

ORCHARD HILLS ANIMAL HOSPITAL

CLIENT EDUCATION SERIES

Hip Dysplasia in Dogs

Hip dysplasia is defined as a deformity of the coxofemoral (hip) joint that occurs during the growth period. Hip dysplasia is a hereditary condition that creates a poorly fitting hip joint. As the dog walks on this joint, arthritis will eventually develop, causing pain in the joint. The degree of lameness that occurs is usually dependent upon the extent of arthritic changes in the hip joint.

Breeds Affected

Most breeds of dogs can be affected with hip dysplasia although it is predominantly seen in the larger breeds of dogs, such as the German Shepherd, St. Bernard, Labrador Retriever, Pointers, and Setters. There is equal distribution of the disease between male and female dogs.

Clinical Signs

The typical clinical signs of hip dysplasia are rear leg pain, incoordination, and a reluctance to rise. Wasting of the large muscle groups in the rear limbs may eventually develop. Most owners report that the dog has had difficulty in rising from a lying position for a period of weeks or months; lameness and pain subsequently develop. Again, the severity of signs and progression of the disease usually correlate with the extent of arthritis in the joint. Clinical signs can occur as early as 4-6 weeks of age, but most dogs manifest the disease as a lameness around one to two years of age. Dogs with mild hip dysplasia and minimal arthritis may not become painful and lame until 6-10 years of age.

Diagnosis

Tentative diagnosis of hip dysplasia is made on the basis of history, breed, and clinical signs. A large breed dog that has been slow to rise for several months and now is lame is highly suspect for hip dysplasia; a dog that refuses to rise should also be considered a candidate. Because the clinical signs may mimic other diseases, final diagnosis of hip dysplasia can only be made on the basis of specific radiographic (x-ray) findings. To obtain the proper radiographs, dogs must be carefully positioned on the radiographic table. This procedure requires the use of a short-acting anesthetic. The radiographs are evaluated for abnormal shape of the hip joint and for degenerative changes (arthritis).



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Treatment

The degree of clinical signs and arthritic changes in the joints determine the specific approach to therapy. Treatment of hip dysplasia comes in two forms – surgical or non-surgical or both. The options are as follows:

I. Non Surgical Management of Dysplasia: There are several key components to managing your dog's dysplasia. The goal is to maximize his or her comfort level while slowing the progression of arthritis and deterioration of the affected joint(s).

- **Weight Control:** This is critical. Your pet should not be at all overweight. In fact, most canine surgeons and orthopedic specialists prefer they even be a little on the thin side. The concept here is the less weight your pet has to carry around on the bad joint, the less damage and pain occur. Consult with us about your pet's weight and a weight control program.
- **Joint Support:** Numerous products help promote and prolong the health of the hip joint. The goal of these products is to minimize inflammation, promote the health of the joint cartilage and synovial fluid, and slow down the progression of arthritis and degenerative joint disease. Products we highly recommend are:
 - **Glucosamine & Chondroitin Products:** While there is debate in human medicine as to whether these products help joints, there is ample evidence to support their positive effects in animals. Chondroitin helps promote cartilage health and prevent cartilage damage. Glucosamine promotes the health of synovial fluid – the “oil” that lubricates the joint. Products with glucosamine and chondroitin are available for humans as well as for pets. It is important to understand animal formulations are more effective for your pet. Many of these products also include other items beneficial to joints, like anti-oxidants. We have formulations at our hospital that we recommend.
 - **Fish Oils/Omega Fatty Acids:** Omega-3 and omega-6 fatty acids, when used together in the proper ratios, help derail the inflammatory cascade in your pet's dysplastic joint, improving comfort and slowing the development of arthritis. There are several pet formulations available. We firmly believe every pet with hip dysplasia should be on an appropriate fish oil product.
 - **Injections of PSGAGs (!):** Products like Adequan, injected intramuscularly (IM) on a regular schedule, improve joint health and your pet's comfort remarkably. By inhibiting degradative enzymes that are present during joint damage, they improve tissue flexibility, resistance to compression and resiliency. They also promote synovial fluid health.



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- **Anti-inflammatory drugs.** By controlling inflammation, these drugs control and minimize pain your pet feels in the affected joint. There are two general classes of anti-inflammatory drugs: steroids and non-steroidal anti-inflammatory drugs (NSAIDs). Steroids are generally avoided and used only in rare instances. There are several veterinary-approved NSAIDs on the market that we carry and recommend. Please ask our veterinarians about them.

****SPECIAL NOTE**** Over-the-Counter medications like aspirin, ibuprofen, and Tylenol are NSAIDs. Do not give these to your pet without advice from your veterinarian.

Extreme caution is advised when these drugs are given to dogs with a history of kidney disease or with marginal kidney function. Many of these drugs have an adverse effect on blood flow to the kidneys and can lead to kidney failure. This does not appear to be a concern if kidney function is normal. As alluded to above, dogs with a history of ulcers are also at risk for complications. Your veterinarian can determine the risk for your dog.

- **Physical Therapy:** Low-impact exercise like leash walks or swimming may be very beneficial for your pet. Consult with our veterinarians to discuss your pet's special circumstances.

2. **Surgery:** Surgery tends to be reserved for patients with severe hip dysplasia that is debilitating due to consistent pain or inability of the joint to function properly despite the non-surgical therapeutic modalities discussed above. There are four main procedures: pectineal myotomy (muscle cutting surgery), femoral head ostectomy (ball removal), triple osteotomy, and hip joint replacement.

Pectineal myotomy is a relatively minor procedure that involves cutting a small muscle that puts pressure on the hip joint. It results in no loss of leg function and gives good to excellent relief in 80-90% of dogs. If both hips are abnormal, both hips may be operated at the same time. The dog recovers from surgery in one to two days. However, this procedure does not stabilize the hip joint or prevent progression of arthritic changes. Within a few months to several years, pain and lameness will return. There is debate among surgical specialists this procedure may limit the effectiveness of other procedures, like the total hip replacement.

Femoral head ostectomy (FHO) is another choice. The hip joint is a ball and socket joint. FHO is the removal of the ball part of the joint. This gives excellent results in small dogs because a functional "false joint" forms. However, some large dogs may not form this "false joint" very well. This procedure is usually used in large dogs if arthritis is very severe, if the hip dislocates, or if the expense of the other procedures is prohibitive. This is called a "salvage" procedure because it is an attempt to "salvage" comfort and quality of life for your pet when other, more expensive procedures are not an option.



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Triple osteotomy is a procedure in which the pelvis is cut in three places around the hip joint. The bone is rotated to create better alignment with the femoral head (the ball). It is reattached so that the joint functions in a more normal fashion without looseness and pain. This should only be performed in a dog with no arthritic changes in the joint. It is an expensive procedure and is usually reserved for only young dogs.

Total Hip Replacement (THR), as is done in humans, is very common. A stainless steel ball and socket are attached to the pelvis and femur in place of the abnormal ones. It is another expensive procedure, but it may give many years of pain-free use of the hips. Although the intent is for the transplant to be permanent, the new joint may loosen after a period of time.

Breeding Dogs and Hip Dysplasia

Research has shown that the cause of hip dysplasia is related to a combination of genetic and environmental factors. The disease is known to be an inherited condition and the genetics of hip dysplasia are extremely complicated. In addition, environmental factors such as overfeeding and excessive exercise can predispose a dog (especially growing puppies) to developing hip dysplasia. Because the inheritance of the disease is so complicated, many questions remain regarding eradication of the disease.

Here are some practical suggestions:

1. Have your dog radiographed before breeding to be sure the hips are normal. If they are not, this dog should not be bred.
2. Consider a feeding program to slow growth. There is a growing body of evidence indicating that dogs that grow very rapidly are more likely to have hip dysplasia. Many authorities recommend feeding an adult-type food to puppies of high risk breeds so their growth is slower. They will still reach their full genetic body size, but just not as rapidly.
3. Avoid excessive exercise in a growing puppy. Any abnormality in the structure of the hip joint is magnified if excessive running and jumping occur. It is not necessary to treat your puppy as if were handicapped, but long sessions of running or chasing thrown objects can be detrimental to joints.

Hip Certification

The Orthopedic Foundation for Animals (O.F.A.) is an organization established for the purpose of standardizing the evaluation process of canine hip radiographs. The O.F.A. consists of a board



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of certified veterinary radiologists who are skilled in detecting hip dysplasia. If the radiographs submitted to the O.F.A. are declared normal, the dog is issued an O.F.A. certificate number indicating that it has normal hip confirmation. The O.F.A. requires that dogs must be a minimum of two years of age to be certified. Many breeders require that a dog must have an O.F.A. certificate before breeding is allowed.

Another hip evaluation program is called the PennHip method. Radiographs are made of the anesthetized dog in such a manner as to place outward force on the hip joints. This can reveal looseness in the joints that may elude detection by the more standard radiographic methods. It is also useful in identifying hip dysplasia in puppies as young as 4 months of age. Although any veterinarian can make the appropriate radiographs and submit them for O.F.A. certification, the PennHip method must be performed by a veterinarian specifically trained and certified in this procedure.

The radiographs must be imprinted with identification information about your dog at the time they are made and developed. This procedure creates a permanent mark on the radiograph. In addition, OFA now requires that certified dogs be permanently marked with either a tattoo or a microchip implant. The implant process is simple and very effective. A tiny microchip is implanted under your dog's skin through a special injection needle. A special scanner can detect these chips through the skin. They can identify the dog and its owner through its code number and a registry system. This is also an excellent means of getting lost dogs back home because the registry system is national in scope.

**As always, call us if you have any additional questions. We are glad to help!
360.835.2184**

