HIP DYSPLASIA IN DOGS

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ADVANCED VETERINARY CARE

SYLVIA PARK • AUCKLAND

HIP DYSPLASIA IN DOGS

One of the most common causes of hind leg lameness in the dog is developmental problems of the hip joint. This disease leads to degenerative changes (osteoarthritis) in the joint including cartilage damage, bone spur (osteophyte) production, and loose bone fragments.

HIP JOINT FUNCTION

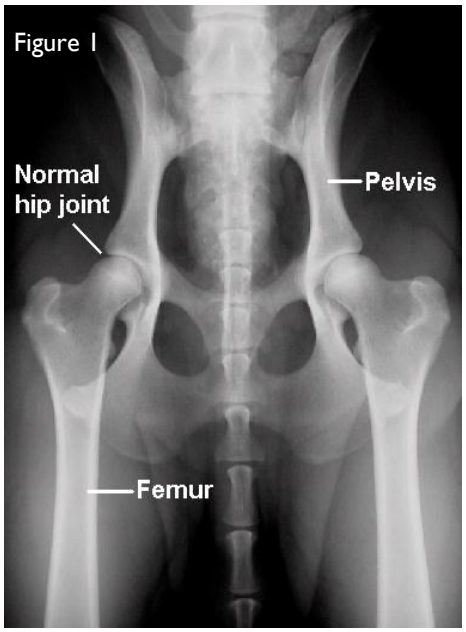
The hip joint of the dog is formed by two bones (the femur and pelvic bones {Figure 1}) that must fit together correctly for the joint to function normally. The top of the femur has a ball that fits into the socket of the pelvis. The muscles surrounding the joint help to maintain a tight joint. The ball should glide smoothly around the socket without excessive looseness.

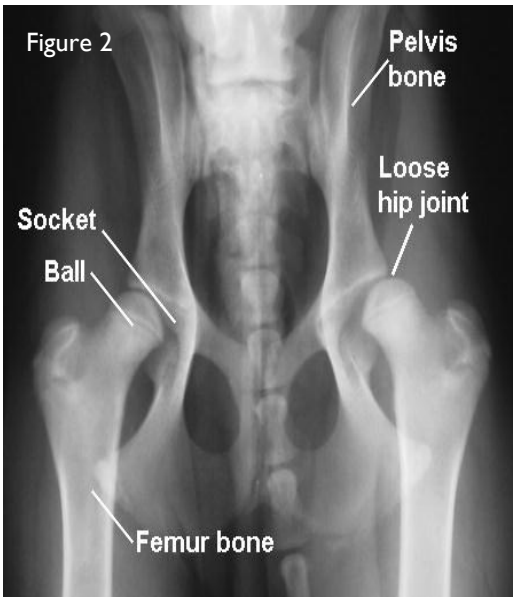
CAUSES OF HIP DYSPLASIA

Hip dysplasia is typically a developmental, inherited disease of young large-breed dogs. Several factors have been found to play a role in the abnormal development of the hip joint. In these dogs, during growth, excessive looseness develops in the hip due to an imbalance between the muscles and the mechanical forces acting on the joint (Figure 2). This imbalance causes extra stress to be placed on the cartilage and the prominent parts of the joint (the rim of the socket and the edges of the ball) during normal activity. The joint cartilage is damaged in this process leading to pain, inflammation, and further joint looseness. Arthritis develops as a result of loss of cartilage and subsequent bone damage (Figure 3).

Whilst hip dysplasia in dogs is predominantly a genetic condition, diet and excessive exercise contribute to the severity of symptoms seen. Limiting the intake of calories in young, growing dogs and avoiding sustained activity are helpful in reducing the signs of hip dysplasia.

For a number of years, hip scoring schemes (e.g. PennHIP) have been used to assess breeding dogs for signs of hip dysplasia. X-rays of the hips are taken under anaesthesia or heavy sedation and sent away to be graded by trained veterinarians. These schemes are helping to eradicate this condition but because even normal dogs can produce puppies with hip dysplasia the rate of hip improvement has been slow.





SYMPTOMS

Typically, affected dogs show hind leg lameness that can start as young as 5 months of age. The lameness may be intermittent and tends to improve with rest and get worse with exercise. Affected dogs are often reluctant to jump or rise and may resist climbing stairs. Not all dogs with hip dysplasia show symptoms.

DIAGNOSIS

A thorough orthopaedic and neurologic examination is performed evaluating the dog when walking and by manipulating all four limbs and the spine. Pain and joint looseness can frequently be felt in the affected joint. Sedation or anaesthesia and **X-rays** are necessary to show signs of joint looseness and arthritis. A **CT scan** will often be more effective in showing any bony changes.

MEDICAL TREATMENT

Some dogs with confirmed hip dysplasia will improve without surgery. The object of medical treatment is to control the symptoms. The dog should not be allowed to get overweight and exercise should be controlled. Cartilage-protecting agents (omega fatty acids, glucosamine, green-lipped mussel, fish oil) may help lubricate the joint and keep cartilage healthy. Generally, lifelong supplementation is necessary. Anti-inflammatory medication (aspirin-like drugs) can be helpful in reducing pain but should only be necessary occasionally. Medical treatment does not stop arthritis from continuing to develop.

SURGERY

Surgical treatment benefits dogs that do not adequately respond to medical treatment. The type of surgery differs between dogs depending on age, degree of arthritis, and hip looseness.

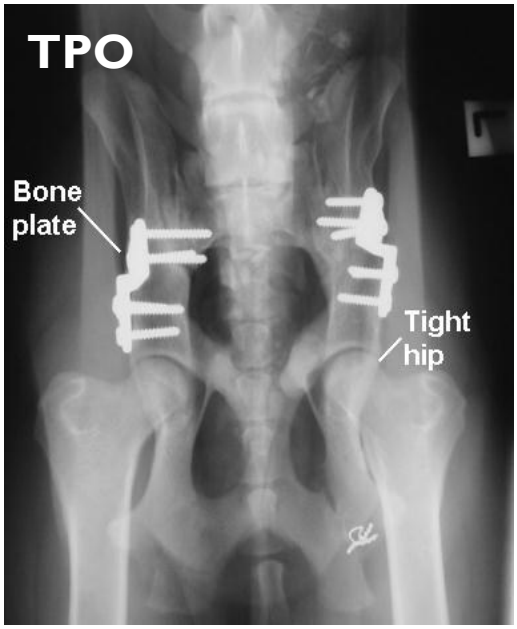
The triple pelvic osteotomy (TPO) can be performed in young dogs without arthritis. This procedure involves cutting the pelvis to rotate the socket thereby tightening the joint.

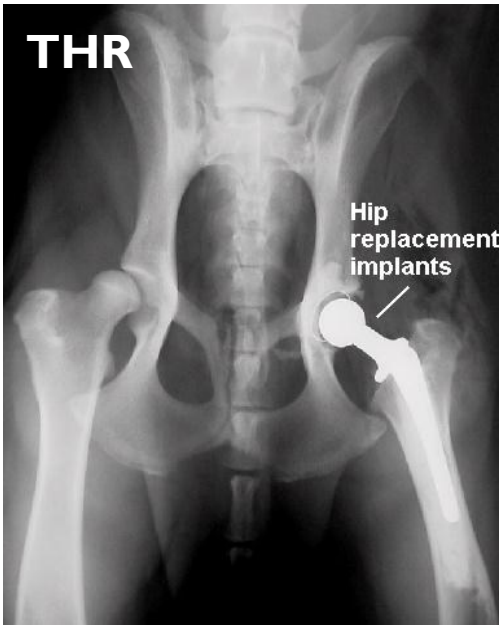
A total hip replacement (THR) can be performed to remove the arthritic hip joint and implant an artificial joint that is functional and pain-free.

If either of these procedures is not possible then a femoral head ostectomy (FHO) can be performed to remove the ball and reduce the arthritic pain.

RESULTS

Dogs that have had surgery generally show excellent results and can return to full activity 3-4 months after surgery.





POSTOPERATIVE CARE

EXERCISE CONTROL

To allow the bone to heal following the surgery, complete restriction of exercise is absolutely necessary for the first 6 weeks. Your dog can be walked on a lead for toileting. Light (5-15 minutes) lead walks can begin after 4 weeks.

SUTURE REMOVAL

The skin stitches need to be removed 10-14 days following surgery. This can be done by your regular veterinarian. Please call our hospital if there is any swelling, discharge or redness around the stitches.

MEDICATION

Most dogs are sent home with medication for additional pain relief. Sometimes, antibiotics are also dispensed. Give the medications as prescribed. Further pain relief can be prescribed if necessary.

PHYSIOTHERAPY

Physiotherapy is an important part of your dog's recovery. We strongly recommend a consultation with a recognized animal physiotherapist. Home-based physiotherapy should consist of a warm compress applied to the region of the stitches for 15 minutes followed by gentle massage of the muscles. This can be followed by gentle flexing and extending of the leg.
After the bone has healed, your dog can begin more active physiotherapy with regular controlled exercise. Running without leash control is recommended for only short periods. Regular swimming is an excellent way of providing active exercise without joint stress.

FURTHER X-RAYS

Your dog should return to our clinic for further X-rays about six weeks after surgery to evaluate the bone healing. The dog will require sedation to get good X-rays. Do not feed your dog on the morning of this visit. This assessment will incur an additional cost.

LONG-TERM TREATMENT

Some dogs will need long-term medication to control the arthritis already present in the elbow prior to the surgery. Cartilage-protecting agents (omega fatty acids, glucosamine, green-lipped mussel, fish oil) may help lubricate the joint and keep cartilage healthy. Generally, lifelong supplementation is necessary.
Dogs with hip dysplasia may benefit from feeding with Hill's Prescription Diet j/d Canine Mobility. This diet can improve your dog's signs of arthritis with a clinically proven combination of nutrients.
Anti-inflammatory medication (aspirin-like drugs) can be helpful in reducing pain but should only be necessary occasionally.

VETERINARY SPECIALISTS AUCKLAND, 1 Te Apunga Pl, Sylvia Park, Auckland
Phone: (09) 320 5645
Email: reception@vsnz.co.nz Website: www.vsahospital.co.nz