Dogs yawn more often in response to owners' yawns than strangers

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A yellow labrador retriver dog with pink nose. Credit: Wikipedia.

Dogs yawn contagiously when they see a person yawning, and respond more frequently to their owner's yawns than to a stranger's, according to research published August 7 in the open access journal *PLOS ONE* by

Teresa Romero and colleagues from the University of Tokyo.

Pet dogs in the study watched their owner or a stranger yawn, or mimic a yawning mouth movement, but yawned significantly more in response to their owners' actions than to the strangers' yawns. The dogs also responded less frequently to the fake movements, suggesting they have the ability to yawn contagiously. Previous research has shown that dogs yawn in response to human yawns, but it was unclear whether this was a mild stress response or an empathetic response. The results of this study suggest the latter, as dogs responded more to their owners' genuine yawns than those of a stranger. The researchers observed no significant differences in the dogs' heartbeat during the experiments, making it unlikely that their yawns were a distress response.

Explaining the significance of the results, Romero says, "Our study suggests that contagious yawning in dogs is emotionally connected in a way similar to humans. Although our study cannot determine the exact underlying mechanism operative in dogs, the subjects' physiological measures taken during the study allowed us to counter the alternative hypothesis of yawning as a distress response.

More information: Romero T, Konno A, Hasegawa T (2013) Familiarity Bias and Physiological Responses in Contagious Yawning by Dogs Support Link to Empathy. *PLOS ONE* 8(8): e71365. doi:10.1371/journal.pone.0071365