

*Which animal's
heart beats
fastest?*

ANSWER:

*Generally, the smaller the animal,
the faster its heart beats.*



A hedgehog's heart beats 300 times per minute on average



A hummingbird's heart beats up to 1,260 times per minute (250 times per minute at rest)



An elephant's heart weighs 20-30kg and beats about 30 times per minute



A blue whale's heart is as big as a small car and beats six times per minute

High blood pressure may lead to heart failure and enlarged hearts in humans, but what happens in other animals?

ANSWER:

Low birth weight in lambs seems to be linked with developing high blood pressure in adulthood. Several studies of human populations around the world indicate that there is a relationship between low birth weight and high blood pressure in adult life.



Giraffes' blood pressure is about twice as high as most other animals. The higher blood pressure helps pump blood up their long necks to their brains.



Racehorse hearts can weigh twice as much as normal horses' hearts and heart size has been correlated with athletic performance. The heart of Australian champion racehorse Phar Lap weighed 6.2 kg, 20% more than an average racehorse.

ANSWER:

Pig heart valves are sometimes used to replace diseased human heart valves.

How could a pig mend your broken heart?



During hibernation an animal's heart rate drops to as little as 2.5% of its usual level. A chipmunk's heart rate slows from 200 to 5 beats per minute (bpm).



Amphibian and reptile heart rates vary with temperature, speeding up from 1-8 bpm at 10°C to 24-40 bpm at 28°C. The response happens within a minute of the change in temperature, too quickly to be caused simply by changes in body temperature, so scientists are curious to find out more...



A crocodile can slow its heart rate to 2 bpm and cuts the blood supply to everything except vital organs, to hold its breath for up to an hour under water.

Cows are famous for their special four-compartment stomachs, but what animals are notable for having several hearts?

ANSWER:

Octopuses and other cephalopods have three hearts, one that supplies blood to their body and one for each of their two gills.



Mammal, reptile and amphibian hearts are different. Mammal hearts have four chambers, reptiles and amphibians have three. Reptiles have two atria and one partly divided ventricle. Amphibians have two atria and one ventricle.



A Burmese python's heart grows by up to 40% two days after a big meal and later shrinks again. Its enlarged heart helps supply the extra oxygen necessary for digestion – an example of fully reversible hypertrophy.

*How many times
will your heart
beat today?*

ANSWER:

Each day, your heart beats about 100,000 times and pumps about 23,000 litres of blood.

During a typical human life span, the human heart will beat approximately 2.5 billion times.



Racehorses' resting heart rate of 25-40 beats per minute (bpm) increases to 240 bpm while racing. Each beat pumps around 1 litre of blood with the maximum blood flow around the body 300 litres/minute.



Greyhounds are built for sprinting. When racing, their heart rate can reach 360 bpm from around 40 bpm at rest – that's five beats every second.



Alaskan sled-dogs are built for endurance, running for 6-7 hours without tiring. Their heart rate increases to 300 bpm when running, compared to around 50 bpm when asleep.