

Love, Actually: How a Tiny Peptide Drives Your Passion for Dogs

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WHAT IS OXYTOCIN?

Oxytocin is a peptide hormone that is secreted into the blood from the pituitary, a pea-sized structure at the base of the brain, although it also can be made in many other cells of the body. Its size – just 9 amino acids long – truly belies its important role in how people respond to the world around them.

Oxytocin is a major driver in human social communication. When a mother gazes at her infant, attachment begins to develop. Human attachment is a more sophisticated version of imprinting in which an orphaned baby duck will imprint on a human and will follow it around. Oxytocin plays other roles in humans as well, including enhancing reward centers in the brain and inhibiting stress ([references in blog 1, 2](#)).

OXYTOCIN AND THE HUMAN – CANINE BOND

Recently scientists have been studying the role of oxytocin in the human-canine bond. It was already known that interactions between humans and dogs resulted in oxytocin release into the blood stream of both species ([3](#)). To understand more about the mechanism of this mutual hormonal response, researchers performed experiments to ask the following questions: Is gaze important for mutual oxytocin release between humans and dogs as it is for mothers and infants? And does mutual oxytocin release happen between humans and hand-raised wolves?

To answer these questions, researchers measured urine oxytocin levels in dogs or hand-raised wolves and their people before and after spending 30 minutes alone in a room together ([4](#)). During that time, the owners could gaze at the dogs or wolves, talk to them and touch them. Results: Dogs differed in the amount of time that they would gaze at their owners; they were divided into long gazers and short gazers. Long gazers induced significantly higher mutual oxytocin levels in both the people and themselves during the 30-minute interaction, whereas short gazers and wolves did not.

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THE OXYTOCIN-GAZE POSITIVE LOOP

As in the relationship between mother and child, humans interacting with dogs experience gaze-induced mutual oxytocin secretion and the longer the gaze, the higher the resulting oxytocin levels in both humans and dogs. This hormonal interaction is called the oxytocin-gaze positive loop (we'll refer to it as the OGPL for short). This diagram illustrates that steps that are involved in this positive feedback loop: [Illustration In Blog Post Here](#)

TRY IT!

So why don't you try a little experiment now. Sit down and gaze into your dog's admiring eyes. Now think about how it makes you feel. It might feel silly, but just go ahead and do it. When you think about your feelings, do the words "calm," "love," "peaceful," "happy," and/or "content" come to mind? If they do, then you are experiencing the OGPL loop!

As a dog lover, I am sure that you can connect with the closing statements in the researchers' publication: "These results suggest that humans may feel affection for their companion dogs similar to that felt toward human family members..." You can't help it – it's a chemical attraction!

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