

# Lameness In Dogs Factsheet

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### Causes of Lameness

There are many causes of lameness in dogs, such as:

1. abnormalities in the soft tissues (e.g. muscles, ligaments, tendons, nerves and connective tissues), and
2. those affecting hard tissues (e.g. bones and joints).

Lameness resulting from damage to the soft tissues may be difficult to diagnose, however rest is often all that your pet needs to recover. If lameness persists, and no abnormality is obvious when your pet is examined by your vet, then special imaging techniques can be used to look at the muscles, tendons, etc. These include ultrasound examinations, CAT scans, MRI scans, scintigraphy (looking for inflammation in the tissues) and EMGs (looking for abnormal muscle function).

Of more significance is damage to the joints, which can result in osteoarthritis. This is a degenerative disease characterized by joint pain, lameness, loss of joint cartilage and proliferation of new bone around the joint. This results in painful and restricted joint movement. There are many causes of osteoarthritis, trauma being a common one. An example is when a bone fracture extends through the joint surface, or when ligaments and other tissues that support joints are damaged causing joint instability. Other less common causes of arthritis include joint infections and immune mediated disease when the body starts attacking its own tissues (e.g. rheumatoid arthritis).

In older large breeds of dog, and in dogs that have been very athletic, osteoarthritis can be caused by simple "wear and tear". Unfortunately there is a growing

incidence of osteoarthritis in young animals especially affecting the larger breeds. This is caused by congenital and developmental problems affecting the joints. Examples of these problems include hip dysplasia (common in the Labrador, German Shepherd, and Rottweiler) and osteochondrosis dissecans (OCD), often affecting the shoulder and elbow, (common in the Labrador and Rottweiler). In these conditions normal stresses are being placed on abnormally developing joints. This results in lameness in dogs that are often less than one year of age.

### Diagnosis of Lameness In Dogs

A thorough physical examination performed by a veterinary surgeon is essential to identify the affected joint/s. High quality radiographs taken under general anaesthesia are important when looking for early subtle signs of joint disease. In some early cases of congenital joint disease the pet may be quite lame with minimal radiographic signs. Repeat radiographs may be advised after 6-8 weeks to look for radiographic signs of joint disease.

Other imaging techniques include CT and MRI scanning. These techniques will often require referral by your veterinary surgeon to a facility specialising in the use of such techniques.

Fluid can also be taken off the joint and analysed. This is called a joint tap and is especially useful in acutely inflamed joints.

A more invasive technique used to examine joints is called arthroscopy. With this procedure scopes are

placed directly into the joint through small stab incisions. These allow the operator to view the joint internally, and in certain cases to operate inside the joint. This technique is much less traumatic to the joint than making a large surgical incision, but is only available at a few specialist institutions and is not suitable for the management of all joints diseases.

### **Therapies for Osteoarthritis**

- \* Daily physical activity is important for maintaining muscle and joint function. However, it needs to be moderated with adequate periods of rest and the avoidance of over-extension of the affected joints.
- \* Weight control is very important for both the young and old dog with osteoarthritis. Special diets are available to help with this.
- \* Careful use of pain-killers and anti-inflammatories can help improve the quality of life of a pet. They also allow for increased mobility, which is important in maintaining joint function. Your vet can prescribe from any number of non-steroidal anti-inflammatory products, including Metacam, Ketofen, and Zenecarp. Unfortunately all non-steroidal products have the potential to cause adverse side effects and careful monitoring of the pet is important. Side effects include vomiting and diarrhoea, gastric ulceration and bleeding, and generalised bleeding tendencies.

\* A recently developed group of products termed “chondroprotective agents” are reported to reduce inflammation of the joint and to support or enhance the maintenance of articular cartilage. These products are promoted as providing a more natural approach for treating joint problems and avoid many of the side effects of anti-inflammatories. Because of their mechanism of action they tend to show a slower response than non-steroidal medications. Products available from your vet include Cartrophen (injectable), and several oral preparations.

\* Surgery can be beneficial in certain cases for relieving pain, increasing the range of motion, and correcting instability and deformities in the joints. In young animals with developmental problems it may be possible to re-align the joint or remove pieces of cartilage that have developed abnormally. In older animals replacement of certain joints is possible, eg total hip replacement, whilst other joints can be fused in order to relieve pain and increase the pet’s quality of life. Referral to veterinary surgeons with specialist training in these more advanced surgical procedures is recommended.

Questions regarding this or on any other veterinary related matter must be discussed with your veterinary surgeon. The information contained herein is of a general nature only and may not relate to the specific conditions exhibited by your pet. Specifics of each case must be discussed with your veterinary surgeon. For further information, fact-sheets for clients and articles for veterinary surgeons, contact <http://members.aol.com/opvet>