



Normal Hips



Hip dysplasia in a young dog



Arthritis from hip dysplasia

Hip Dysplasia and Arthritis in Dogs

Hip dysplasia is perhaps the most common inherited defect in dogs. Simply defined, it is a looseness of the ligaments of the hip joint holding the ball of the femoral head into the socket (acetabulum) of the pelvis. The condition is widespread and is especially common in the sporting breeds. Controlling this painful and debilitating condition has been the frustration of dog owners and veterinarians alike.

Hip dysplasia is not a congenital disease--the dog is not *born* with dysplastic hips. The syndrome begins when the skeleton grows too rapidly and exceeds the strength of the surrounding musculature. The muscles and ligaments are then unable to maintain the femoral head (ball) into the acetabulum (socket joint of the pelvis). The syndrome occurs primarily within the first 4-10 months of life and multiple factors play a role in its development. The result is a dislocation of the head of the femur. The acetabulum then develops improperly and becomes shallow. With the femoral head in a dislocated position, its cartilage covering is subjected to wear and tear. This then leads to variable degrees of arthritis.

Clinical Signs

It is important to realize that the severity of hip dysplasia does not always correlate with the clinical signs exhibited by an affected dog. Signs may range from no apparent symptoms to a pronounced lameness and disability. Some dogs are incredibly stoic and do not show overt signs of pain. Subtle indications of pain are easily overlooked by owners. They include:

- Waddling or swaying type of gait
- Morning stiffness that eventually dissipates as the dog “warms up”
- Difficulty in rising
- Change in temperament (grumpy)
- Development of a body shape in which the dog is thin in the rear quarters (from muscle atrophy) and barrel chested in front (from carrying more weight in the forelimbs)
- Bunny hopping in rear limbs at a run
- Lameness after prolonged exercise
- Reluctance to go up stairs or on wood floors

Diagnosis

The diagnosis of canine hip dysplasia is based upon:

- Palpation of the hips under anesthesia
- Clinical signs: swaggering gait, bunny hopping, pain on extension of hips, etc.
- A complete history and physical examination
- X-rays of the pelvis under anesthesia
- The size of your dog—the larger the dog, the more likely the dysplasia will manifest itself in arthritis and pain

The presence of hip dysplasia is highly suggested when, under anesthesia (when your dog is completely relaxed), the hips can be “popped” in and out. This indicates that the ligaments holding the hip joint in place are loose. Due to the complexity of this disease, it is not always an accurate predictor of how severe the subsequent arthritis and pain will be. Larger dogs would be expected to have more problems than lighter weight canines—though this does not always hold true.

If your dog has looseness in his/her hips, we usually recommend X-Rays to look at:

- The shape and depth of the acetabulum
- The shape, contour and position of the femoral head
- The presence of any arthritis

Prevention

Prevention involves purchasing dogs from reputable breeders who have had their breeding dogs checked for hip dysplasia. Both parents should have had their hips X-rayed and certified by the Orthopedic Foundation of America—“OFA-Certified” hips. This involves radiographing a breeding dog over the age of 2 years under anesthesia, and sending the films to veterinary radiologists at the OFA for evaluation. There is also a new technique, called the Penn-Hip, which can be performed on dogs as young as 8 weeks of age for evaluation and certification of hips. Do not accept an answer from a breeder that the parents have no lameness and therefore have no hip dysplasia. Nothing could be farther from the truth. As we’ve stated—clinical signs do not always correlate with the degree of hip dysplasia.

If you have a mixed breed dog of unknown parentage, don’t despair. Mixed breeds have “hybrid vigor”, meaning the genes come from vastly different lineage, and may result in a healthier dog with fewer inherited defects.

You can also help prevent your dog from developing hip dysplasia:

- If your dog is estimated to weigh more than 65# as an adult, feed him/her one of the good quality *large breed puppy foods*. These foods are lower in protein and a balanced calcium/phosphorus ratio in order slow growth.
- Keep your puppy a little lean while it is growing—overfeeding causes rapid growth which is a major contributor to hip dysplasia.
- Don’t let them get *overweight (at any age)!!* This places stress on the joint and contributes to the dislocation of the joint and accelerates arthritis formation.
- Exercise your dog *regularly* to strengthen the muscles that hold the hip joint in place.
- Physical Therapy (see below). We highly recommend a consult BEFORE your dog shows signs of pain and arthritis!

Treatment

The treatment of canine hip dysplasia may be medical, surgical, or a combination. It is important to remember that these dogs should not be used for breeding. While there is no “cure” for canine hip dysplasia, appropriate therapy and management can help patient’s live long, healthy, active lives.

Medical therapy

- **Above all--Keep your dog at a normal to slim weight. No medical treatment is as effective as this.**
- Enforced rest when your dog is experiencing discomfort.
- Glycoflex or Adequan is our next line of defense for hip dysplasia and arthritis. They contain glucosamine, MSM, chondroitin and other substances that have been shown to protect the underlying cartilage from erosion, increase joint fluid, and also has anti-inflammatory properties. In addition to relieving pain, they also slows the development of arthritis. Not all dogs respond to this treatment, though at least 80% of my clients report some improvement.

Many dogs have responded dramatically. There are several forms of Glycoflex with varying amounts and types of ingredients. There are also other products on the market with similar ingredients, including human supplements, but buyers beware—there are **many variations in quantity and quality of ingredients**.

- Adequan is the most effective glucosamine product on the market. If your dog is at high risk for arthritis (breed predilection, early signs of pain, diagnosed hip dysplasia at the time of spay/neuter, or by x-ray analysis), we highly recommend this product. It must be given by injection, which we can demonstrate for you. It's not as difficult as you think and is well worth the extra effort!
- Rimadyl, Deramaxx and Metacam are antiinflammatories/pain relievers which are very effective prescription medications similar to aspirin, though safer for your dog. We initially prescribe them for days when your dog is showing signs of pain. Do not wait until your dog is in severe pain—these are *more effective if used at the first sign of pain*, or when pain is anticipated, such as after a long walk or on cold days. Some dogs need pain relievers every day. We have many patients that have been on these medications on a daily basis for years without problems; however, they need to be monitored for potential liver and kidney effects. The main side effect is diarrhea. This may be avoided if you start at a lower dose and gradually bring them to the prescribed dose.
- **Daily exercise is also essential**—if only for a walk around the block! Mild to moderate daily exercise strengthens hip muscles, maintains flexibility, and promotes joint fluid production by the joint capsules.
- **Physical Therapy** cannot be overemphasized!! There is a wonderful PT facility and fitness center for dogs in the metro area. The therapists are certified health care professionals who can help your dog to restore function and decrease pain. We strongly encourage you to call them for a consult 303-762-7946 (SWIM). www.dog-swim.com. They have a pool, massage, electrical stimulation, etc. They can give you techniques and exercises to do at home as well.

Surgical Alternatives

Surgical intervention is usually reserved for those patients for whom medical therapy has been unsuccessful or in cases where the disease is quite advanced.

There is a procedure that can be performed in the growing dog if the diagnosis is made early in life (before 8-10 months). The triple pelvic osteotomy involves cutting the pelvic bones and rotating the acetabulum (socket joint) such that the femur fits in a more normal position. Approx cost: \$1,500-2,000.

In adult dogs, there are basically two surgical options:

1. Total hip replacement, in which the top of the femur and the acetabulum of the pelvis are replaced with composite material. Approx. cost: \$4,500.00.
2. For people without \$4,500 to spare, there is a procedure in which the head and neck of the femur is removed, and the bone in the hip socket is smoothed down. An adjacent muscle is then fit into the space—creating a muscular, pain free joint. The success of this procedure is often dependent on the size of the dog. Bigger dogs do not tend to adapt to this procedure as readily as small and medium size animals (<60#). Although this technique is considered a salvage procedure, it can lead to a permanent relief of osteoarthritic pain in successful cases.

There are, unfortunately, no easy answers for hip dysplasia, however there is a lot of ongoing research and we will keep everyone informed as new treatments come available.