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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?

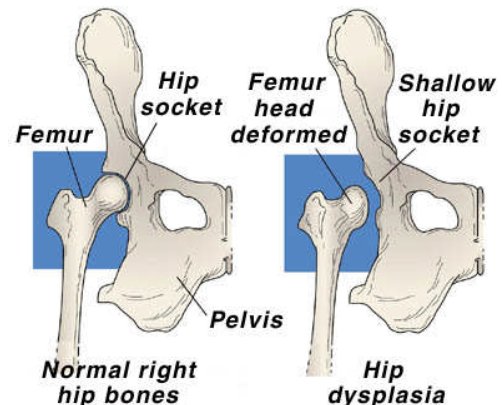
There are many causes of limping and lameness in young dogs. Most of these are relatively minor and will resolve without medical or surgical intervention. However, there are also causes that are more serious and, if not treated promptly, may result in permanent lameness or arthritis. The large breeds of dogs (typically dogs whose adult weight is over sixty pounds) have several bone diseases that occur during the period of rapid growth (up to two years of age).

Because of the possibility of permanent lameness, we recommend an accurate diagnosis if lameness lasts more than two weeks. X-rays are usually performed to diagnose the cause of lameness. Several radiographs are usually necessary in order to get an accurate assessment of various bones and joints. In most cases, this will require a short-acting anesthetic or sedative in order to achieve the positioning that is necessary for diagnostic radiographs.

What diseases are likely in a young dog?

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

Rear legs only



Hip Dysplasia is an improper formation of the hip joint(s). The hip joint is a “ball and socket” joint. During growth, both the “ball” (head of the femur) and the “socket” (acetabulum) must grow at equal rates. If this uniform growth does not occur, the result is that the ball and socket do not articulate or fit together properly and laxity or looseness results. Hip dysplasia has a hereditary component to it, and is seen much more frequently in large-breed dogs such as golden and Labrador retrievers, mastiffs, Rottweilers, and so forth. To decrease the incidence of hip dysplasia in future generations, no dog that is in a high risk breed should be bred until radiographs of its hips have been taken. Recent research suggests that there may be a correlation to the type of diet being fed. Large breed puppies should be fed a special large-breed puppy food for at least their first year of life.

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 develop secondary arthritis. 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 (one of the bones of the forearm) 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 or legs 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.

2) Fractured Coronoid Process is the fracture of a small process or bony protrusion on the radius (the other bone of the forearm) 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 called "long bone pain" or "growing pains." This may occur in more than one bone at a time and may cause a "shifting" lameness that goes from one bone or leg to 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 in the joint (called a "joint mouse"). This causes pain, which varies from mild, intermittent limping to intense, constant pain. Surgery to remove the defective piece of 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.