

## Cool Cats: Chillin' With the Power of Music

If pleasant music can make plants grow taller, cows give more milk and even improve motor skills and cognitive function in humans recovering from a stroke, can music also calm cats in their most stressful moments, which arguably might be the tension-filled ride to visit the vet?

**Analysis by Dr. Karen Shaw Becker**

### STORY AT-A-GLANCE

- If the vitality of plants, animals and humans can be improved by bringing calming music into their environment, a group of scientists concluded the same might work for cats stressed out by taking a trip to the vet
- According to the study, the researchers based their premise on classical or calming music, but went a step further and tested their theory using tunes developed especially for cats
- What's worked best on humans is vocal and instrumentals with rhythms that most closely follow the human pulse rate
- Cats listening to "chill" music responded in kind compared to felines exposed to pop or heavy metal selections; even when anesthetized, they remained "physiologically responsive" and showed lower cat stress scores
- Besides benefitting the psychological stability of cats, soothing, melodic refrains can make life easier for both cat owners and the veterinarians treating them

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Scientists have long known that playing a recording of classical or otherwise pleasant music such as Beethoven's Pastoral Symphony or even Everybody Hurts by R.E.M. can make plants grow faster<sup>1</sup> and encourage cows to give more milk.<sup>2</sup> Music has the charm to soothe the savage beast, as the ancient saying goes.

Except for a few who may argue the point that not all cats are beasts, research reveals that much like humans, cats, too, have been found to respond measurably well to the calming strains of beautiful melodies. According to a study published in Scientific Reports,<sup>3</sup> it's also been shown to improve both motor dysfunction and cognitive function in patients recovering from a stroke.

What constitutes tranquil music may also be up for debate, but researchers at Louisiana State University based their initial studies on classical songs. With its mathematical precision and well-defined structure, balance and cadences, it's been tested on cats with positive results — even cats on a dreaded car ride to the vet.

What better time would there be to test the theory? Pooling their experiential resources with cats, the scholars agreed that tension mounts exponentially when the pet carrier appears. When the humans start kitty-calling in the tone of voice every cat must associate with harrowing experiences occurring immediately afterward — that's when the chase is on and the anxiety level (in the cat) skyrockets.

By the time you've got the cat in the carrier and the carrier in the car, the stress level could be considered at its peak, and that's precisely when the theory was tested. What the researchers found was that when "relaxing" music was played, the cats in their carriers, even when they had been yowling miserably, mellowed out considerably.

As a side note, if you have a cat that has a substantial fear of travelling, I highly recommend finding a vet that makes house calls. If this isn't an option, partner with a **certified Fear Free veterinarian** who can prescribe a stress-reducing protocol to minimize anxiety related to the whole process of traveling to and from the vet.

As in many other studies, however, there were caveats. Study Finds<sup>4</sup> noted that cats listening to "chill" music responded in kind compared to other felines exposed to pop or heavy metal selections. Even anesthetized cats remained "physiologically responsive" and showed lower cat stress scores as a result, according to a study published in the Journal of Feline Medicine and Surgery.<sup>5</sup>

## A New Twist: Calming Composition for Cats

Knowing that previous studies had already established that plants, animals and humans react favorably to strains of what is generally considered classical music stylistically, the researchers went a step further and tested their theory using compositions developed especially for cats, or cat-centric music. An example can be heard in the featured video, titled Scooter Bere's Aria, which notes:

*"This music was designed from the ground up to appeal to the sensibilities of cats, just as human music is designed to appeal to humans. If we want to connect with our cats through sound in a meaningful way, shouldn't we try to hear the world as they hear it?"*

*The brain development and vocalizations of cats are the bases for this music, making it a new and unique form of communication and environmental enrichment that can enhance the relationship between you and your feline companion."<sup>6</sup>*

What measurable musical principles have the most positive effects in helping to mollify flustered felines when they're primed for potential panic? According to the study, what's worked best on humans is a combination of vocal and instrumentals with rhythms that most closely follow the human pulse rate.

So what could be more natural for inducing serenity in cats than compositions created just for them? Composers implemented subtle, fluid tunes with that idea in mind, but added in what might be most likely to inspire calm, such as purring, scratching, suckling noises and feline vocal sounds in frequencies two octaves higher than that of humans.

## How the Researchers Tested the Cats' Stress Levels

The 20 cats that found themselves participants in the study were taken on three separate visits to the vet, two weeks apart and with three different conditions: 20 minutes of cat music, 20 minutes of classical music or 20 minutes of silence. According to Study Finds:

*"During each subsequent vet visit the cats' stress levels were assessed using video footage and their overall body behavior and posture. The cats' reactions to handlers were also considered, as well as neutrophil to lymphocyte ratios assessed via blood tests in order to account for physiological stress."<sup>7</sup>*

Medical News Today<sup>8</sup> explains that neutrophils are white blood cell types that help heal damaged tissues and stop infections. Neutrophil blood levels are elevated in those cases, but also when there's stress. Lymphocytes are white blood cells that are a main type of immune cells.

EMCrit<sup>9</sup> explains the neutrophil to lymphocyte ratio (NLR) as the total number of neutrophils divided by the number of lymphocytes. Under stress, lymphocytes decrease and neutrophils increase; combined, the two have a greater impact than one by itself.

Although a lower NLR wasn't reflected in the cats' blood samples, which the researchers attributed to insufficient time after the 20-minute music segments to measure the ratios, they did report that the felines appeared to be "much more relaxed."

And while there wasn't a measurable NLR response in the blood samples, the obvious decrease in trauma after the stressed cats listened to kitty-inspired tunes suggests that music does indeed have the power to soothe the soul, even if it isn't old time rock and roll. In fact:

*"Besides the obvious benefits here for cats' own wellbeing, the study's authors say using specialized music for vet visits can also make life a whole lot easier for the cats' owners as well. Not to mention the fact that it will allow veterinarians to more easily and thoroughly examine their feline patients."<sup>10</sup>*

## Sources and References

<sup>1</sup> [Innovation and Technology \(IJIT\) December 2015 4\(6\), 30-34](#)

<sup>2</sup> [Modern Farmer February 10, 2014](#)

<sup>3</sup> [Scientific Reports December 5, 2016 ; 6: 38521](#)

<sup>4,7,10</sup> [Study Finds February 25, 2020](#)

<sup>5</sup> [Journal of Feline Medicine and Surgery February 12, 2019](#)

<sup>6</sup> [YouTube Scooter Bere's Aria April 27, 2019](#)

<sup>8</sup> [Medical News Today January 10, 2020](#)

<sup>9</sup> [EMCrit May 23, 2019](#)

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