

# Walker Valley Veterinary Hospital

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## **LEGG-CALVE-PERTHES DISEASE (Avascular necrosis of the femoral head)**

Legg-Perthes disease has many “aliases:” Legg-Calve-Perthes disease, aseptic necrosis of the femoral head, and avascular necrosis of the femoral head. By any name, this is a disease producing lameness of the hip joint in young, small breed dogs. Toy breeds or terriers in the 5 to 8 month-old range are the most common patients, but a wide range of small breeds up to a year of age can be affected. The problem begins with an interruption in blood supply to the head of the femur, which is the “ball” portion of the hip’s “ball and socket joint.” Portions of the bony tissues, starved of their blood supply, begin to die and the overlying cartilage that lines the hip joint collapses. This leaves a painful, poorly-fitting hip joint. Initially, the dog will show pain and lameness. Some owners describe these dogs crying out when they stretch the limb or try to bear weight. As the lameness continues and the dog favors the leg, the muscles of the hip and thigh region will begin to shrink from lack of use.

Legg-Perthes disease usually involves only one hip but approximately 1 out of every 6 or 8 cases will involve both hips.

### *Breed Predilection*

Affenpinscher	Australian terrier	Bichon Frise
Boston terrier	Cairn terrier	Chihuahua
Cocker spaniel	Dachshund Pomeranian	Poodle
Pug	Schipperke	Scottish terrier
Shetland sheepdog	Small breed terriers	Toy breeds terriers
Welsh terrier	West highland white terrier	

### **What Causes Legg-Perthes Disease?**

While trauma to the hip can occasionally be the cause of the disruption in blood supply, most cases are thought to be genetically determined.

## **Diagnosis**

Diagnosis of this condition requires radiographs of the hips. In the early stages of the disease, the normal density of the bone in the femoral head may be diminished. With time, the top surface of the femoral head will become flattened and misshapen as the cartilage and underlying bone collapses.

## **Treatment**

Treating Legg-Perthes disease inevitably involves surgery. While your veterinarian may prescribe anti-inflammatory/pain relieving medications that can ease the pain, these almost never resolve the problem. The best solution is a surgical procedure called a femoral head and neck ostectomy (FHNO). The FHNO involves surgical removal of the diseased femoral head and neck that is the source of the pain. For most owners, the concept of the FHNO is a tough one to understand. After all, if the femoral head and neck, which constitutes half of the hip joint, are removed can the dog return to functional use of the leg? The answer is yes for two reasons. First, the major muscles surrounding the hip joint attach at points other than on the femoral head or neck, predominantly on the top of the femur, much like the supporting ropes are strung from the top of a tent pole. Removing the femoral head and neck does not interfere with these major supporting muscles in the hind leg. Second, with the removal of the painful femoral head and neck, the body forms a “false joint” consisting of a cushion of scar tissue between the cut edge and the hip socket. The result, especially in small to medium size dogs, is a pain-free return to good function in the vast majority of cases.

Post-operative monitoring of the patient is especially important to ensure that they begin to use the surgically repaired leg. Most dogs will begin to bear weight within the first 1 to 2 weeks after FHNO. This schedule can be delayed, especially if there has been significant muscle weakening leading up to the surgery. In many cases, your veterinarian will recommend a course of post-operative physiotherapy exercises to help strengthen the muscles. The best physiotherapy of all is having the dog walk and run on the leg and this should be encouraged as soon after surgery as possible.

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