

# Emergency, Specialty & Critical Care



Veterinary Medical Center of CNY 5841 Bridge Street, Suite 200 East Syracuse, New York 13057 (315) 446-7933

(315) 446-0920 fax

<u>www.vmccny.com</u> contact@vmccny.com



## Surgical Options for Canine Hip Dysplasia

### Total Hip Replacement (THR)

In this procedure, the hip joint is completely replaced with a prosthetic joint made of stainless steel and surgical grade polyethylene. This procedure provides the most normal long term limb function, although it is the most expensive and requires the greatest commitment from the owners regarding aftercare and postoperative rehabilitation.

Postoperative physical rehabilitation is absolutely necessary with THR. With appropriate rehabilitation, total hip replacement results in excellent return to normal pain free function unless complications occur. Complications after total hip replacement may include infection, implant failure, hip luxation, and fracture.

After total hip replacement, most patients feel much more comfortable right away and begin to use the leg very quickly. Many dogs rapidly become too active and must be strictly confined. Slippery surfaces, stairs, and interactions with other dogs and children should be avoided. A professionally designed physical rehabilitation program coupled with controlled exercise at home is essential for an optimal outcome after this surgery.

### Triple Pelvic Osteotomy (TPO)

Dogs less than one year of age with no arthritic changes (identified on x-rays) in the hip joint may be candidates for a Triple Pelvic Osteotomy (TPO). During this procedure, the pelvic bone is cut in three places and then rotated to create a more appropriate angle to stabilize and hold the femoral head in place. Surgical steel implants are placed to hold the remodeled bone in place, thus stabilizing the hip joint. This may provide increased stability and comfort for the dog. This procedure will not help any dog with advanced arthritic changes already present in the hip joint.

The incidence of complications after TPO surgery is low, and long term clinical (day to day) function is very good. Complications after TPO can include implant failure, restriction in ability to move the limb outward away from the body, and pelvic outlet narrowing.

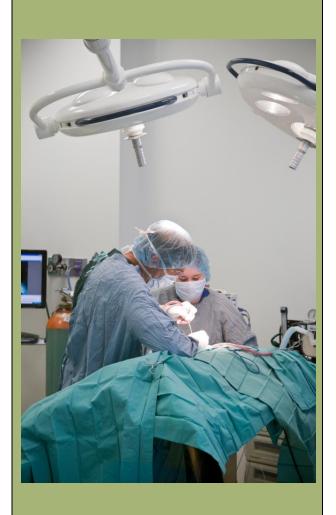
After a Triple Pelvic Osteotomy (TPO), activity must be restricted to leash exercise until the osteotomy sites (places where the bone was cut) are healed, generally around six weeks. Most patients are able to comfortably bear weight soon after surgery. These patients must be closely confined and supervised to prevent overuse of the leg during the healing period. The skin sutures or staples will need to be removed 10-14 days after surgery. Recheck appointments will be required in six weeks to assess ongoing progress.



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### Femoral Head Ostectomy (FHO)

This procedure reconstructs the hip joint. It is considered a "salvage" procedure for cases in which no other options are possible. The femoral head and neck ostectomy involves removal of the femoral portion of the hip joint. The goal is to eliminate the bone to bone contact in the joint, thereby reducing pain for the dog. Basically, the joint heals and creates a "false joint" with scar tissue. In most cases, this results in better overall quality of life for the dog.

Postoperative physical therapy is extremely important to the success of femoral head ostectomy. Overall function is usually improved when compared to the dog's preoperative condition, although smaller patients typically have a slightly better outcome with this procedure.

After femoral head ostectomy (FHO), patients are encouraged to use the limb as soon as possible. A professionally designed physical rehabilitation program coupled with controlled exercise at home is required to increase the range of motion of the hip. Physical rehabilitation is essential for an optimal outcome after this surgery. It may take up to 6 weeks or longer after surgery for some dogs to show improvement.

The skin sutures or staples will need to be removed 10 - 14 days after surgery. Recheck appointments will be required in six weeks to assess ongoing progress.

## Conservative Therapy

Conservative therapy using physical conditioning (rehabilitation) and use of supplements and medications may be considered in mild cases or for immature dogs. Immature dogs should be evaluated by a board certified veterinary surgeon to determine if they are or will be a candidate for Triple Pelvic Osteotomy (TPO). Many immature dogs may return to acceptable function (but not normal hip conformation) at maturity with conservative therapy. Some will require further surgical management later in life.

Mature dogs with mild hip dysplasia that do not show clinical signs do not require surgical treatment. These dogs should be kept slim and fit. Providing these dogs with consistent exercise is key, with the goal being to maintain appropriate muscle mass that will support the hips.

Some cases of intermittent lameness can be managed with a combination of non-steroidal anti-inflammatory medications and an exercise program. Non-steroidal anti-inflammatory medications formulated for humans are very dangerous for dogs. No anti-inflammatory medications (including aspirin!) should be given to dogs without a prescription and instructions from a veterinarian. Veterinary physical rehabilitation practitioners are extremely skilled at creating balanced, safe exercise plans for dogs that have very positive benefits for dogs.