

## Abstract

### Journal of the American Veterinary Medical Association

January 1, 2010, Vol. 236, No. 1, Pages 67-73

doi: 10.2460/javma.236.1.67

### Evaluation of the effects of dietary supplementation with fish oil omega-3 fatty acids on weight bearing in dogs with osteoarthritis

James K. Roush, DVM, MS, DACVS; Alan R. Cross, DVM, MS, DACVS; Walter C. Renberg, DVM, MS, DACVS; Chadwick E. Dodd, DVM; Kristin A. Sixby, DVM; Dale A. Fritsch, MS; Timothy A. Allen, DVM, DACVIM; Dennis E. Jewell, PhD; Daniel C. Richardson, DVM, DACVS; Phillip S. Leventhal, PhD; Kevin A. Hahn, DVM, PhD, DACVIM

Department of Clinical Sciences, College of Veterinary Medicine, Kansas State University, Manhattan, KS 66506. (Roush, Renberg); Department of Small Animal Clinical Sciences, College of Veterinary Medicine, University of Florida, FL 32611. (Cross); Pet Nutrition Center, Hill's Pet Nutrition Inc, PO Box 1658, Topeka, KS 66601. (Dodd, Sixby, Fritsch, Allen, Jewell, Richardson, Hahn); 4Clinics, 8 rue de la Terrasse, 75017 Paris, France. (Leventhal)

**Objective**—To evaluate the effects of a food supplemented with fish oil omega-3 fatty acids on weight bearing in dogs with osteoarthritis.

**Design**—Randomized, double-blinded, controlled clinical trial.

**Animals**—38 client-owned dogs with osteoarthritis examined at 2 university veterinary clinics.

**Procedures**—Dogs were randomly assigned to receive a typical commercial food (n = 16) or a test food (22) containing 3.5% fish oil omega-3 fatty acids. On day 0 (before the trial began) and days 45 and 90 after the trial began, investigators conducted orthopedic evaluations and force-plate analyses of the most severely affected limb of each dog, and owners completed questionnaires to characterize their dogs' arthritis signs.

**Results**—The change in mean peak vertical force between days 90 and 0 was significant for the test-food group (5.6%) but not for the control-food group (0.4%). Improvement in peak vertical force values was evident in 82% of the dogs in the test-food group, compared with 38% of the dogs in the control-food group. In addition, according to investigators' subjective evaluations, dogs fed the test food had significant improvements in lameness and weight bearing on day 90, compared with measurements obtained on day 0.

**Conclusions and Clinical Relevance**—At least in the short term, dietary supplementation with fish oil omega-3 fatty acids resulted in an improvement in weight bearing in dogs with osteoarthritis.

Dr. Cross' present address is Georgia Veterinary Specialists, 455 Abernathy Rd NE, Sandy Springs, GA 30328.

Supported by Hill's Pet Nutrition Inc.

Presented at the 15th Annual American College of Veterinary Surgeons Symposium, San Diego, October 2005.

The authors thank Dr. John Brejda for assistance with data analysis and interpretation.

Address correspondence to Dr. Hahn ([kevin\\_hahn@hillspet.com](mailto:kevin_hahn@hillspet.com)).