

Who Wants a Spiny Snack?

Not many animals! Here is how the pufferfish stays safe in the ocean...

This StepRead is based on an article provided by the American Museum of Natural History.

A hungry shark swims through the ocean. It looks for something to eat. It sees a small fish. Yum! But when the shark swims closer to the fish, PUFF! The fish puffs up. Now it looks like a big ball. And it's covered with sharp spines called spines. Ouch! The shark swims away. So the small fish is safe.



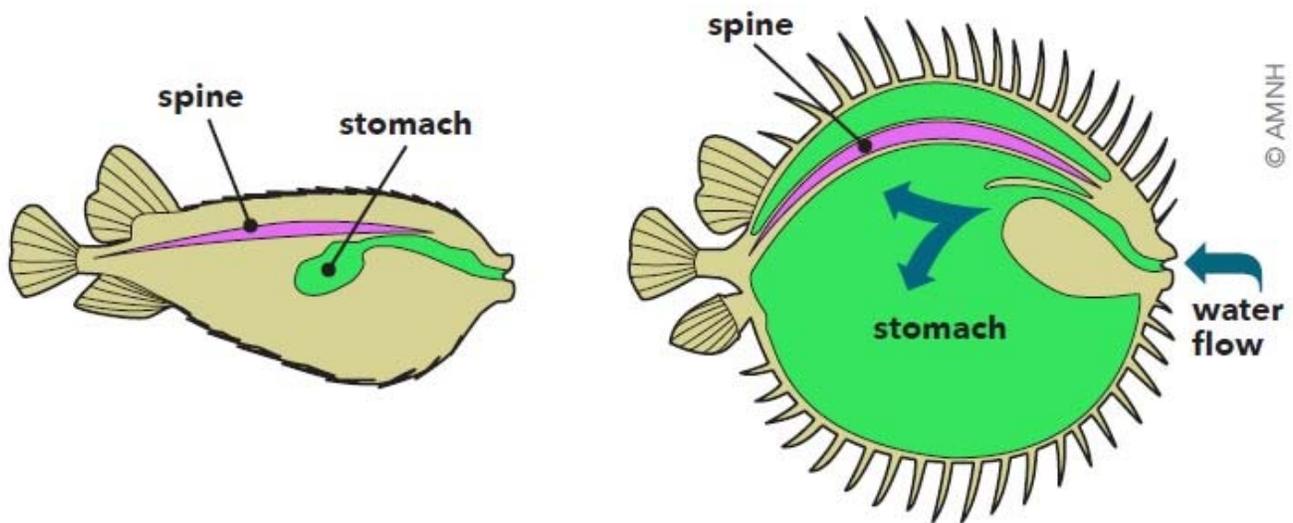
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That small fish is called a pufferfish. Most times, a pufferfish looks like any other fish. But when a dangerous animal gets close, the pufferfish puffs up like a balloon. But this fish is not soft and smooth like a balloon. Its skin is hard and it has sharp spines all over. Most of the time, these spines lie flat on the fish. But when the fish puffs up, the spines stick out.

How does the pufferfish puff up? It drinks lots of water. The water goes into the fish's stomach. As the stomach gets fuller, it gets a lot bigger. It pushes other body parts inside the fish to the side as it grows. The stomach gets so full and big that the fish looks like it is puffing up.



The ocean is full of danger for small fish like the pufferfish. Bigger fish and sharks eat small fish. So do birds. Animals that hunt and eat other animals are called predators. Pufferfish puff up into a spiny ball to stay safe from predators.

A pufferfish's spines are an adaptation. So is its ability to puff up into a ball. An adaptation is a body part or action that helps an animal stay alive. All animals have them. Predators have adaptations that help them hunt. For example, sharks have sharp teeth. These teeth are an adaptation. They help sharks catch and eat fish.

Small fishes have adaptations too. They help keep the fish safe from predators. Some fish can swim fast enough to get away from some predators. Others can hide from predators by blending in with the ocean floor.



A shark uses its sharp teeth to catch and eat fish.



Can you find the fish?

But some animals don't try to get away or hide from predators. Instead, they have bodies that are hard to eat. For example, porcupines have long sharp spines. So do sea urchins. Predators don't like spiky food. So the sharp spines help keep these animals safe.

Some toads and snakes have another way to stop predators from trying to eat them. They puff up to look bigger.

Pufferfish do both of these things to stay safe. They have spines AND they puff up. A pufferfish can turn into a spiny ball in a few seconds. Then only the biggest animals can eat it.

The ocean is full of danger. But the pufferfish is ready for it. Adaptations like sharp spines and puffing up help keep the pufferfish safe.



Porcupines have long sharp spines that keep them safe.



Pufferfish have hard skin with sharp spines.