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Evaluation of the effect of limited food consumption on radiographic evidence of osteoarthritis in dogs.

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Abstract

OBJECTIVE:

To determine prevalence of radiographic evidence of osteoarthritis in 4 diarthrodial joints of dogs with restricted feed intake, compared with dogs without restricted feed intake.

DESIGN:

Paired feeding study.

ANIMALS:

48 Labrador Retrievers.

PROCEDURE:

Dogs in litters from 7 dams and 2 sires were paired by sex and weight within litters and randomly assigned to a control-fed group or a limit-fed group that received 25% less food than the control-fed group. Radiographic evaluation of prevalence and severity of osteoarthritis in the hip, shoulder, elbow, and stifle joints was performed when dogs were 8 years of age.

RESULTS:

Radiographic evidence of osteoarthritis that affected multiple joints was significantly more common in the control-fed group than in the limit-fed group. Prevalence of lesions in the hip joint was 15/22 in the control-fed group and 3/21 in the limit-fed group. Prevalence of lesions in the shoulder joint was 19/22 in the control-fed group and 12/21 in the limit-fed group; lesions in this joint were generally mild. Severity, but not prevalence, of osteoarthritis in the elbow joint was greater in the control-fed group than in the limit-fed group.

CONCLUSIONS AND CLINICAL RELEVANCE:

Prevalence and severity of osteoarthritis in several joints was less in dogs with long-term reduced food intake, compared with control dogs. Food intake is an environmental factor that may have a profound effect on development of osteoarthritis in dogs.

Comment in

- [Interested in dietary impact on osteoarthritis.](#) [J Am Vet Med Assoc. 2001]

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