



<https://askfido-2i09v4zdrcomtpsrxer.stackpathdns.com/wp-content/uploads/2018/09/dog-arthritis.jpg>

Effectiveness of Dry Needle acupuncture for arthritic canines

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In mild/moderate arthritic canines, would dry needle acupuncture, with NSAIDs, increase mobility versus solely NSAIDs?

Research Question

Proposal Overview

- History/importance of acupuncture
- Participant involvement
- Testing methods
- Why I chose this type of study/methods
- Suggestions for future research

Introduction/Background

- Progressive disease-causing pain/lameness
- 5% of the population
- Common cause of euthanasia and natural death (Baker-Meuten, Wendland, Shamir, Hess, & Duerr, 2020)
- Commonly use NSAIDs, cause side effects.

Introduction/Background (Cont.)

- Acupuncture found to reduce pain and stiffness.
- Inhibits inflammatory mediators, works on normalizing physiologic homeostasis and promote self-healing (Summers, 2020).
- Successful case study for acupuncture (Koh, N.D.).
- World Small Animal Veterinary association, American Association of Feline Practitioners, and American Animal Hospital Association suggest acupuncture for multimodal pain management regimen (Koh, N.D.).

Introduction/Background (cont.)

- Meta-analysis found 55% had adverse effects to NSAIDs (Teixeira, et al., 2016).
- Acupuncture may reduce dosage of NSAIDs.
- Immediate and cumulative effects, following repeated treatments (Koh, N.D.).



Why this research?

- Zero articles about dry needle acupuncture (Sanderson, et al., 2009)
- Common issues for past research:
 - Needing to be more high-quality and randomized studies
 - Little participation
 - And timing of measurements (Baker-Meuten, Wendland, Shamir, Hess, & Duerr, 2020; Sanderson, et al., 2009).

H0- Dry needle acupuncture, with NSAIDs, will show no difference of mobility in mild/moderate arthritic canines versus solely NSAIDs.

H1- Dry needle acupuncture, with NSAIDs, will increase mobility in mild/moderate arthritic canines versus solely NSAIDs.

H2- Dry needle acupuncture, with NSAIDs, will decrease mobility in mild/moderate arthritic canines versus solely NSAIDs.

Prospective cohort study

Variables

Controlled variables

- Dogs taking Metacam or carprofen.
- Mild/moderate arthritis
- Elbow arthritis

Independent variable

- If the dog will receive dry needle acupuncture.

Methods

- Before participation, confirmed diagnosis using scale.
- Prescribed Metacam or Carprofen prior to and for the duration of the study.
- Varying sizes accepted.
- Control group: Only receive NSAIDs.
- Treatment group: Receive NSAIDs and dry needle acupuncture (weekly).

OA Grade	Description
1	Suspicion based on history Recognised incongruity No OA changes on radiographs
2	Mild clinical signs Discomfort on examination of joint Early OA changes on radiographs
3	Moderate clinical signs Reduced range of motion of joint & crepitus Moderate OA changes on radiographs
4	Overt clinical signs Crepitus, thickening of the joint & pain Obvious OA changes on radiographs
5	Pronounced clinical signs Severe joint changes on palpation End stage joint disease on radiographs

Lameness scale (Chart by Nganvongpanit, Boonsri, Sripratak, & Markmee, 2012)

Methods (Cont.)

- Excluded/removed from the study if:
 - Taking other treatments (such as supplements and joint health diets)
 - Diagnosed with severe arthritis
 - Developed another condition
- Owners decide which group their dog joins.

Methods (cont.)

Criterion	Grade	Clinical evaluation
Lameness	1	Walks normally
	2	Slightly lame when walking
	3	Moderately lame when walking
	4	Severely lame when walking
	5	Reluctant to rise and will not walk more than five paces

Osteoarthritis grade Scale (Chart by 5x5x5 The Management System for Canine Osteoarthritis, n.d.)

Testing Methods:

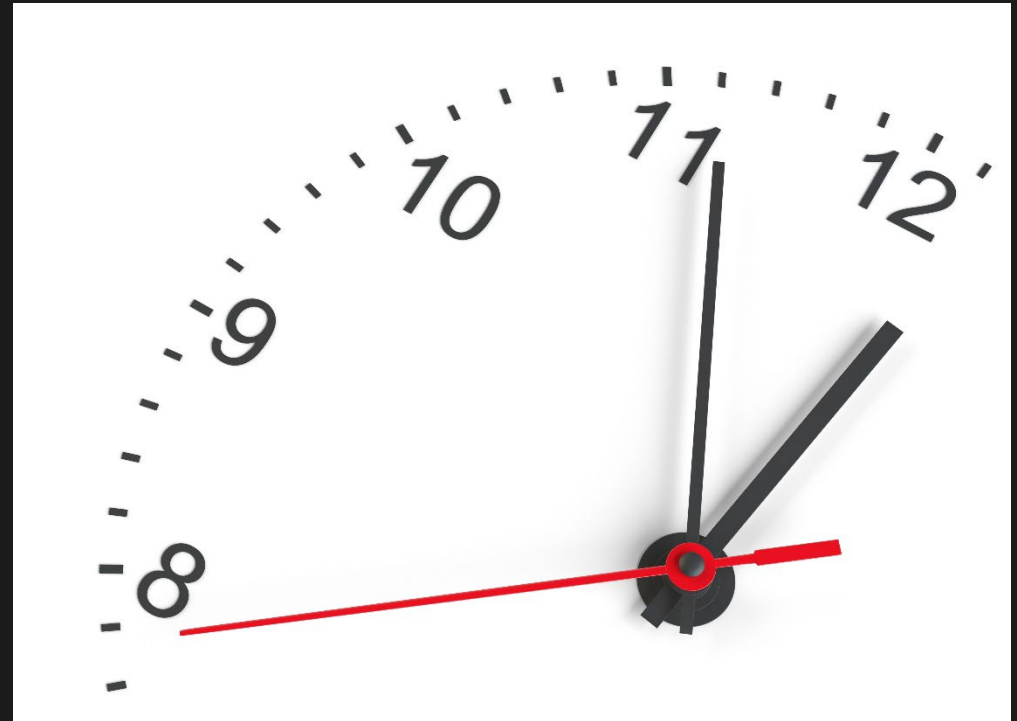
1. Walked across pressure plate.
 - Converted into Newtons- allows for normalizing the body weight
 - Allows to test dogs of varying sizes
 2. Lameness scale-recording
 - Recording sent to three outside examiners and averaged.
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- Tested biweekly until 26 weeks involvement

Discussion

- Prospective cohort allows us to determine if dry needle acupuncture was effective.
 - Better control of participation
 - Prevention of use of additional treatments
 - More precise data collection
- Testing methods prevent bias

Study Limitations

- Duration of study
- Treatment costs
- Loss of follow-up



Future Suggestions

- More dry-needle acupuncture studies
- Consider other low-dose NSAIDs.
- Compare dry needle acupuncture to other alternative therapies

- Multi-modal treatment discussion

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