

Total Hip Replacement (THR)

For over three decades, total hip replacement has been the gold standard treatment for dogs with severe hip dysplasia and/or osteoarthritis, especially when conservative measures like medication or rehabilitation therapy are no longer working.

A THR involves replacing the hip socket (acetabulum) and the ball (head) of the femur with prosthetic implants. These implants are made from specific metals, polyethylene plastic, and ceramics, each of which has been uniquely designed for dogs. More than 85,000 joint replacement procedures have been performed on dogs since 1989. The THR procedure has a 90–95% success rate for good to very good hip function for the rest of your pet's life.



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Hip dysplasia is the most common indication for a THR. It is a hereditary condition often occurring in medium to large breed dogs, where the hip joint develops looseness or laxity after birth. This laxity causes damage to the cartilage surface of the joint, which results in abnormal wearing and changes in the bones of the hip. The shape and fit of the bones and the joint change as osteoarthritis develops over time. These changes result in pain and loss of joint and limb function. The signs of hip dysplasia can be seen from a few months of age and often become more obvious with growth.

Such signs may include:

- > A “bunny-hop” gait
- > Stiffness or limping during or after exercise
- > Reluctance to jump, climb stairs, or get in and out of the car
- > Less active, reluctant to exercise, or gives up on activity quickly
- > Weight shift to forelimbs (noticed by large forelimb muscles and thin hind limb muscles)
- > Pain in the hip area. May lick or chew, vocalize if touched, resent people or other animals getting near hind limbs

While a physical exam by your primary care veterinarian may indicate hip dysplasia, X-rays of your dog's hips are necessary to provide a formal diagnosis. X-ray imaging also helps determine the extent and severity of the condition, which guides treatment.

What are the nonsurgical (conservative) options for treating hip issues?

If hip issues aren't severe, the nonsurgical options for treating them include:

- > **Weight optimization** to decrease stress on joints and lessen the inflammation associated with excess body fat
- > **Medications**, including NSAIDs, to reduce pain and inflammation
- > **Modifying exercise** to maintain activity and movement but not cause severe pain
- > **Joint supplements and injections** to help slow the progression of osteoarthritis and improve joint lubrication
- > **Rehabilitation therapy** to improve joint movement and flexibility, and limb function
- > **Acupuncture** may be helpful for decreasing pain

What are the surgical options for treating hip issues?

If your dog is a candidate for surgery, there are three common treatments that may be offered:

- > **1. Double or triple pelvic osteotomy (DPO/TPO):** In this procedure, the surgeon cuts the pelvic bone in two (DPO) or three (TPO) places and rotates the hip socket section to cover the top of the femur better. This decreases the joint laxity (looseness). These procedures are performed only in young dogs, usually less than 9–10 months of age, and in dogs with no evidence of hip arthritis. Due to the advancements in total hip replacement, these procedures are performed less and less frequently but can still be a good option in select cases.
- > **2. Femoral head and neck excision (FHNE):** The idea behind this procedure is to remove bone-to-bone contact across the hip joint in hopes of decreasing pain. The top portion of the femur (femoral head) is removed. The ball-and-socket hip joint becomes a muscular joint. The FHNE is referred to as a salvage procedure, reserved for when other treatments or surgical options aren't possible.
- > **3. Total Hip Replacement (THR):** As mentioned above, THR is considered the most effective surgical treatment for hip dysplasia, osteoarthritis, and other conditions that affect the hip joint. Specially designed implants replace the damaged or arthritic joint, enabling your dog to return to a pain-free and active lifestyle.

What should I expect after THR Surgery?

Your dog will typically be hospitalized 1-2 days after THR surgery. Dogs can often begin putting weight on their new hip on the day of surgery and can use their leg quite well within a couple of weeks – but just as with humans, a slow and gradual return to activity is key to the long-term success of the procedure.

Your dog will be on restricted activities (leash walks only, house confinement to a small, safe space when unsupervised, and separation from other housemates) for about 8 weeks after surgery. A gradual return to activities as healing progresses will be allowed after eight weeks. Most dogs are ready to resume regular exercise and activities after 12 weeks of recovery.

In most cases, the replaced hip will last for your dog's lifetime. In fact, studies show more than 90% of dogs have good to excellent function with THR – providing years of pain-free activity that otherwise wouldn't have been possible.

How do I find out more?

If your dog has been diagnosed with hip arthritis and your vet has suggested total hip replacement as an option, the next step is to book a referral consultation with the specialist surgical team at Melbourne Animal Specialist Hospital.

At the initial consultation we will review whether your dog is a good candidate for total hip replacement and answer any additional questions you may have, so we can plan the surgery and ensure the best outcome possible for your dog.

