

## Is There Any Evidence to Support the Use of Garlic as a Wormer for Dogs and Cats in the UK?

Louise Buckley

Hello, my name is Louise Buckley, and the title of my Knowledge Summary is, 'Is there any evidence to support the use of garlic as a wormer for dogs and cats in the UK?'

And I got the idea for this Knowledge Summary when running a nurse consultation with a client and the client telling me that they used garlic to worm their dog. I was curious about this, so I went investigating and found that on a certain popular press, Facebook groups and websites, garlic was being recommended regularly for dogs. And occasionally for cats, I was intrigued by this and wanted to find out more and to see what the scientific evidence base for this was.

Now, my formal PICO was 'in dogs and cats is the oral administration of garlic compared to no treatment efficacious at preventing or reducing the intestinal worm burden (species found in the UK). So to do this, I undertook a systematic review of the literature, and I consulted three of the main databases that list veterinary related research papers from this search, I identified three papers that either partially or fully addressed the PICO. Now, none of the papers looked at the use of garlic to prevent infestation by any species of intestinal worm found in the UK or elsewhere in the world for that matter. The three papers that I did find were focused on the use of garlic in dogs that already had a worm burden, not all of the species of worm commonly found in the UK dogs were studied and no studies looked at effect of garlic on tapeworm species.

So this is one of the first limitations as conventional wormers, maybe more attractive as they tend to target multiple species of worm at the same time. Of the three papers, two of these papers focused on dogs and one on cats and of the two that were focused on dogs the first paper found that the herbal preparation used reduced egg counts for several species of nematode in treated dogs. However, crucially the paper combined garlic with lots of other ingredients. So, it was not possible to identify what effect, if any, was due to the garlic per se, the second paper focused on one type of intestinal nematode and found an 82% reduction in larvae present in faeces. After five days of being fed raw garlic egg counts also reduced by a less impressive 15%. However, upon cessation of garlic larvae counts returned to baseline levels within two days, the other major issues to this study were poor quality design, a sample size of one. And of course, external validity was poor as the type of nematode that was studied is not commonly found in the UK.

The final paper examined the use of garlic as a wormer for cats that were naturally infested with Toxocara cati roundworms. Now this study with a sample size of five cats per treatment group found that cats fed garlic had a lower egg count and that they demonstrated euthanasia and the cats at the end of the study and counting the number of adult worms present that this reduction in egg count was due to reduce fecundity. Now, one of the key limitations of all of the studies was that none of them examined the effect of garlic on killing adult worms. Therefore there is currently no research to demonstrate high levels of adulticidal action against a range of intestinal worms at therapeutic non-toxic

levels in dogs and cats. So in the absence of this evidence, I concluded that garlic has not been demonstrated to be an effective anthelmintic for either multiple species or single species wormer use in dogs and cats living in the UK.

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