Only cats and a few other animals purr. Here’s the science of how they do it

Scientists have struggled to understand how cats produce a low-pitched rumbling sound when they purr, but a new study sheds some light on the mystery.

The type of sound an animal makes is typically linked to the size of its vocal folds, says Christian Herbst at the University of Vienna in Austria. Vocal folds are two bands of smooth muscle tissue in the larynx, a hollow tube in the middle of the neck through which air passes to make sounds.

“Typically, the larger the animal, the longer the vocal folds and so the lower the frequency of sound created,” he says.

Domestic cats, which weigh just a few kilograms, have relatively short vocal folds, which they use to make high-frequency sounds such as meowing and screeching. But that doesn’t explain purring – a behaviour they share with some wild species such as cheetahs and lynxes, says Herbst.

To do this, they cut out the larynxes of eight domestic cats that had been euthanised due to illness.

The researchers found that the larynxes made a purring sound when air was passed through them, meaning that muscle contraction isn’t required. Instead, the sounds were made possible by connective tissue embedded in the vocal folds that lowered the frequency of the sounds they produced.

This is an excerpt. Read the original post here