

What are the benefits of a total hip replacement?

The main benefit of total hip replacement is the total relief of a painful hip joint. Dogs are very good at concealing pain, so once the affected hip joint is replaced, the dog's activity and attitude improve dramatically. Once the pain and inflammation associated with surgery resolve, many dogs can discontinue the daily pain medications that were previously required to control the signs of hip pain and arthritis. Total hip replacement is the best surgical option for an arthritic, painful hip, but it does carry some risk.

What are the risks of total hip replacement?

There are risks associated with any anesthesia and surgery. Your veterinarian or orthopedic surgeon will discuss these risks with you. The reported complication rate following total hip replacement in dogs is between 7 and 12%. With total hip replacement, it is critical that complications are identified and treated early. Complications can be minor, such as swelling at the incision site (seroma) or a low-grade infection of the skin surrounding the incision. However, **there are three major complications that can lead to failure of the hip replacement and more surgery.** These include:

Dislocation of the prosthesis (luxation).

Implant luxation occurs in approximately 2-4% of cases and usually occurs in the first 3 months after surgery. Dislocation of the implants may be corrected manually under anesthesia, but often a second surgery is required.

Infection of the prosthesis.

Infection of the prosthetic hip is a serious and



An orthopedic surgery team performing a total hip replacement at Texas A&M University's Veterinary Medical Teaching hospital.

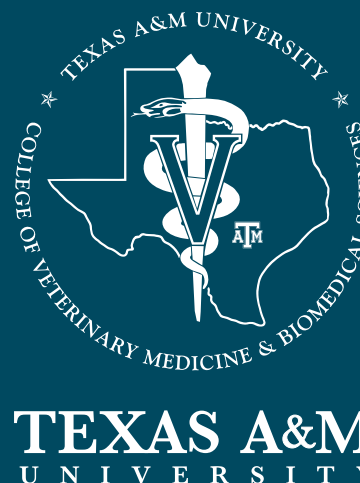
catastrophic problem. If the infection is limited to the skin and surgical wound, long-term antibiotics may control the problem. If the implants themselves become infected, removal of the entire hip replacement is required.

Loosening of the prosthesis.

Loosening can occur either due to low-grade infection or due to "aseptic loosening", a condition in which the dog's own body decides to reject the implant. Aseptic loosening occurs in 5-15% of cemented total hip replacements. If aseptic loosening develops, the prosthesis may have to be removed or replaced.

Is total hip replacement permanent?

In most dogs, the hip prosthesis will last for the dog's life. In fact, studies have shown that 90-95% of dogs have good to excellent function with this procedure. Hip replacement provides years of pain-free activity that would otherwise not have been possible. With the arrival and use of newer implants such as the cementless total hip (also known as press-fit or BFX), the future looks promising for dogs of all ages and sizes that need total hip replacement.



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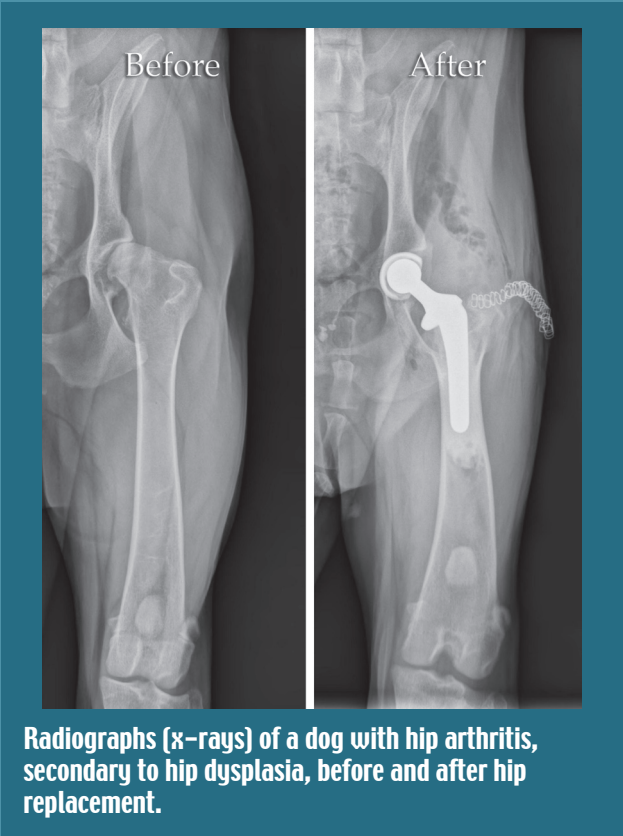
A **total hip replacement** is a procedure in which the orthopedic surgeon replaces a painful or damaged hip joint with an artificial one. The hip joint is a “**ball and socket**” joint made of two bones. These bones are partially removed and a metal and plastic artificial implant, or “**prosthesis,**” is placed to function like a normal hip. Removal of the affected hip joint eliminates the source of pain and lameness, thus allowing the patient to return to a normal level of activity. The new artificial hip provides a pain free joint substitute, and as such, limb function and activity level return to normal.

Why is total hip replacement necessary?

The most frequent indication for total hip replacement in dogs is the **relief of pain and lameness caused by severe arthritis secondary to hip dysplasia, or fractures (breaks) and dislocation of the bones that make up the hip joint.** Many dogs with arthritic and painful hips function fairly well with pain medication and exercise restriction, but when a painful joint is removed and replaced with a prosthesis, there is often a dramatic change in the patient’s activity, lameness, muscle mass, and personality.

How do I know if my dog needs a total hip replacement?

A complete **physical, orthopedic, and neurologic examination** will be performed by an orthopedic surgeon. A complete history of how and what your dog has been doing at home will be an important part of the decision making process. Common clues that a total hip replacement might be needed include hind limb lameness, reluctance to rise or jump, inability to exercise, pain after exercise, decreased activity, and loss of muscle mass.



Radiographs (x-rays) of a dog with hip arthritis, secondary to hip dysplasia, before and after hip replacement.

Are there reasons why my dog shouldn't have a total hip replacement?

Yes. If your dog **suffers from skin, ear, dental, or urinary infections, or shows evidence of other potential sources of weakness or lameness,** total hip replacement will not be performed. Other common causes of hind limb problems in dogs include rupture of the cranial cruciate ligament and neurologic problems such as intervertebral disk disease. Once these underlying problems are addressed and resolved, total hip replacement may again be considered. If a femoral head ostectomy (FHO) has already been performed, total hip replacement is extremely challenging and the chances of success are much lower. Finally, your dog must be finished growing (skeletally mature), so most dogs must be at least 10 months old before a hip replacement can be performed.

How does the total hip replacement procedure work?

Under general anesthesia, the surgeon removes the cartilage and bone that make up the hip joint. The diseased femoral head (the ball) is replaced with a metal prosthesis on a stem that fits inside the femur (thigh bone). The diseased part of the pelvis (socket) is replaced with a plastic or combination metal and plastic cup. The new prosthetic hip is designed to allow the joint to move in an identical manner to a normal hip. The prosthetic implants are very durable, and are anchored in place using either bone cement (cemented hip replacement) or by the dog’s own bone actually growing into the implants (cementless hip replacement). For more information on veterinary total hip implants, please visit **www.biomedtrix.com**.



Biomedtrix cementless (BFX) total hip replacement implants. Long-term implant stability is achieved as the patient’s bone grows into the porous portions of the implants. Photo courtesy of Biomedtrix.



Biomedtrix cemented (CFX) total hip replacement implants. Long-term implant stability is achieved by placing bone cement inside the bones, then securing the implants into this bed of bone cement. Photo courtesy of Biomedtrix.

Should I stop all of my dog's medications before surgery?

Medications prescribed to treat systemic problems such as **hypothyroidism** should not be stopped. Medications for hip pain (aspirin or other **non-steroidal anti-inflammatories**, like Rimadyl®) should be stopped 3-5 days before the initial exam. If your dog is taking **corticosteroids**, or **antibiotics**, these medications should be stopped for a minimum of 2 weeks prior to surgery.

Will surgery be performed the same day as the initial exam?

No. **Dogs undergoing evaluation for hip replacement must be carefully screened.** A thorough physical exam, labwork (complete blood count, serum chemistry, urinalysis and urine culture), and specialized x-rays must be completed before surgery is considered. If problems are detected it might indicate that your dog is not a good candidate for the surgery. If the initial tests reveal no abnormalities, surgery is usually scheduled for 1-2 days after the initial exam.

What about my dog's recovery and care after surgery?

Most dogs can stand and walk on the new prosthesis the day after surgery and are able to go home after 3-5 days of total hospitalization. However, total hip replacement patients must be confined to a crate and allowed outside only on a leash to eliminate for 3 months after surgery. While at home, care should be taken to avoid walking on slippery surfaces, and long flights of stairs are not allowed. After the first 4 weeks of crate confinement, SLOW, 5 minute leash walks are started 2-3 times a day. These leash walks are increased by 5 minutes each week, until leash walks are 20 minutes long. These 20 minute leash walks are continued for 4 additional weeks, at which time the dog is returned to Texas A&M for re-examination and x-rays.