

A vibrant photograph of two hummingbirds with iridescent green and blue feathers hovering and feeding from a cluster of bright pink flowers. The background is a soft, out-of-focus green, suggesting a natural habitat. The hummingbirds' wings are blurred from motion, and their long beaks are inserted into the flowers.

# Amazing Animal Hearts

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*From itty-bitty hearts to massive ones, and from many hearts to none, discover what keeps the animal kingdom going.*



For humans, the heart is one of the most important organs there is. After all, your heart keeps blood moving throughout your body. But is the same true for animals? Read on to find out!

## Helping Hearts

First, let's find out just why the heart is so necessary for humans. Your heart is a large muscle—but you don't need to actively control it like you do other muscles. Your heart is moving even when you aren't, like when you're sleeping. As your heart beats, it sends blood and oxygen to the rest of your body through channels called arteries. This blood carries nutrients and chemicals known as hormones. It also carries some waste away. Then, other channels called veins carry blood back to the heart. On top of that, your heart also sends blood to your lungs to pick up more oxygen. Altogether, this is called your circulatory system. It keeps you healthy and functioning!

For many animals, their hearts do the same thing—but that doesn't mean that all hearts are the same!

## Big and Small

The animal with the largest heart on Earth is, by far, the blue whale. How big is big? Huge! The heart of a blue whale can stand more than 5 feet (1.5 m) tall—that's taller

### DID YOU KNOW?

**A python's heart grows bigger when the snake eats a large meal.**



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*A blue whale's heart is massive!*

than most 10-year-old kids. In fact, a blue whale's heart is so enormous that a toddler could (theoretically) crawl through its tubes. And this heart isn't just massive, it's also heavy. A blue whale's heart can weigh more than 1,000 pounds (453.6 kg). That's almost twice as heavy as a large tiger!

As for the animal with the smallest heart, that title goes to a tiny type of wasp called the fairy fly. The fairy fly itself is less than 0.2 millimeters long. That means that its heart is so small, you can't even see it without a microscope!

### *Fast and Slow*

Just like animals have hearts of many sizes, they also have hearts that beat at different rates. In general, larger hearts tend to beat more slowly than smaller ones. This means that blue whales have some of the slowest heart rates, or number of times a heart beats each minute, around. In fact, a blue whale's heart beats about only four to eight times a minute, on average. And if they're diving deep, then it might beat only twice a minute! Compare that with an adult human's average heart rate, which is between 60 and 100 beats a minute.

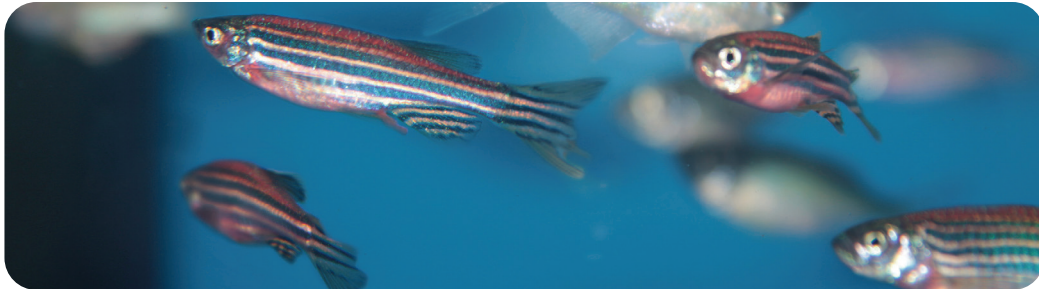
When it comes to fast heart rates, scientists have had a tough time clocking the beats of tiny insects, such as the fairy fly. But they do know the heart rates of most mammals, which are warm-blooded animals like humans and whales—and there are some pretty



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astounding ones! A tiny, mole-like animal called the pygmy shrew has a heart that beats an amazing 1,200 times every minute. That means it beats about 20 times every second. Many animals that aren't mammals, like birds, have amazing heart rates as well: The blue-throated hummingbird's heart beats 1,260 times each minute!



*Blue-striped zebrafish swim in an aquarium.*

### Plenty of Heart

Humans have only one heart. The same is also true for many other animals ... but not all of them! Cephalopods, a group of ocean animals including octopuses, squids, cuttlefish, and more, often have three hearts. These hearts work together to do a job similar to the ones done by the human heart, sending oxygen throughout the body.

On the other hand, there are also animals that have no hearts at all. This includes certain sea animals, such as sea stars, jellyfishes, sea cucumbers, and more. If you're wondering how these animals' bodies pump blood without a heart, the answer may surprise you: they don't have any blood! Instead, they have special organs that help spread oxygen through their bodies.

#### **FUN FACT**

**If a zebrafish's heart is damaged, the fish can regrow parts of it.**

Whether animals have small hearts or huge ones, super speedy or slow hearts, and even multiple hearts or no hearts at all, there is plenty of heart to go around the animal kingdom.