



Micro & Nano Total Hip Replacement



“Meggie received a total hip replacement and was bearing weight the day after surgery. She returned to normal activity 8 weeks later. Now she has full use of her leg with no lameness.”

Dorothy Garza

Meggie’s Micro THR surgery was performed in January 2012

Frequently Asked Questions About THR

What is Micro Total Hip Replacement (THR)?

Micro THR is a surgical procedure for small dogs and cats in which the arthritic hip joint surfaces are replaced with a new prosthetic ball and socket. The prosthesis is designed to fit precisely and mimics the anatomy of the original joint. The arthritic joint is immediately pain free after a total hip replacement. Micro THR can be performed in dogs and cats that weigh approximately 6 to 25 pounds. Nano THR is an identical procedure however the implants have been designed for dogs and cats that typically weigh less than 5.5 pounds.

What are the indications for Micro THR?

Many indications for Micro THR exist, all of which cause hip joint pain. Arthritis secondary to hip dysplasia is the most common indication. Other indications include traumatic hip luxation that cannot be managed successfully on a consistent basis, hip fractures, developmental abnormalities such as avascular necrosis of the femoral head (also called Legg-Calvé-Perthes Disease), prior injuries, or anything else that is causing hip pain that is not responsive to more conservative treatment.

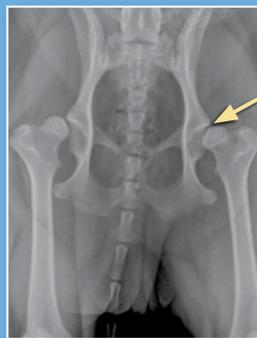
What are the clinical signs of hip pain?

The signs of hip pain may be subtle unless trauma has occurred. Signs can include reluctance to jump, climb stairs, slow to rise after sleeping, decreased interest in playing or exercise, and an abnormal gait. Dogs that are affected by hip pain most often become less active and less playful. They may be reluctant to go on walks and their gait may be a “bunny hop” at certain speeds.



Restoring Pets to Their Full Potential

Before Surgery



The femoral head (ball) is partially out of the joint, indicating joint laxity (looseness). Over time, this leads to cartilage damage and arthritis.

This radiograph of a canine pelvis immediately before surgery shows bilateral subluxation of the femoral heads (on both sides, ball partially out of the socket) and arthritis is present. At this stage, dogs require pain medication, such as non-steroidal anti-inflammatory drugs. If medication is ineffective, insufficient, or if required indefinitely, hip replacement is the best option to create a pain free joint with normal biomechanical function.

After Surgery



The cup on the pelvis side is not visible. A metal wire is embedded in the implant to allow visualization of its position.

The femoral head articulates inside the cup.

The metal femoral implant is inside the femur.

This radiograph is from the same dog one year following THR surgery. The dog is now pain free, walks and runs normally, is not medicated, and the arthritis will never return.

Three separate implants are in place. These three implants completely replace the ball-in-socket hip joint.

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My veterinarian said a Femoral Head Ostectomy (FHO) will provide similar results to a THR. Is that true?

Pain relief following FHO is unpredictable. Dogs with THR are expected to be pain-free for life. Research has shown objective evidence that dogs return to normal function in three to six months following THR.

FHO provides less predictable pain relief, a leg length discrepancy will be present, rehabilitation is prolonged, and the joint mechanics are permanently altered.

Dogs that have had successful THR surgery do not require long-term drug therapy. In addition to significant cost savings, this will eliminate the potential problem of long-term complications associated with chronic use of anti-inflammatory drugs.

What are the risks of Micro THR?

Micro THR, like all surgeries, carries a low risk of anesthesia and infection complications. Additional low risks include femur fracture and luxation of joint components. In very rare instances, the sciatic nerve can be injured during the surgery. Sciatic nerve problems are usually transient and recovery occurs within a few weeks. If complications arise, they can usually be resolved successfully. Complication risks should be discussed with your surgeon.

Are there reasons why my dog shouldn't have THR surgery?

THR is not performed on dogs with cancer or other major medical problems of higher priority. Dogs with lameness caused by problems other than hip pain including problems affecting the knee joint or spine are carefully evaluated before THR is recommended. Other serious orthopedic or neurological problems may take priority over a THR.

“Patches was only 9 months old when we learned he had hip dysplasia on both sides. Following staged THR, he now runs, jumps, climbs stairs, and swims like a dog that never had anything wrong. Patches is the happiest dog I know.” – David Finkelstein

Patches' THR surgeries were performed in January and March, 2010



“Nutmeg is a happy, active 6 year old. She enjoys climbing and jumping with our other three cats on a regular basis. Without surgery, she would have lived a life of pain, or no life at all.” – Valerie Martin

Nutmeg's THR surgeries were performed in December, 2008 and March, 2009

How common are Micro THRs in dogs and cats?

More than 800 Micro THR procedures have been performed since the product was commercialized in 2005. The first Micro THR performed on a dog was in 2005, and the first Micro THR performed on a cat was in 2006.

What is the typical success rate for Micro THR procedures?

The success rate is very high. More than 95% of the patients who receive a Micro THR are expected to use the new hip for the rest of their life.

How long will the implant last?

THR implants are expected to last a lifetime.

How long will my pet be in the hospital following Micro THR surgery?

Most dogs are released from the hospital one to three days after surgery. In rare instances, high-risk patients may be hospitalized for longer periods to provide additional assistance.

What is the typical recovery time for Micro THR and what is involved?

Most dogs and cats use their operated limb on the day of surgery. Most use the operated leg quite well within a couple of weeks; however activity should be supervised by the pet owner and limited to an indoor surface with good traction and a leash outdoors for approximately six weeks after surgery.

**For more information,
please contact your veterinary specialist:**



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BioMedtrix was founded in 1989 with the objective of designing, developing, and manufacturing state-of-the-art veterinary orthopedic implants. Our continuing mission is to provide quality in all aspects of product development, manufacturing, and customer service. Through research sponsorships and collaborations with the world's foremost surgeons, BioMedtrix continues to support the development of new programs to address veterinary needs.