

Everyday Mysteries: The purr of a cat

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Mase, a 2-month-old tabby kitten is pictured at the Washington Animal Rescue League in Washington, D.C., October 21, 2016. Photo by: Linda Davidson / The Washington Post via Getty Images

Question: Why and how do cats purr?

Answer: No one knows for sure why a house cat purrs. Many people think it means the cat is in a good mood. Most scientists agree that there are at least three parts of the body involved. The first is the larynx, or voice box. It is what allows animals to make sounds. The second part is the laryngeal muscles, which are the muscles in the larynx. The third part, called a neural oscillator, is a repeating signal from the brain.

In Purr-fect Health

Kittens learn how to purr when they are only a few days old. Veterinarians suggest that this purring tells the kitten's mother where they are. It also helps the kittens express whether they are healthy and safe.

As the kitten grows into adulthood, purring continues. Many people think a cat purrs from contentment and pleasure, but a cat also purrs when it is injured and in pain. Dr. Elizabeth Von Muggenthaler is a veterinarian. She thinks that the purr is a natural way of healing. Purring causes the cat's body to shake soothingly. It may be able to strengthen and repair bones, ease pain and heal wounds.

Domestic And Wild Cats

Purring is a well known behavior in the domestic cat. However, other members of the Felidae family purr, too. The list includes bobcats, cheetahs, pumas and wild cats. Some big cats like lions do make a purr-like sound. However, studies show that such lions, leopards, tigers and snow leopards do not exhibit true purring.

Purring is very different from other cat sounds. Most noises, like meowing, only happen when cats breathe out. Purring, however, involves both inhaling and exhaling. In other words, it involves both breathing in and breathing out.

Caused By Laryngeal Muscles

It was once thought that the purr was caused by the surging of blood into the heart. However, as studies continue, it seems that the laryngeal muscles inside the throat are the real cause. Moreover, a cat with a damaged larynx seems unable to purr.

The laryngeal muscles are responsible for opening and closing the glottis. This is a space inside the throat that allows people to speak. It also allows animals to make sounds. Studies show that the laryngeal muscles are controlled by a neural oscillator in the cat's brain. In certain conditions, the oscillator sends a signal to the laryngeal muscles, making them move quickly back and forth. This makes the glottis open and close repeatedly. The result is the purring sound.

Quiz

- 1 Read the second paragraph of the introduction [paragraphs 1-2].

Answer: No one knows for sure why a house cat purrs. Many people think it means the cat is in a good mood. Most scientists agree that there are at least three parts of the body involved. The first is the larynx, or voice box. It is what allows animals to make sounds. The second part is the laryngeal muscles, which are the muscles in the larynx. The third part, called a neural oscillator, is a repeating signal from the brain.

Which phrase from the paragraph helps you understand the meaning of "larynx"?

- (A) at least three parts of the body
 - (B) allows animals to make sounds
 - (C) the muscles in the larynx
 - (D) repeating signal from the brain
- 2 Read the selection from the section "In Purr-fect Health."

Veterinarians suggest that this purring tells the kitten's mother where they are. It also helps the kittens express whether they are healthy and safe.

Which answer choice uses "express" in the SAME way as the selection above?

- (A) Babies express their hunger by crying loudly.
 - (B) During the holiday season, many packages are shipped express.
 - (C) He went to the store with the express purpose of buying a hat.
 - (D) She took the express train to get to the city quickly.
- 3 Overall, the article is organized around:
- (A) a type of house cat and a type of wild cat
 - (B) a veterinarian and an animal
 - (C) a cat and its feelings
 - (D) a sound and its cause

- 4 How is the structure in the section "Domestic And Wild Cats" different from the structure in the section "Caused By Laryngeal Muscles"?
- (A) "Domestic And Wild Cats" refers to step by step procedures, while "Caused By Laryngeal Muscles" includes a detailed explanation in its structure.
 - (B) "Domestic And Wild Cats" describes a problem and a solution, while "Caused By Laryngeal Muscles" includes an opinion in its structure.
 - (C) "Domestic And Wild Cats" relies mainly on comparison and contrast, while "Caused By Laryngeal Muscles" uses sequential order in its structure.
 - (D) "Domestic And Wild Cats" focuses on a cause and its effects, while "Caused By Laryngeal Muscles" uses description in its structure.