

About Osteoarthritis

INCIDENCE

Osteoarthritis (OA) is a common cause of lameness in dogs. At UW Veterinary Care, the surgeons treat a large number of patients each year for this condition. In many dogs, OA is often secondary to developmental joint disease, such as elbow dysplasia or hip dysplasia.

CAUSES

OA in most dogs is not associated with traumatic injury to a joint. OA is most often found secondary to specific types of developmental joint disease. Most common developmental joint diseases in the dog have a genetic component. Inflammation within the diseased joint also contributes to progressive degeneration over time, with loss of the articular cartilage lining the joint surface.

CLINICAL SIGNS

Poor mobility and lameness are the main clinical signs. Affected dogs may have swollen and stiff joints. Pain on range-of-motion may also be evident. Radiographs are often used to confirm arthritic degeneration, such as the hips (see below).



TREATMENT OPTIONS

CONSERVATIVE THERAPY

Conservative treatment is often recommended to control joint pain and perhaps limit progression of OA over time. Conservative treatment typically consists of weight control, exercise restriction, and use of pain-relieving drug treatment. Non-steroidal anti-inflammatory drugs (NSAIDs) are most commonly used.

SURGICAL TREATMENT

If dogs are severely affected with advanced arthritis, surgical treatment may be indicated. Arthrodesis or surgical fusion of a joint can be used as a treatment. Joint replacement surgery is also available in the dog, particularly for the hip joint.

FOOD SUPPLEMENTS

Several different types of food supplement have been studied as a treatment for OA. Glucosamine and chondroitin sulphate are widely used in dogs and human beings as dietary supplements or nutraceuticals. Omega-3-fatty acids are also used, particularly as part of a special joint-specific diet, such as Hills Prescription Diet J/D Canine Mobility or Purina J/M. For most food supplements there is a little scientific evidence that they are an effective treatment of OA in dogs.

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Dog Arthritis Nutraceutical



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*Making Strides Toward Better
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Nutraceutical Treatment of Dogs with Osteoarthritis (OA)

STUDY INFORMATION

BACKGROUND

OA is a common cause of lameness in dogs. Lameness is caused by a combination of joint pain and restricted range-of-motion. OA is a degenerative condition with an inflammatory component. A key feature of OA is loss of hyaline articular cartilage from the affected joint. Commonly, affected joints in the dog include the hip and knee. Many different types of medical treatment are available for patient management. In small animals, NSAIDs are most commonly used.

NUTRACEUTICAL FOOD SUPPLEMENTS

In addition to drug treatment, various types of food supplements have been evaluated as a nutraceutical treatment for canine OA. Examples of nutraceuticals include chondroitin sulphate, glucosamine, omega-3 fatty acids, undenatured type II collagen, hydrolyzed collagen, avocado and soybean unsaponifiables, gelatin hydrolysate, and green-lipped mussel powder. Evidence that these treatments are effective is mixed. There is a need to conduct high-quality clinical trials to establish whether or not a particular nutraceutical supplement is an effective treatment.

OA TREATMENT WITH TRIAL NUTRACEUTICAL

Treatment with a food supplement (nutraceutical or placebo) will be provided by mouth for 12 weeks and any effect on mobility will be determined.

STUDY DESIGN

This clinical trial involves four visits to the UW Veterinary Care hospital as a day patient. Dogs diagnosed with arthritis of a hind limb joint (hip or knee) are eligible to participate if decreased mobility is visually apparent. If knee arthritis from cruciate rupture is present, a stabilizing treatment must have been provided at least 12 months ago.

At the initial visit, patient mobility will be assessed with a force-plate and a patient exam. Radiographs of arthritic joints will be obtained under sedation. During a second visit, after 2 weeks, mobility will be re-assessed and food supplement treatment will be provided in the form of a palatable oral treat. While the dog is being treated, follow-up visits at 6 and 12 weeks will be scheduled to assess response to treatment. As this is a placebo-controlled trial, rescue treatment with a pain-relieving medication will be available for use during the study period.

WHY IS THIS RESEARCH IMPORTANT?

OA is a common problem in dogs. Over the long-term, drug treatment with NSAIDs can be associated with side-effects. Therefore, use of a nutraceutical food supplement is potentially advantageous, if it is confirmed that the treatment is effective at improving patient mobility. If the results of this pilot study are promising, our trial will be expanded into a full efficacy study.

CAN MY DOG PARTICIPATE IN THE STUDY?

INCLUSION CRITERIA

The dogs enrolled in this study must be diagnosed with OA of the hip or knee. If knee OA is secondary to cruciate rupture, a stabilizing treatment must have been provided at least 12 months ago.

IF YOUR DOG QUALIFIES FOR THE STUDY, WE WILL OBTAIN:

- Current radiographs of arthritic joints
- Questionnaire information on patient mobility
- Mobility data using a force-plate and an accelerometer.
- Blood samples to assess markers of OA and knee joint fluid, if knee OA is present

THE STUDY PROVIDES:

- Patient examination and radiographs to assess mobility
- Two-thirds of the dogs will receive a nutraceutical that may improve mobility
- \$150 at trial completion

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