rare for an Axolotl to Morph?

Yes, an axolotl morphing into its adult features is quite rare, given that it is unnatural.

Axolotls are neotenic, which means they tend to retain their larval features even as they age. They are like the Peter Pans among amphibians.

Neoteny, the ability to prevent metamorphosis, is associated with a genetic mutation along the evolutionary lines of axolotls.

Experts would say the said mutation targeted the ability of the axolotls to process iodine from its food and water.

Plus, it's highly probable that the environment in which axolotls commonly thrive also has a shortage in its iodine composition.

Iodine is a critical component for the production of the hormone thyroxin, which is responsible for activating metamorphosis among many salamander species.

As a result, specific genes in axolotls were altered to suppress metamorphosis and achieve neoteny.

With this phenomenon, axolotls are able to reach sexual maturity while retaining their larval features. Hence, they really don't need to morph into adults anymore.

Besides, morphing in axolotls has become a curse rather than a blessing. Instead of living a longer lifespan, most metamorphose axolotl lives short due to the unbearable changes they have to undergo.

They are no longer aquatic animals. Instead, they become land-dwellers who need to navigate an entirely different environment.

In a way, they are like going back to square one of their existence which, if it occurs around the time they're much older, becomes a distressing change that weakens their overall health.

What Causes Axolotl to Morph?

As we said, it is unnatural for axolotls to morph, but it's not an event that can be completely ruled out. Some triggers could induce metamorphosis.

In most cases, pet owners are unaware that they have inadvertently activated their morphing process. Check out the most common reasons why axolotls spontaneously morph.

1. Too much iodine in the tank

Iodine is an element crucial for the production of the thyroid hormone called thyroxin. This hormone initiates axolotl metamorphosis.

Inside your home, iodine comes with salt and several brands of food products fortified with trace elements.

If there was any chance your axolotl was exposed to iodine, or it somehow ended up in the water tank, then there's a high likelihood that your axolotl will morph.

2. Poor water conditions

Axolotl metamorphosis is all about hormonal imbalance. And this condition is not just triggered by iodine. It could also be due to stress, especially if the water conditions are of poor quality. Likewise, it could also be associated with inappropriate water temperatures.

3. Overcrowded water tank.

It's unlikely that you stuff your water tank with axolotl. But if you do, then be prepared for some metamorphosis any time soon.

Axolotl owners observed a higher likelihood of axolotl metamorphosis within crowded living conditions. If that's the case, the most obvious response is to transfer some of your axolotls to another tank.

Imagine sharing a single tank with many other axolotls that others felt the need to evolve just to get out of there.

4. Genetic alteration due to hybridization

Most store-bought axolotls are not pure-bred. A large portion of them has gone through hybridization, usually with tiger salamander.

With that, you could expect some morphing, knowing that tiger salamanders naturally undergo metamorphosis. However, the combination of genes with two different species overshadows the mutation causing neoteny among axolotls.

How Do I Know if My Axolotl Is Morphing?

It's easy to detect if your axolotl morphs as long as you pay attention to the following changes.

1. Bulging eyes

Axolotls who are morphing start to gain changes in the protrusion of the eyes. They seem to have eyeballs that are about to pop out of the socket.

2. Receding dorsal and tail fins

The fins that axolotls used to aid them to swim begin to recede. These dorsal and tail fins will be totally gone as the metamorphosis becomes complete.

3. Gradual loss of feathery gills

The feathery gills located on the side of the axolotl's head are prominent as they are necessary for breathing underwater.

When axolotls morph, these gills start to diminish until they are gone altogether, making it unbearable for axolotls to tolerate their original environment.

4. Thicker and stompier legs

As the fins are receding, you will notice changes in the legs of the axolotls. They become thicker and stompier, accustoming them for terrestrial use.

5. Less webbed feet

The webbed feet of axolotls also become less apparent. This anatomical structure is helpful in an aquatic environment, but its functions become lesser on land. Hence, during axolotl metamorphosis, they start to form into a single mass of tissue.

6. Growing eyelids

Juvenile axolotls don't have eyelids. So, if you spot a growing pair, it's a clear sign that your axolotl could be undergoing metamorphosis.

7. Changes in the color

There is a chance that axolotls will have a changed skin color. Some become darker while others are lighter.

In the same way, some axolotls retain their original color. This change is probably determined by genetic factors – at least for most parts.

8. Behavioral changes

There would be several changes in terms of activities and behaviors with your axolotls. First, they can be a bit erratic and uncomfortable in the water. Likewise, they also eat less during the transformation, which can be alarming for some owners.

9. Trouble swimming or going to the surface

In the final stage of their morphing, axolotls are visibly trying to escape the water. Due to their fins and gills' diminishing structure and functions, you could observe that they are having difficulties swimming or reaching the surface.

What to Do if an Axolotl Morphs?

Taking immediate action determines your axolotl's survival rate after the transformation.

Some owners fail to recognize the signs suggesting metamorphosis that their axolotls die in the tank due to drowning. And that's definitely what you should avoid.

So, here are the steps you can take after observing morphing signs in your axolotl.

1. Remove the Axolotl From the Tank.

If the fins and gills are clearly too small and receded to help the axolotl survive the water, it's time to take it out of the water tank. You can place it in a tank or spacious container with low water levels for the time being.

2. Prepare a Separate Area for Your Morphing Axolotl.

Place your axolotl in a more suitable area that wouldn't interfere with the transformation.

Make sure to keep it moist as you don't want the axolotl to experience sudden environmental changes. This could be distressing, which will affect the behavior of the axolotl.

3. Keep a Close Eye on Your Axolotl.

Monitor your axolotl every now and then. Take note of changes in their eating habits and unusual changes in their physicality, behavior, and activity.

4. Consult Your Veterinarian if You Observe Some Health Problems.

Once the transformation is complete, continue monitoring your axolotl's health. If you observe health problems like complete inactivity or weakness and refusal to eat any food for a long time, contact your veterinarian.

5. Prepare a Vivarium Suitable for the Morphed Axolotl.

One critical factor to the survival of a newly morphed axolotl is a suitable environment. Unfortunately, your axolotl is probably under a lot of stress considering the massive changes it underwent.

Hence, make sure to prepare a nice and spacious vivarium where the axolotl can get plenty of exercise.

6. Feed Your Morphed Axolotl.

Having a newly morphed axolotl is almost like having a new pet around. But, first, you have to get a feel of their habits, especially when it comes to eating.

Feed your axolotl with the usual food you gave in the water tank. A sense of familiarity will be good for them.

Sometimes they would go back to what they are used to when it comes to food preferences. Other times, they favor terrestrial foods such as earthworms.

In a Nutshell

Axolotls are probably the only pet salamander where it is unnatural to evolve into another form. However, it's pretty interesting if you sink your teeth into it.

Other animals need to undergo metamorphosis to survive, but with axolotls, it could become a major impediment to their survival.

Nevertheless, spontaneous axolotl morphing can be inevitable, given several external factors, not to mention the uncontrollable internal factors.

As much as you may want your axolotl to remain juvenile forever, much like a parent to a child, you will simply have to accept the process.

But responsible pet ownership dictates that you do more than just live with a morphed axolotl. Having said that, you need to aid your axolotls in surviving in their new environment.

So, you will have to make sure to follow the crucial steps mentioned above to preserve the lifespan of your axolotl – however long or short.