

Do Fish Get Thirsty or Drink Water in Your Home Aquarium?

Every animal needs water for survival; fishes drink it to control specific balances inside the body, such as the balance between salt and water. It is not common for aquarium fish to drink a lot of water, at least not as much as we do. If they did, they would run the risk of ingesting too much water, which might thin their blood and upset the body's salt-water balance.

Just like humans, fish consume water and need it to survive. In contrast to humans, fish do not necessarily drink it as they do water. Water is consumed by fish through a process called osmosis. As a result of osmosis, water passes through their bodies. Their skin and gills allow them to absorb small amounts of water, and their urine allows them to pass out excess water.

When we observe a fish performing its gulping mouth action, this idea can frequently come to mind. But it is impossible to tell if they are drinking water during the process.

Although fish spend their whole lives beneath, they can obtain the water they need by absorbing it through osmosis and their gills.

This is the reason, fish in an aquarium are not actively drinking water by mouth like humans or animals because it will dilute their blood if they do.

Do Fish really get thirsty?

An interesting aspect of this question is the definition of "thirst," which means a desire to drink water. Drinking is part of animals' physiological control mechanisms for maintaining salt and water balance, and they can display this drive usually regulated by kidneys.

Fish, on the other hand, are aquatic animals. Aquarium fish have blood that contains more salt and other solutes than the surrounding water does.

Aquarium fish do not employ drinking as a strategy to maintain the high solute concentration in their blood since they constantly risk having their blood diluted by their gills, which are in constant contact with the water (Hecht, 2022).

However, saltwater fish face the same risk of dehydration as terrestrial species since their blood has a lower solute concentration than its surroundings.

Fish certainly require water, though, as do all living creatures, not through their mouth but by their gills and skin. They typically absorb it through their skin by a process called osmosis, much like how our bodies take in nutrients and hormones.

Osmosis, to put it simply, is the process by which water balances in something by passing through a thin sheet. Fish effectively drink water by absorbing it through their gills through the mechanism of osmosis.

In order to understand their phenomena, their gills have specialized cells that selectively pump salt into or out of their blood to balance the water-salt ratio.

In saltwater fish, the cells constantly pump salt out, whereas freshwater fish or aquarium fish constantly pump salt in. The kidneys of saltwater fish also assist in removing some of their salt.

How do Aquarium fish absorb water?

Since Aquarium fish produce a lot of diluted urine, the question of where these fish obtain their water from when they don't even consume it emerges.

The majority of the water in freshwater fish's bodies is actually absorbed. Additionally, the majority of the water that enters the fish's gills is absorbed and integrated into their system.

Their blood is diluted as a result of the water intake, enabling important metabolic processes to occur.

It's interesting to note that freshwater fish have active pumps that continuously draw salt in opposition to the gradient of its concentration. In this way, their body keeps salt in reserve because of this salt flowing from within.

How Aquarium and saltwater fish differ in their drinking behaviour?

Saltwater fish actually drink water through their lips to somewhat make up for the water loss. Saltwater fish also consume water through their gills.

They excrete some salt through cells in their gills to get rid of the extra salt they absorb from consuming seawater. Since their bodies are already saltier than the water around them, aquarium fish never consume water.

As aquarium fish do not consume water through their mouth, they usually take water inside their bodies through gills and skin.

Why do saltwater fish drink but aquarium fish not?

Compared to aquarium fish blood, the salt concentration in saltwater fish is greater.

Because water is continually being lost from the surface of the fish, saltwater fish must regularly drink large amounts of water. As a result, saltwater fish drink a lot and are frequently thirsty.

Furthermore, saltwater fish that generate a very tiny volume of concentrated pee frequently exhibit this behavior in order to conserve this water. To get rid of extra salt that was ingested by consuming lots of saltwater, concentrated pee is expelled.

Conclusion

In conclusion, all of the biological and chemical activities taking place in a fish's body depend on osmosis. Additionally, a fish's drinking habits are entirely dependent on its environment.

In conclusion, the majority of fish do not sense the need to drink water. With the help of their gills and skin, aquarium and saltwater fish can both survive by osmosis. Few saltwater fish occasionally replenish themselves by drinking water.

Aquarium or freshwater fish doesn't even need to sip water; simply diffuse it around their body surface or their gills.

In contrast, saltwater fish consume a large amount of water each day to maintain their metabolic processes and avoid dehydration.

References

Hecht, E. (2022) *Do all fish need to drink water? how freshwater vs. saltwater fish process water.*, *USA Today*. Gannett Satellite Information Network. Available at: <https://www.usatoday.com/story/tech/science/2022/07/26/do-fish-drink-water-saltwater/10033182002/> (Accessed: December 4, 2022).