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Information Brochures

Hip Dysplasia

Hip dysplasia means malformation of the hip joints. It is the most common orthopedic disease in dogs, and a similar problem occurs in cats but much less often. The cause of the disease is unknown, however, it is proven to be inherited and affected dogs should not be used for breeding. The malformed hip will eventually develop some degree of arthritis. It is impossible to predict how an individual dog will respond to the development of arthritis; in fact the severity of clinical problems often does not correlate with the severity of osteoarthritis. At least half of affected dogs will exhibit mild clinical signs or none at all, whereas others may become quite painful and have a significant disability. Dogs are remarkably competent at hiding the disability associated with dysplastic hips and it may not be apparent to the owner how seriously affected their dog really is.

Early signs that your dog may have hip dysplasia include:

- reluctance to rise and hind limb stiffness after exercise, or a general reluctance to exercise vigorously
- an abnormal stance (leaning forward) or gait (bunny-hopping)
- reluctance to climb or jump
- popping or snapping sounds when walking

Veterinary Evaluation

If you notice any of the above signs a veterinarian should examine your dog. In many instances a second opinion from a surgical specialist is useful. Evaluation will include a complete physical examination, detailed history, and X-rays of the pelvis. Sedation or anesthesia is often required to perform a complete physical examination or for obtaining the X-rays. Specialized X-rays may be required in circumstances where surgical options are being considered.

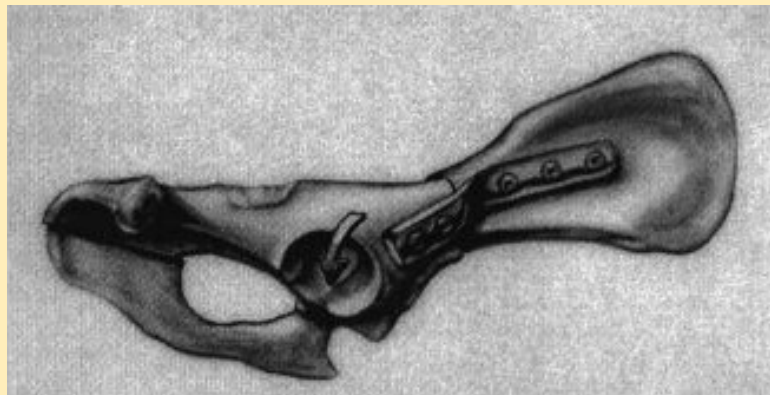
Treatment Options

Younger dogs (<2 years of age) may be treated conservatively (pain medication, weight loss if needed, exercise modification) or a surgical procedure may be advised. Complications can occur after any surgical procedure, and often the cost of the operation is significant. This is never an easy decision; obtaining opinions from several veterinarians or from people that have had the surgical procedure done in their dog are strongly advised. The two operations that are commonly performed in young dogs with hip dysplasia are the triple pelvic osteotomy (TPO) and the femoral head excision (FHO). Excision means removal.

The TPO is a major operation that involves cutting the pelvic bone in 3 locations and reorienting the pelvic segments so that the hip joint becomes stable.

Key points that clients should be aware of include:

- Only one hip is operated on at a time. Rarely, both hips are done during one anesthesia, but the possible complications generally outweigh the advantages of this approach.
- The dog must be young enough to benefit from the operation, and not already have significant arthritis, as this procedure is intended to prevent the development of arthritis. Each dog must be evaluated on an individual basis, but the ideal candidate is generally 6-9 months of age and has little or no arthritis evident on X-rays.
- The second operation is done approximately 3-5 weeks after the first one. The dog should be using the limb that was operated on first fairly well before doing the second



The figure illustrates the principle of rotating a portion of the pelvis to stabilize the hip joint

side.

- The dog absolutely must be kept restrained during the healing period (from the first operation until 7-8 weeks after the second operation). This means confinement to a home or kennel, short leash walks only, no running, no contact with other dogs, and no jumping. If the owner cannot be confident of being able to provide this postoperative care they should not have this operation done.
- Possible complications include loosening of the plate that holds the fragments together, fluid accumulation at the wound site (seroma), and wound infection. Although the prognosis is very good in properly selected patients, the operation cannot be guaranteed to prevent the development of osteoarthritis, and this does occur in some dogs.
- The surgical procedure will be scheduled after the diagnosis has been confirmed and the various options discussed with the client. In many cases, the dog can be left at the VMTH the day of the appointment, and the operation will be done the next day or the following day. In some cases the operation will have to be scheduled for a future date. The animal must be hospitalized on the day before the operation, in any case. Generally the dogs are kept for one to two days after the operation to permit recovery from anesthesia and to provide the surgical team the opportunity to assess the wound and the dog's ability to ambulate. This general policy applies to all of the surgical options that are described in this information sheet.



The figure illustrates the portion of bone that is removed during FHO

The FHO is a simpler operation (compared with TPO) that is intended to eliminate pain by preventing contact between the femur (the bone of the upper leg) and the pelvis. This is accomplished by removing the head portion of the femur and allowing the formation of a "false joint" between the pelvis and the femur. This procedure is done in humans (Girdlestone operation) and has been used for many years in dogs and cats. It is highly successful in cats and small dogs, and has been successful in larger dogs as well, but the result is not as predictable in larger dogs

We recommend FHO in cats and smaller dogs (< 40 pounds) but generally advise TPO in larger dogs. In some cases, however, the arthritis is too advanced or the costs associated with TPO are too great and FHO is performed in larger dogs.

Key points to remember regarding FHO:

- The recovery time is relatively prolonged; often it requires 4-6 months before the dog is using the leg well.
- Physical therapy is crucial to the success of the operation. Swimming, running, playing with other dogs, retrieving, etc are all encouraged starting 7-10 days after the operation.
- The overall prognosis is not as good in large dogs as it is in smaller dogs and in cats. Some dogs may never regain full use of the leg and normal muscle mass in the operated limb. Dogs having had the TPO will recover sooner and have a more consistently satisfactory prognosis.

In older dogs with hip dysplasia, conservative management is generally recommended initially, and many dogs will do well and only require periodic administration of pain-relieving medication. Those dogs that have continuing clinical signs of pain and disability can be managed using FHO or total hip replacement (THR). The advantages of THR include more rapid return of limb function and more consistent results. The disadvantages include more serious potential complications and the cost of THR (\$3900). Ninety to 95% of dogs will have normal hip function after THR, but potential complications include infection, loosening of the hip implant, and dislocation of the joint. Although both hips are typically affected with hip dysplasia, usually only one side requires hip replacement.

The table below summarizes the information regarding the different management strategies for dogs with hip dysplasia:

PROCEDURE	INDICATIONS	COSTS	ADVANTAGES	DISADVANTAGES
Conservative management	Dogs with minimal clinical signs	Medication costs can be significant; newer drugs	No surgical risks	Adverse effects of medication, less than optimal function
Triple pelvic osteotomy	Young dogs with minimal arthritis and significant clinical signs		Restores full hip function in appropriately selected patients	Major surgery with associated risks; expensive

<p>Femoral head excision</p>	<p>Smaller dogs and cats. Larger dogs in cases where other procedures are not available</p>	<p>See Orthopedic Procedure Price List</p>	<p>Economical, less complex operation</p>	<p>Major surgery with associated risks; less than full function; prolonged recovery</p>
<p>Total hip replacement</p>	<p>Mature dogs (>2 years of age) with significant clinical signs</p>		<p>Rapid return to full function in over 90% of patients operated on</p>	<p>Major surgery with associated risks; possible serious complications; expensive</p>

Appointments can be made with the Orthopedic Service by contacting the Admissions department of the Veterinary Medical Teaching Hospital at 530 752-1393.

Prices subject to change without notice.

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