

Hip Dysplasia

Canine Hip Dysplasia (CHD) is a progressive, degenerative disease of the hip that is genetic in origin. It has been reported equally in males and females of all breeds, but is more common in large breed dogs. It most commonly affects both hips (92% of cases).

All dogs are born with normal hips (fig. 1)

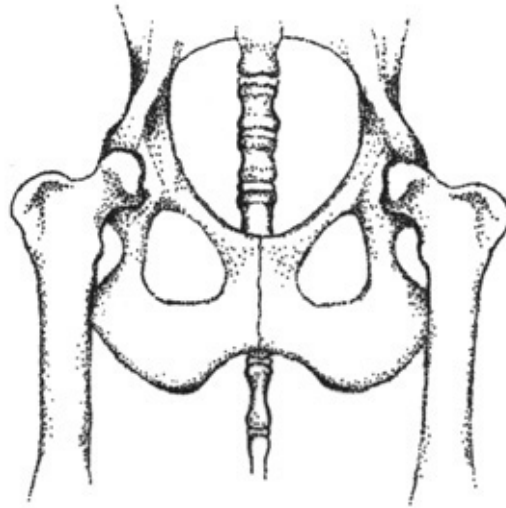


Fig. 1 Normal Hip Joint

Between 4 to 6 months of age, the dysplastic hip begins to loosen due to increased fluid in the joint. This results in the ball coming out of the socket and then getting "locked out" of the socket with scar tissue. As time passes, the constant grinding of the ball on the rim of the socket results in severe arthritis.

The loosening of the ball in the socket and the developing arthritis result in pain and rear limb stiffness which cause difficulty rising or walking and often a noticeable "bunny hopping" hind limb gait. These symptoms begin as early as 4 months or as late as 9 to 10 years of age, depending on the individual severity of the disease, as well as the dog's tolerance for pain.

Treatment

Treatment regimens can be either medical or surgical depending on the individual circumstances. Medical treatment usually involves rest, weight loss (if obese), analgesics and arthritis medication to symptomatically relieve pain. These treatments do not correct the source of pain or underlying problem.

Several surgical procedures are now available for correcting the various stages of Canine Hip Dysplasia.

Pelvic Osteotomy

In a young dog with little or no degenerative changes in the hip joint, Pelvic Osteotomy (fig 2) is effective in correcting the joint looseness. In this procedure, the pelvic bones are cut in three places and the surgeon redirects the hip socket so that the ball (femoral head) becomes more deeply seated inside. The pelvic bone is then fixed in its new position by a bone plate and screws. This eliminates hip instability and pain, allowing the hip to develop more normally.

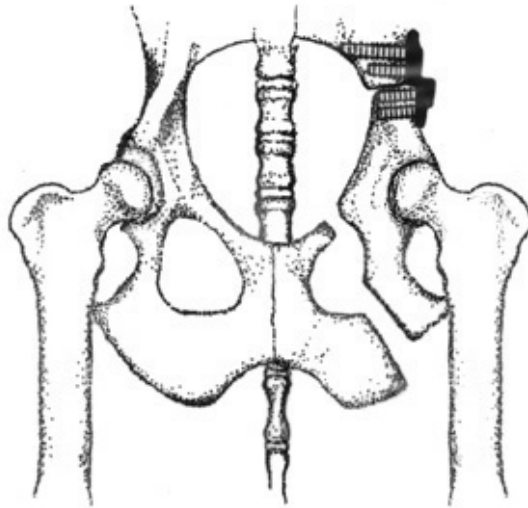


Fig. 2 Pelvic Osteotomy

Femoral Head and Neck Excision

If the hip joint (ball and socket) has become irreversibly damaged, a Pelvic Osteotomy would not benefit your pet. One result of the hip instability is cartilage deterioration and erosion. Cartilage covers the joint surface and serves many functions. It is very slick and has no nerves to feel pain. Once it has been ground away by dysplasia, the underlying bone of the joint and its pain receptors are exposed. The raw bone of the ball rubbing on the raw bone of the socket is one source of pain in this arthritic condition.

In these instances, removal of the femoral head and neck (the ball of the ball and socket) eliminates a source of pain (fig. 3). The dog's body reacts by forming a false joint with the hip being supported by surrounding muscles.

As you might imagine, hip function is somewhat compromised. Remember though, that your pet has four legs to walk on and that this procedure removes a significant amount of pain associated with hip arthritis.

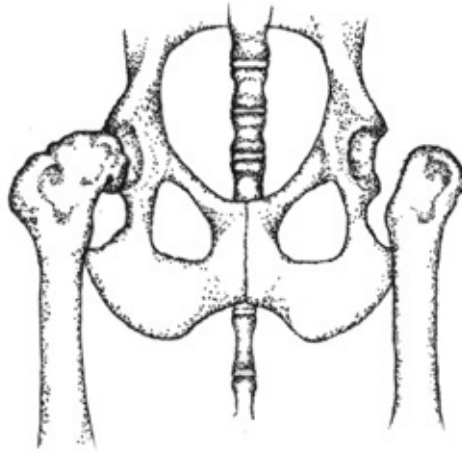


Fig. 3 Femoral Head & Neck Excision

Total Hip Replacement

This option (fig. 4) involves replacing the diseased hip joint with an artificial joint made of a high density polyethylene (socket) and stainless steel (ball). These components are held in place with bone cement. A newer technique of Total Hip Replacement involves the use of porous coated components that are held in place by surrounding bone ingrowth rather than by cement. Still new, this procedure may prove more advantageous and have fewer complications in the long term.

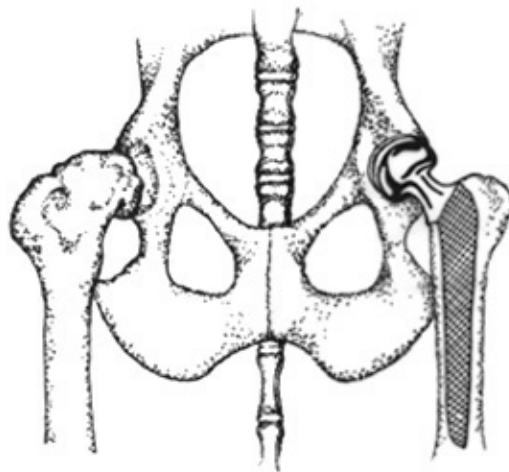


Fig. 4 Total Hip Replacement

Diagnosis

Radiographs are necessary to confirm the diagnosis and evaluate the degree of arthritis present. In the past, the Orthopedic Foundation of America (OFA) was the only recognized group to "certify" a dog being free of dysplasia. The OFA required that properly positioned radiographs



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be taken of dogs no younger than 2 years of age. Unfortunately, many of the surgeries that stabilize the hip and prevent dysplasia need to be performed before 12 months of age.

Actually, a diagnosis of hip dysplasia can now be made with 80% certainty at 4 months of age utilizing the newly developed **PennHIP Distraction Technique**. In performing this technique, the dog is placed on its back with its hind legs situated in a normal weight-bearing position. A safe, specially designed fulcrum-like device is applied between the legs to evaluate the degree of looseness in the hip. A higher degree of laxity indicates a greater chance of developing CHD.

As you can image, proper positioning is very important to adequately assess a dog's hips radiographically. Sedation or general anesthesia is often needed for the benefit of your pet as well as the people taking the radiographs.

The fee for a PennHIP study is comparable to that for OFA films. Consideration is given for litter evaluations. PennHIP films are performed by scheduled appointment.

VCA Animal Specialty Group is participating in a new national study of this technique which, by earlier evaluation and diagnosis, will hopefully result in a decreased incidence of hip dysplasia.

Evaluation

For an evaluation of your dog or further information about the diagnosis and treatment of CHD, please call VCA Animal Specialty Group.

Conclusion

Canine Hip Dysplasia is a serious problem facing veterinarians, dog breeders and pet owners alike. Few cases are exactly alike and careful evaluation must be considered by the pet owner and veterinarian prior to electing the proper method of treatment.

Early diagnosis is very important for the pet, pet owner and breeder. PennHIP distraction films allow accurate hip evaluation as early as 4 months of age, allowing plenty of time for surgery to prevent further hip deterioration.