



Are Pressure Vests Beneficial at Reducing Stress in Anxious and Fearful Dogs?

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Hello, my name's Louise Buckley. And today I'd like to talk to you about a Knowledge Summary that I recently wrote looking at the effects of pressure vests on stress in dogs. My PICO question was in fearful or anxious dogs does wearing a pressure vest compared to not wearing one resulted in reduced behavioural and physiological signs of stress.

Now, the motivation for this particular PICO came about from undertaking veterinary nursing clinics. I was finding that I had clients asking whether these vests might be suitable for use with their dog, who could be scared of being left alone or was nervous of loud noises like fireworks or thunderstorms or similar. So I realized I didn't actually know that much about these vests and certainly didn't know enough to advise them knowledgeably. So I decided to review the literature and find out.

So I reviewed three different databases, PubMed, Science Direct and CAB abstracts and out of these identified four papers that I felt were suitable for inclusion. The three of these were commercially available pressure vests, the sort that we might stock or recommended at a veterinary practice. The fourth paper used something called a telemetry vest, but the authors described it as a spandex vest and they reported fitting it firmly to the dog. They also looked at the effect of wearing it on the stress response of the dog to a noise stressor. So I felt that it was justified in inclusion in my Knowledge Summary.

So these papers included three randomized controlled trials, which were conducted under reasonably well-standardized laboratory type conditions with these dogs exposed either to isolation, stress or to artificial noise stressors. And the fourth paper was a clinical trial and this was conducted in the owner's own home with the owner and themselves assessing the dog's response to thunderstorms before wearing and during the wearing of these pressure vests. Now the papers varied in terms of the behavioural and physiological parameters that they used to evaluate the stress, the fear, or the anxiety response in these dogs, and this meant that it was quite difficult to directly compare the study findings. Thinking about the physiological parameters where measured there was no effect of the vest on oxytocin or cortisol levels, but wearing a pressure vest affected heart rate. And interestingly, when you first fit it, it initially increases. So suggesting it was initially stressful to initially wear one, but then over time, it decreased relative to the control. But unfortunately, one of these studies was actually flawed in relation to this measurement. And I direct you to the Knowledge Summary, to look at this. Now in the better-controlled studies, there was very little effect of wearing the pressure vest on stress behaviours, but the clinical trial found that the dog's behavioural thunderstorm anxiety score was much lower when

wearing a vest, and that this effect was more pronounced with repeated exposure to thunderstorms, ie: that the dogs had a better effect the more times wore it. The weakest randomized clinical trial also found an effect, on their global anxiety score and that was a composite type behavioural measurement based on subjective assessment. But again, there were issues with data handling and sample size in this study.

Finally, two of the studies asked the owners what they thought and the owners generally reported believing that the vests had a positive effect and that they would use them again with their dog. Of course, no controls were in place to assess for placebo effect here, and the owners were not blinded to their use.

So in conclusion, the take-home message for the veterinary professional, was that these pressure vests may have small but beneficial effects on canine anxiety and that habituating the dog to their vest, assessing for comfort, and then repeatedly using it during sort of stressors may improve the likelihood of any benefit. However, I think it's important that we caution owners that they should not expect the dog's anxiety to be fully alleviated or prevented. And of course, it's possible that there'll be no beneficial effect at all. So we need we're in need of more and stronger quality studies.

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