

The Real Reason Dogs Cry Happy Tears

Researchers had never before heard of dogs shedding tears in joyful situations, so the idea this might be a world first excited them. Sure enough, after being separated from their owners for more than five hours, these 18 dogs cried tears of joy when reunited, but perhaps for a deeper reason.

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STORY AT-A-GLANCE

- Researchers set out to determine if dogs shed tears in response to emotional triggers, as humans do
- Tear volume was measured in dogs during a normal day at home and again within five minutes of reuniting with their owners, who had been away for five hours or more
- Significantly greater tear volume was found during the reunions compared to when the dogs were at home
- A separate study of 22 dogs revealed that when the “love hormone” oxytocin was dropped into their eyes, tear volume increased — a change not seen when oxytocin-free drops were used
- Dogs shed tears associated with positive emotions, and oxytocin may be the reason why

Humans shed tears when they're feeling especially emotional — either happy or sad. It turns out, dogs may too. While little is known about this phenomenon in animals, researchers with Azabu University in Japan set out to determine if dogs also shed tears in response to emotional triggers.¹

The idea came about when researcher Takefumi Kikusui noticed her dog, a standard poodle, had tears in her eyes while nursing her puppies.² “That gave me the idea that oxytocin might increase tears,” she said, referring to the “love hormone” that’s released in both humans and dogs.

Her hunch was correct. “We found that dogs shed tears associated with positive emotions,” says Kikusui said. “We also made the discovery of oxytocin as a possible mechanism underlying it.”³

Dogs Get Teary When Reunited With Their Owners

The study began with 18 dogs, whose tear volume was measured while in their home environment with their owners. The researchers used Schirmer’s test for this, in which a strip of paper is placed inside the lower eyelid and the distance moisture travels along it is measured.⁴

The same test was performed within five minutes of the dogs reuniting with their owners after being separated for more than five hours. Significantly greater tear volume was found during the reunions compared to when the dogs were at home. A separate study of 22 dogs further revealed that when oxytocin was dropped into their eyes, tear volume increased — a change not seen when oxytocin-free drops were used.

This suggests "oxytocin might mediate tear secretion during owner–dog reunions," the study explained.⁵ Next, 74 people were shown photos of five dogs that had teary or dry eyes. The participants were asked to rate how much they wanted to care for, or avoid, each animal.

The dogs with teary eyes had 10% to 15% more people responding favorably to caring for them, which suggests there may be a primal reason why animals get teary. "Through this process, their tears might play a role in eliciting protective behavior or nurturing behavior from their owners," the study noted.⁶

It's also possible that the tears may strengthen bonds between dogs and their owners. It's unknown whether dogs may also produce more tears in response to negative emotions, but for now the study suggests that dogs, like humans, may get teary when they're extremely happy. Kikusui said:⁷

"We had never heard of the discovery that animals shed tears in joyful situations, such as reuniting with their owners, and we were all excited that this would be a world first! ... Dogs have become a partner of humans, and we can form bonds. In this process, it is possible that the dogs that show teary eyes during interaction with the owner would be cared for by the owner more."

Humans Hear Dog Whimpers as 'Cries'

Even without the presence of tears, pet guardians tend to be very in tune with their dog's vocalizations, including distress signals like whining or whimpering. They even equate them with a human infant's cries.

In a study of young adults who owned cats and/or dogs and those who did not, researchers played recordings of animal distress vocalizations from dogs, cats and humans, and asked the participants to rate how happy or sad they sounded.⁸

Both dog and cat owners rated dog whines more negatively, or sadder overall, than did non-pet owners. Study author Christine Parsons of the Interacting Minds Centre at the Department of Clinical medicine at Aarhus University, Denmark, explained:⁹

"The result suggests that dogs, more effectively than cats, communicate distress to humans and that pet ownership is linked to greater emotional sensitivity to these sounds. For sounds that we need to respond to, like a dog that is utterly dependent on its human host for food and care, it makes sense that we find these sounds emotionally compelling."

Further, pet owners were more likely to rate dog whines on a similar emotional scale as human baby cries. The researchers wrote:¹⁰

"Dogs are generally more dependent on their owners for care than cats, and therefore require an especially effective set of communicative signals."

Furthermore, dog-owners have a greater tendency to anthropomorphize (ascribe human-like emotions) than cat-owners. If this tendency extends to non-dog-owners, it might explain why the dog whines were a particularly plaintive sound for humans, as negative as a baby's cry for the tested participants."

Dogs Are Also Adept at Giving ‘Puppy Dog Eyes’

Not only do dogs produce tears in response to being reunited with their owners, and whimper in a way that humans consider comparable to crying, but they’re also unique in their ability to make irresistible facial expressions, including puppy dog eyes. Compared with wolves, dogs have more fast-twitch fibers, making their facial muscle makeup more similar to humans’ than to wolves’.¹¹

These fast-twitch fibers contract quickly but also fatigue easily, allowing dogs and people to quickly make a range of facial expressions. In addition to allowing faster muscle movement and raised eyebrows, having more fast-twitch fibers also allows for the short muscle contractions needed for barking, as opposed to wolves’ howling.

Dogs have developed multiple mechanisms that deepen their bond with their owner, some subtle and some impossible to ignore — like those adorable puppy dog eyes. But if you look closely next time you come home after being away for a few hours, you may even notice tears of joy welling up in your dog’s eyes — he’s that happy to see you!

Sources and References

^{1, 5} [Current Biology August 22, 2022](#)

^{2, 3, 7} [Science Daily August 22, 2022](#)

^{4, 6} [The Guardian August 22, 2022](#)

^{8, 10} [Royal Society Open Science August 21, 2019](#)

⁹ [Science Daily August 21, 2019](#)

¹¹ [Experimental Biology April 5, 2022](#)
