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## Effects of a single dose of oral gabapentin in dogs during a veterinary visit: a double-blinded, placebo-controlled study

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### Abstract

Visiting a veterinary clinic may be a stressful event for pets, leading to impaired welfare. Various medications including gabapentin are currently recommended for dogs to reduce fear and anxiety. Gabapentin is a structural analog of GABA used as an antiepileptic medication and to treat neuropathic pain. To date, there are no published studies investigating the efficacy of gabapentin for reducing fear and anxiety in dogs.

This randomized, double-blinded, placebo-controlled, cross-over study evaluated the anxiolytic effects and safety of a single dose of gabapentin (50 mg/kg PO) prior to a veterinary visit. Non-aggressive dogs not receiving any other medications were solicited for the study from the local community. Anxiolytic effects were evaluated by video recorded behaviors and physiological variables before, during, and after a standardized, 5-minute-long, mock veterinary examination. Treatments were compared with mixed effects linear models. Twenty-two privately owned dogs (9 spayed and 3 intact females, 9 neutered and 1 intact male) were recruited for this study. Median age was 4.4 years (range 1.5-8.7 years), and median body weight was 23.5 kg (range 11.3-32.7 kg).

During the veterinary examination, the mean ( $\pm$ SD) total frequency for lip licking was significantly less for the gabapentin treatment ( $9.8 \pm 10.1$ ) compared to the placebo ( $15.0 \pm 14.7$ ) ( $P=0.001$ ). There was no significant difference in other fear/anxious behaviors such as the frequency of shake offs, yawning, whining, growling, attempts to jump off the examination table, or duration of panting. Few adverse events, such as mild sedation were reported by owners.