



To understand how this works, you first need to know that bony fish have a different concentration of salt in their bodies to their environment. This means they're more or less salty than the water they swim in.

The bodies of marine fish (which live in the sea) are less salty than the water they swim in, while the bodies of freshwater fish (which live in rivers and lakes) are more salty than the water they swim in.

Both marine and freshwater fish have to control the amount of water and salt in their bodies, to stay healthy and hydrated.

Hard to stay hydrated

Bony marine fish are constantly losing water from their body, through a process called "osmosis". During osmosis, water moves through a membrane (like skin), from areas of lower concentration to areas of higher concentration.

Remember, the body of a marine fish is

less salty than the seawater it swims in – which means it has a lower concentration of salt. So these fish actually lose water through osmosis: it passes from their body, through their skin and gills, out into the sea.

Thirsty work. Sebastian Pena Lambarr/Unsplash., FAI

Since they're constantly losing water this way, these fish have to drink a lot of seawater to stay hydrated.

You might be interested to know that the opposite happens in freshwater fish. Water flows into their body through osmosis, instead of out. This means they don't generally need to drink – but they do have to pee a lot.

We all know that too much salt is bad for us. So of course, an animal that drinks seawater must have a way to get rid of excess salt.

Marine fish have kidneys, which pump excess salt into their pee so they can get it