



# Femoral Head Ostectomy

Mature dogs with hip dysplasia suffer from chronic, painful, degenerative joint disease (arthritis) (see related brochures on hip dysplasia and degenerative joint disease). The clinical signs can occur in one or both rear limbs but are usually bilateral (occurring in both legs). Lameness often appears suddenly after prolonged exercise or after a brisk walk. This is the result of tears or injuries to the abnormal joint tissue. The dog may be slow upon rising and may take a few minutes to warm out of joint stiffness. Occasionally, stifle (knee) ligaments are injured when the dog tries to protect the hip by overextending the stifle joint.

In the chronically affected hip, the joint capsule (which is normally paper thin) is markedly thickened. Subsequently, extension

of the hip becomes difficult. This results in shorter, choppy steps when the dog is running. Due to discomfort and pain, the dog sits rather than stands when he or she stops. When rising, he or she does so slowly and with some degree of difficulty. The dog may be reluctant to chase, jump, or run a long distance. Finally, when pain has restricted limb use for weeks to months, muscle atrophy and loss of muscular support in the rear limbs becomes severe. At the same time, weight is shifted to the forelimbs and the shoulder muscles enlarge.

Once the patient has radiographic (x-ray) evidence of degenerative arthritis (Figures 1a and 1b), it is no longer a candidate for a triple pelvic osteotomy. Over time, many of these dogs will become less responsive to analgesic medications and surgical therapy should be considered.

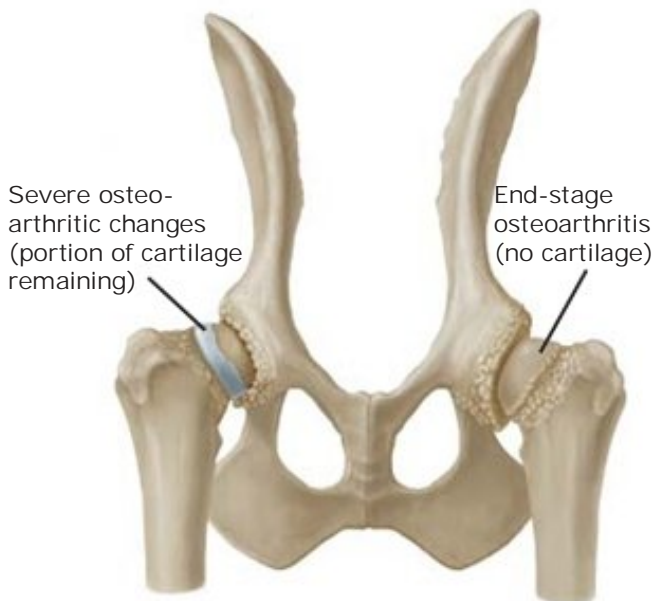
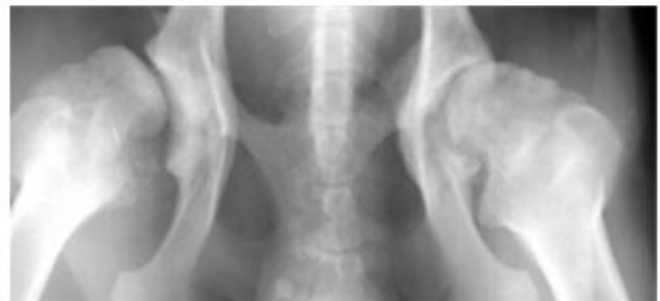


Figure 1a (left). View of severe osteoarthritic changes in right hip joint and abnormal left hip joint showing end-stage osteoarthritic changes

Figure 1b (below). X-ray view similar to Figure 1a: bilateral hip dysplasia with end-stage osteoarthritis



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Two procedures are available:

- Total hip replacement
- Femoral head and neck excision arthroplasty (femoral head ostectomy, FHO)

Total hip replacement (see separate brochure) has become the only treatment available that provides normal hip joint function once advanced arthritis is present.

Common problems that mimic hip dysplasia:

- Cauda equina syndrome (i.e. lower back problems) (see separate brochure)
- Cranial (anterior) cruciate ligament tears (see separate brochure)
- Other rear limb arthritic conditions

Traditionally, the signs of hip dysplasia are rarely extreme. Usually, only mild to moderate lameness is noted which may suddenly worsen. Dogs with a cranial (anterior) cruciate ligament tear typically hold the affected leg up (which is unusual with hip dysplasia). Patients with back (spinal) problems often scuff their toenails when walking, have an uncoordinated gait, and are weak in the rear limbs. The dog may have great pain if there is a disc rupture (sciatica) or may show no spinal pain in certain degenerative spinal cord conditions (German Shepherd myelopathy). In any case, the complete evaluation of a total hip replacement candidate will include an examination for these problems.

For those owners who cannot afford the cost of a total hip replacement or for those animals whose other medical conditions do not make them candidates for total hip replacement, femoral head excision (FHO) offers an alternative to relieve the severe pain often associated with a debilitating arthritic or traumatized hip. This procedure eliminates the "bone-to-bone" contact that causes pain.

Femoral head ostectomy removes the "ball" of the femur that normally fits in the socket of the pelvic bone (Figure 1). The resulting false joint is supported by the large muscle mass around the hip (Figure 2). Generally, a 70-80% return to normal function and a pain-free active life can be expected.

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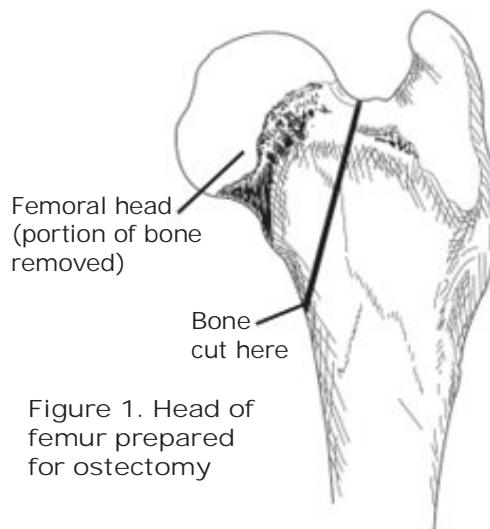
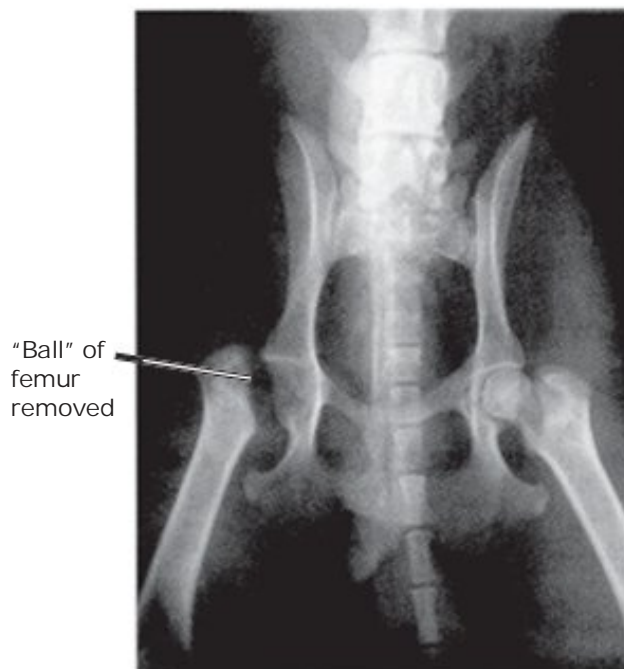


Figure 1. Head of femur prepared for ostectomy

Postsurgical results, however, are affected by a number of factors. In general, younger and smaller dogs (under thirty pounds) recover faster and more completely than older and larger dogs (over fifty pounds). Well muscled and active dogs will also usually have a quicker and more complete recovery than overweight, sedentary patients.

Most importantly, animals that undergo an aggressive rehabilitation program will have better function and less stiffness than those that are left alone to recover as best they can.

Figure 2. X-ray of hips showing femoral head ostectomy on right



## Postoperative Care

Your participation in the recovery process is critical. By using the following timetable, good ambulatory function can be attained within 6-8 weeks after surgery. Maximal function and comfort usually requires 6-10 months.

Post-operative week 1: Rest and T.L.C. (tender loving care) are most important. Light passive physical therapy (flexing and extending the hip) may be instituted to prevent adhesions and encourage a full range of motion. This simple early exercise may be uncomfortable to the dog and may require a muzzle and two people to complete.

Post-operative weeks 2-4: Slow, short leash walks around one to two blocks are ideal. The length and frequency of the walks should be increased every 3-4 days. Passive flexion and extension of the hip (pulling the hip back as far as allowed) at least 2-3 times daily for 1-2 minutes per session is also recommended. This will likely be uncomfortable or even painful with maximal hip extension (pulling back) but is critical to achieving a full range of motion and a more normal gait. Swimming is an excellent form of physical therapy and may begin after suture removal.

Post-operative weeks 5-8: Muscle and stamina are increased with walks or straight line jogs in tall grass, sand, or even uphill. Standing on the rear legs and jumping will extend the hip joint.

Post-operative weeks 8-12: Jogging and walks of substantial duration (1-2 miles) are to be encouraged depending on climate and

stamina. Jumping, stairs, and playing are permitted with certain limitations (supervised activity only).

Post-operative weeks 12-24: Until at least four months after surgery, continue to avoid slick floors and heavy activity with other dogs or children. Acrobatics and aggressive ball chasing should not be allowed yet as they will stress the joint area, incite pain, and actually cause the hip to be "protected" or guarded. By four to six months after surgery, the patient can usually return to unrestricted activity.

As with all orthopedic problems, good health and weight control are extremely important for a smooth recovery. Feed the same amount of food every day and weigh your dog once a week. If weight gain is noted, reduce the amount of food by 25-50%. Be certain that all members of the household are following the diet regimen. Thyroid levels should be evaluated if weight control has been or is a current problem.

As the animal progresses through the healing process, it is not unusual for him or her to stress or strain the muscle and the fibrous support of the hip area. The associated lameness is usually acute and lasts for only one to three days. Treatment consists of 48 to 72 hours of rest and anti-inflammatory medications.

Please feel free to call or schedule a recheck appointment if you have any questions or concerns during the postoperative rehabilitation.

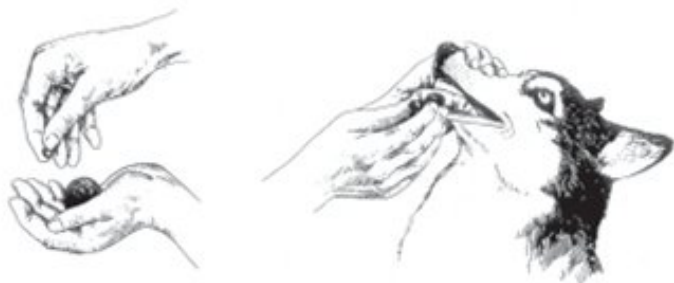
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Figure 3. Administering medication to a dog



### Medicating Your Dog

1. When administering medication in capsule or tablet form to your dog, you may find it much easier to simply place the medication in a small amount of food and offer it as a treat to your pet.

2. If your dog will not accept medication in the above mentioned fashion, it will be necessary for you to manually 'pill' your pet (Figure 3). Place your hand around your pet's upper jaw and gently apply pressure by pressing the lips against the teeth. Using your other hand, gently pull the lower jaw downward and place the medication in the very back of your pet's throat. By holding his/her muzzle and gently stroking the throat, you will stimulate your pet to swallow.

### Ambulation

During your pet's convalescence, it may be necessary to offer assistance with ambulation (walking). Two such methods are:

#### Towel Walking

Place a sheet or large towel under your pet's abdomen as a means of support, holding an end in either hand. Use a towel or sheet that is large enough to enable you to stand in an upright position (Figure 4).

Support your pet so that he/she is unable to bear full weight on the affected limb(s). Over the passage of time (usually two to three weeks), you will notice that your pet will be able to accommodate a greater percentage of its actual weight, requiring less assistance from you.

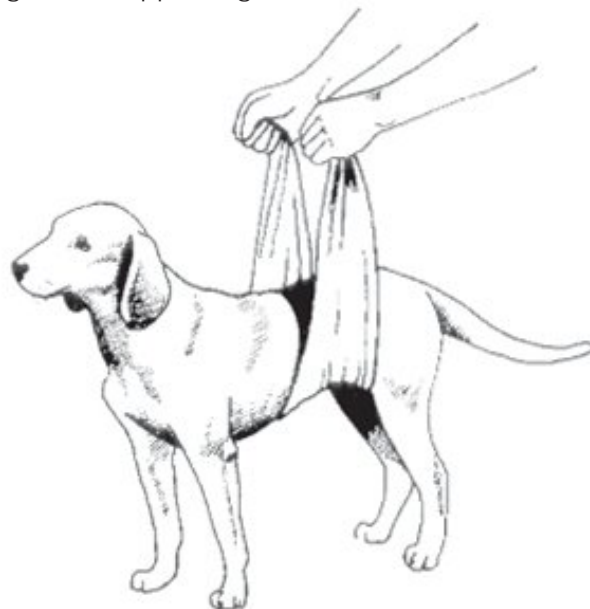
In the case of a male dog, you will need to reposition the towel/sheet so as not to impede urinary function. This would be done once the dog is outside and ready to urinate. Allow him to lean against you while urinating. This will provide stability for him while urinating.

#### Tail Walking

You may also assist your dog with ambulation by holding its tail in an upright manner. This serves as a 'rudder' and provides the needed stability for walking.

NOTE: Not all pets will tolerate this method. You will need to decide which method of assistance will be the most effective.

Figure 4. Supporting ambulation with a towel



Your pet is being discharged with a plastic cone-shaped collar called an Elizabethan or Buster Collar (Figure 5). This collar has been provided for use during the recuperation period and plays an important part in your pet's healing capabilities.

The collar is designed to restrict your pet's ability to reach his/her incision area or bandage(s). Licking at an incision area may result in open wounds (granulomas) that can be difficult to treat. This collar has been provided to protect these areas and also to insure that proper healing is allowed to take place.

Although your pet may exhibit some strange behavior (such as pawing at or rubbing the collar, or walking into stationary objects), after the initial placement of the collar this behavior will usually subside after approximately one to two hours time. Contrary to what one might think, it is not beneficial to remove this collar. To do so only increases the time needed to become accustomed to wearing it.

Be assured that this collar does not constrict breathing passages when worn. The animal will be able to eat, drink, sleep and eliminate while wearing this collar.

Figure 5. Elizabethan collar



Typically, it will only remain in place for the duration of time that the surgical site is sutured or an area is to remain bandaged. We do suggest that once your pet may have this collar removed that you keep it for future use. It may prove to be quite beneficial in the future for aid in treating minor skin irritations, "hot spots," and so forth.

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