



BONE DISEASES OF PUPPIES AND GROWING DOGS

**I have a young dog with a lameness that has been present for several days.
Could this be serious?**

There are many causes of lameness. Most of these are relatively minor and are within the body's healing capability. However, there are also causes that are not self-limiting and, if not treated promptly, may result in permanent lameness and/or arthritis. Both small and large breeds of dogs have several bone diseases that occur during the period of rapid growth (up to 2 years of age). To minimise the likelihood of permanent lameness, we recommend an accurate diagnosis if lameness lasts more than 2 weeks. Although in some cases diagnosis is obvious without x-rays, (radiographs) radiography is necessary in order to ascertain the extent of the problem and decide on the best method of repair. It is usual not only to radiograph the affected limb(s) but also the normal leg. This allows the veterinarian to use the normal leg's appearance for comparative purposes. Several x-rays are usually necessary in order to build up an accurate picture of the problem and heavy sedation or a short-acting anaesthetic will be necessary in order to obtain radiographs of good diagnostic quality.

What diseases are likely?

The following diseases will be considered as we radiograph your dog:

- 1. Hip Dysplasia:** an improper formation of the hip joint(s). This is a ball and socket joint. Hip dysplasia results in the ball not being round, the socket not being deep, and the two not fitting together well. Hip dysplasia has several contributing causes, but a primary cause is genetic. A dog of the high-risk breeds for hip dysplasia should not be bred before radiographs of the hips are taken and a score is obtained under an Accredited Hip Dysplasia scheme. This involves your own veterinary surgeon taking the x-rays which have to have the Kennel Club registration number photographed on to the plates and these are then forwarded, together with the appropriate fee, to the appropriate Veterinary Association and a panel of scrutineers examine the x-rays and score them. The lower the score the better the hips. The worst possible score that could be obtained would be 53 for each hip making a total of 106. Since in some hip dysplasia prone breeds it is difficult to select animals that are free from the disease, the aim is to attempt to always breed with an animal with a lower score. There are several choices of treatment depending on the severity. Some involve medication; some require surgery.

2. **Elbow Dysplasia:** a lack of fusion of the top of the ulna at the rear point of the elbow. This is more properly termed ununited anconeal process. When this part of the ulna does not fuse, the joint is unstable and is quickly subject to arthritis. Treatment often involves surgery in order to avoid the early onset of arthritic changes within the joint.
3. **Fractured Coronoid Process:** the fracture of a small process (protrusion) on the radius within the elbow joint. When this process fractures, pain and joint instability result. Unless surgery is done promptly after the fracture occurs, return to normal use of the leg is unlikely.
4. **Ununited Anconeal Process:** causes pain in the elbow joint when a growth plate at the top of the ulna fails to close.
5. **Panosteitis:** an inflammation on the surface of the long bones. This is also termed “long bone” or “growing pains”. This may occur in more than one bone at a time and may cause lameness in one bone or leg and then another. It is self-limiting but may recur until rapid growth is over. The pain may be relieved with several types of medication.
6. **Osteochondritis dissecans (OCD):** a defect in the smooth cartilage surface within one or more of several joints. It may affect the shoulder (most commonly), the elbow, the hip, the knee, or the stifle. Some of these defects may heal with confinement of the dog for several weeks. However, most do not and a few may result in a piece of cartilage breaking off and floating freely in the joint. This disease causes pain which varies in its severity. It is best treated with surgery to remove the defective cartilage.
7. **Hypertrophic Osteodystrophy (HOD) / Metaphyseal Osteopathy (MO):** an inflammation in the growth plates of the long bones. It usually causes swelling and pain of the bones, which may lead to fever and loss of appetite. It is self-limiting in most dogs with no permanent damage. However, some dogs may suffer sufficiently severe damage to the growth plates that leg deformities can occur. Treatment is with medication to relieve the pain and suppress the inflammation.
8. **Ricketts:** although rare due to modern dietary standards, can be a cause of lameness in dogs on diets that are low in calcium and vitamin D and high in phosphorus.
9. **Calcium deficiency:** especially in rapidly growing puppies of large breeds. Their bones are thin and easily traumatised, causing pain. The bones fracture easily.
10. **Growth Plate trauma:** can cause shortening or bending of the growing bone and requires early surgical correction if the dog has a lot of growing left to do.
11. **Avascular necrosis:** a defect in the blood supply to the femoral neck, which causes collapse of the femoral neck in young small breed dogs.

Although these are the most common causes of lameness in young dogs, there are many others eg osteomyelitis, congenital hypothyroidism and dwarfism.

***Disclaimer:** This information is of a general nature only, and must not be used as veterinary advice except where directed by your veterinarian. Hall Veterinary Surgery does not warrant the suitability of this information for specific cases. If your animal is unwell or you want to act on this information, please contact us on 6230 2223.*