

Hip Dysplasia

The term hip dysplasia refers to an abnormal development of the hip joint in a juvenile dog. The hip is a ball and socket joint. In a normal joint the ball fits tightly into the socket. In the abnormal joint the fit is very loose. This abnormal development results in an unstable or loose joint that is able to subluxate or completely luxate (pop out of normal position). Over time the instability results in continued inflammation within the joint and the development of arthritis. Hip dysplasia is hereditary but also environmental (rapidly growing large breed puppies).

Hip dysplasia occurs more commonly in large breed dogs but can happen in any breed, even in cats. Breeds predisposed to hip dysplasia are: Labrador Retrievers, German Shepherds, Belgian Shepherds, Golden Retrievers, Rottweiler's, and St. Bernard's. The causes of hip dysplasia are multifactorial. This disease is inherited, and is controlled by multiple genes. However, there is also an environmental component to the disease. Rapid weight gain and growth contributes to the development of hip dysplasia in predisposed animals.

Hip dysplasia is not seen in undomesticated carnivores. One theory for this is wild animals caloric intake is restricted resulting in a slower rate of growth. One study evaluating the development of hip dysplasia assigned Labrador Retriever littermates to two populations. One population was allowed free choice food. The other population was fed the same diet but 25% fewer calories per day. Hips were evaluated with x-rays on a regular basis until 2 years of age. The population fed limited calories had significantly less incidence of hip dysplasia. To minimize the chance of hip dysplasia it is very important to feed large breed puppies a quality large breed puppy diet. These diets are designed to control the rate of growth in at risk dogs which can minimize rate of growth.

The signs of hip dysplasia are seen in two age groups. The first group is young puppies between 5-10 months of age who have joint laxity but no arthritis. This group may show signs of trouble rising in the hind legs, reluctance to jump up or climb stairs, bunny hopping when running. Many puppies with hip dysplasia do not show any signs during the development stage but then may develop signs later in life. The second group is a the mature or older dog that also may have difficulty rising, lameness that worsens with exercise, resists going for long walks, or have a wobbly gait.

Diagnosis of hip dysplasia and osteoarthritis of the hips is typically through X-rays. Interestingly severity of arthritis on x-rays does not correlate to severity of discomfort or pain. Some dogs with moderate to severe osteoarthritis on x-rays are not symptomatic. Dogs used for breeding purposes should have the hips evaluated for dysplasia prior to breeding. The Orthopedic Foundation for Animals will evaluate the x-rays of a dog. They will classify the hips to be normal with further classification of excellent, good or fair or they will classify them to be dysplastic with further classification of mild, moderate or severe.

Medical management or conservative treatment of hip dysplasia is divided into short term and long term phases. Dogs that are acutely painful or lame should be rested for 14 days. This allows the inflammation to resolve. During this phase stretching and passive range of motion are used to minimize muscle atrophy and maintain range of motion. Non-steroidal Anti-inflammatory drugs (NSAIDS) help to decrease inflammation and control pain. Many dogs will show improvement in 2-3 days and owners will start allowing them too much activity. This can result in re-injury and a prolonged recovery.

Long term management of hip dysplasia and osteoarthritis involves weight management, exercise and medications. Weight management is one of the most important aspects of pain management. Overweight dogs should be put on a calorie control diet and monitored closely until they are at a proper body condition. This can take 1-6 months depending on the dog's body condition. Large breed dogs with hip dysplasia should be kept on the thin side of normal body condition. This means they have good muscle mass but ribs are easily palpable with minimal tissue covering them. There is a misconception that a healthy dog is an overweight dog. Many owners are surprised when I go over body condition score and what I would like their dog to look like. Many owners with dogs of a healthy body condition report that people will tell them their dog is too skinny.

Exercise is also an important component to long term management. Regular leashed walks 2-3 times per day are one of the most effective and least costly treatments for osteoarthritis. **For those older or overweight dogs that are having a hard time getting up or moving much at all, water treadmill and an exercise program can be of great benefit.** Dr. Jason Kutz, DVM is a certified canine rehabilitation practitioner (CCRP). He can examine your dog and start water treadmill sessions and exercises which will allow increased mobility and weight loss.

Medications can be used to help control pain and inflammation. This will allow the patient to be more comfortable during exercise. There are several different medication categories, depending on the patient Dr. Kutz or your regular veterinarian can determine what is right for your dog. Glucosamine and chondroitin supplement is commonly used. There are good studies that prove significant benefit of these medications however many people feel their dog does better when they are used.

Surgery is also a treatment option and is usually reserved for dogs with osteoarthritis that are not improving with medical management. Total hip replacement is the most effective surgical option. Advantages are that a successful surgery is very effective at eliminating clinical signs and returning the patient to a good quality of life. The surgery is complicated and should be performed by an experienced surgeon to minimize the chance of failure. The other option is a femoral head ostectomy. This surgery involves removal of the femoral head/neck. This allows for fibrous tissue to fill in between the pelvis and femur resulting in a false joint. This procedure is better suited to patients less than 50 lbs but can be done in larger dogs. Caution should be taken when considering this procedure for juvenile or young dogs as they may improve with medical management.

If you have concerns your dog has hip dysplasia call Elk Meadow Animal Hospital at 303-674-7400 to schedule an appointment. You can visit www.elkmeadowvet.com for more information.