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BONE DISEASES OF GROWING DOGS

I have a young dog that has been limping for several days. Could this be serious?

There are many causes of limping and lameness in young dogs. Most of these are relatively minor and will resolve without medical or surgical intervention. However, there are also causes that are more serious and, if not treated promptly, may result in permanent lameness and/or arthritis. The large breeds of dogs (i.e., whose adult weight is over 60 pounds) have several bone diseases that occur during the period of rapid growth (up to 2 years of age). Because of the possibility of permanent lameness, we recommend an accurate diagnosis if lameness lasts more than several weeks. X-rays are performed to diagnose the cause of lameness. Several radiographs are often necessary in order to get an accurate look at various bones and joints. In most cases, this will require a short-acting anesthetic in order to get the positioning that is necessary.

What diseases are likely?

The following diseases are common causes of lameness in growing puppies:

Rear legs only

- 1) **Hip Dysplasia** is an improper formation of the hip joint(s). The hip joint 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 properly. Hip dysplasia has two common causes, genetic and diets. A dog of the high-risk breeds for hip dysplasia should not be bred before radiographs of the hips are taken. Large-breed puppies should be fed a special diet and not overfed to help reduce the risk of hip dysplasia.

Dogs with severe hip dysplasia have great difficulty going from a lying to a standing position and are in pain when they walk. Dogs with mild hip dysplasia may show no signs of lameness. However, as the dog ages it will usually experience difficulty rising and may be reluctant to run and play. There are several choices of treatment depending on the severity. Some dogs can be treated with medication while others will require surgery.

Front legs only

- 1) **Elbow Dysplasia** is a lack of fusion of the top of the ulna at the rear point of the elbow. This is more properly termed *united anconeal process*. When this part of the ulna does not fuse, the joint is unstable and is quickly subject to arthritis. Dogs with this disease are lame on the affected leg(s) and they may cry when the elbow is extended. Treatment requires surgery. The results are much better if surgery is done before secondary arthritis affects the joint(s).
- 2) **Fractured Coronoid Process** is the fracture of a small process (bony 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.

Front or rear legs

- 1) **Panosteitis** is 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.
- 2) **Osteochondrosis dissecans (OD or OCD)** is a defect in the smooth cartilage surface within one or more joints. It most commonly affects the shoulder joint but the elbow, hip, knee, or the stifle may also be involved. Some of these defects may heal with strict rest and restriction of activity for several weeks. Most cases of OCD result in a piece of cartilage breaking off and floating freely in the joint. This causes pain, which varies from mild, intermittent limping to intense, constant pain. Surgery to remove the defective cartilage is the recommended treatment in this case.
- 3) **Hypertrophic Osteodystrophy (HOD)** is inflammation in the growth plates of the long bones. It usually causes swelling and pain in the joints, 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 permanent damage to the growth plates resulting in deformed legs. Treatment is with medication to relieve the pain and suppress the inflammation.