Canine Total Hip Replacement

Many factors enter into the decision to have a total hip replacement performed on your pet. You may have questions about the procedure. The answers to the most commonly asked questions about total hip replacement follow. Much of this information is also available from the Biomedtrix website, www.biomedtrix.com. I hope that you find this information helpful and would be happy to answer any other questions you might have.

What is a total hip replacement (THR)?

Both the ball (head of the femur) and socket (acetabulum) of the hip joint are replaced with prosthetic implants. The new ball is made from a cobalt-chromium metal alloy and the new socket from ultra high molecular weight polyethylene plastic. In the new BFX biological fixation system, bone ingrowth into porous coatings on the implants holds the new hip in place. In the CFX system, bone cement is used to hold these implants in place.

Do you use a cementless or a cemented total hip replacement?

Due to its many advantages, I utilize the new BFX cementless system. Some dogs, though, due to conformation of their femurs, are not candidates for cementless and must be done utilizing the CFX system or a “hybrid” technique which uses a cemented CFX femoral stem and a press fit BFX socket. Most of the time, I can tell from pre-operative radiographs if your pet will need the hybrid system. In cemented hips we see approximately 30% loosening of the cup and stem at five years while the Cementless BFX hip implant will normally last the lifetime of your pet.

Can you tell from my dog’s x-rays (radiographs) if he/she is a good candidate for a THR?

Radiographs show abnormalities in the hip joint and are used for choosing the proper sized prosthesis but they are only part of the picture. To decide what is best for your pet, the surgeon must evaluate your pet’s history, perform a complete physical examination, evaluate your pet’s radiographs and interpret laboratory data. Many factors must be evaluated before your pet is considered a good total hip candidate.

How do you determine if my dog is a candidate for a THR?

A painful hip(s) that is affecting your dog’s comfort, locomotion, and activity level is the primary indication for a THR. Stiffness, lameness, and reluctance to exercise are often signs of problems. Your pet must be in good general health. There must be no other joint or bone problems, no nerve disease, and no other medical illnesses. Your dog must be skeletally mature; that is, he/she must be finished growing. Generally this occurs by 9 to 12 months of age. This is determined by x-rays of the hips. The size of the bones as determined by x-rays must be large enough to fit the available sizes of prosthesis. Total hips can generally be placed in dogs.
weighing 40 lbs or greater. A dog with arthritic hips that has pain-free, normal function is not a candidate for THR.

**What is the earliest age my dog can have this procedure done?**

In most dogs 9 months old is the earliest the procedure will be done. There are only a few giant breed dogs where it will be necessary to delay surgery for 1 or 2 months while the dog’s skeleton reaches maturity.

**What can I expect from this surgery?**

The goal of surgery is to return your pet to pain-free, mechanically sound, normal hip function. Generally, dogs are found to be more comfortable and have an improved quality of life. Many owners report that their pet can do things they have not done since they were a puppy. Increase in muscle mass, improved hip motion, and increased activity levels have been observed in most patients. Working dogs have returned to full activity.

**My dog is on medication. Should I stop giving this?**

Medications for health conditions such as diabetes or low thyroid function should not be stopped. Medications for hip pain should be stopped prior to the initial examination. Oral steroids (even for skin conditions) should be stopped one week before the exam, while other anti-inflammatory drugs including aspirin should be stopped 3 days before the exam.

**Where is the surgery performed?**

Unlike all of the other surgeries that I perform where I utilize your regular veterinarians operating room, this procedure has special needs that must be met to insure the best outcome for your pet with the least amount of complications. There is a group of three highly trained surgical nurses in addition to the surgeon that operate as a team. Digital radiology, a new technology that costs over sixty thousand dollars, must be utilized to obtain the highest quality films on a computer where a special program is used to find the best fitting implant for your pet’s unique bone structure. Animal Care Veterinary Hospital (ACVH) in Murfreesboro is our Total Hip Replacement Center where I perform all of my total hip replacement surgeries. Their phone number is 615-894-3434 if you need directions or want to set up an appointment for surgery.

**Is surgery performed the day of admission?**

No. Your pet must be carefully screened before surgery. This entails a complete history and physical examination. Special digital radiographs of the hips will be taken pre-operatively. A complete blood count, chemistry profile (if indicated), and urinalysis will be obtained to screen your dog for evidence of infection, anemia, or problems with internal organs before surgery is performed. Your pet’s skin will be carefully examined for signs of infection. Abnormalities noted on these examinations may indicate that your dog is not a good candidate for a THR. If the pre-operative evaluations reveal no abnormalities, surgery may then be planned depending upon the surgeon’s schedule.
How long will my pet stay in the hospital?

The routine length of hospitalization for patients with THR is 3 to 5 days, including the day of the initial exam.

What is the success rate of THR?

In general, 90-95% of dogs have had good to excellent function with this procedure. These patients have normal pain-free function, increased muscle mass, no limping, and increased activity.

What are the complications with THR surgery?

As with any surgery, total hip replacements have their own set of complications. These include dislocations, fractures of the femur, infection, loosening of the implant, and nerve damage. The risk of a complication occurring is relatively low (5-10%). Some complications can be successfully resolved, preserving the THR, while others may ultimately result in implant removal. In the unlikely event your dog does have a complication, it is best to have it dealt with by the surgeon who performed the surgery.

What is the post-operative care for my dog?

The post-operative care for your dog is critical. The surgical incision must be monitored daily for signs of infection (redness, swelling, or discharge). Your dog must be discouraged from licking the incision. This sometimes requires placement of a special collar to prevent your pet from reaching the incision. Your dog’s attitude and appetite should be monitored daily while the incision heals. The sutures may be removed 10-14 days after the surgery. This may be done by your regular veterinarian or at ACVH. An appointment is required for suture removal. The activity level of your pet must be strictly controlled for 12 weeks. For the first 6 weeks after surgery your dog should only be allowed outside, on a leash, for elimination purposes only (5-10 minutes, 3-4 times per day). Your pet should be immediately returned to the house afterwards. Inside the house your pet should avoid stairs and slippery floors. If your pet must go up and down some stairs, you should go with the pet using a leash or your hand on the collar to control the speed of your pet on the stairs. A sling under the belly may also help to control speed and avoid a fall. Good footing is important. Absolutely no running, jumping, or playing is allowed in the first 3 months after surgery. When your dog is not under your direct control, he/she should be kept confined to a crate or a small room (with no furniture to jump on and good footing).

Do I have to bring my animal back to ACVH for a check-up?

If possible I would like to reevaluate my patients at ACVH in case radiographs are needed. I understand that people may come to me from a distance, so if it is not convenient for you to return to ACVH, I ask that you have your veterinarian x-ray your dog at 3 months after surgery and annually thereafter. I also ask that those x-rays and a report on your pet’s function be sent to me so that I can record that information in your pet’s medical record.
Both of my dog’s hips are affected. Will both need to be replaced? How
do you decide which hip to replace?

Four out of 5 dogs (80%) with arthritis in both hip joints only require one side to be operated
upon to return them to a satisfactory and comfortable life. The decision on which hip to replace
is based on the owner’s observations, the physical examination findings, and the hip x-rays. Your
knowledge of your pet’s disability is important in making this decision. Dogs with successful
total hip replacement surgery usually have more muscle mass on their prosthesis side than their
opposite arthritic side. This allows them to “overuse” the pain free leg and protect the arthritic
side.

How much does the procedure cost?
At present (2006), the average cost ranges from $3,700 to $5,000. This includes the examination,
laboratory work, x-rays, hospitalization fees, anesthesia, surgical fees, surgical supplies, and the
cost of the implants. Charges for follow up evaluations are not included in this estimate. These
costs vary, depending on what needs to be done. A routine follow up at ACVH costs from $150
to $200 per visit.

How do I make an appointment for THR?
In many cases, your veterinarian will have recommended a THR. Your veterinarian may have
already consulted with me about your pet. After your veterinarian has referred you, an
appointment is made with the ACVH by calling them 615-894-3434 and they will coordinate
with my schedule to pick a time that is convenient for the entire team.

Is THR the only treatment available for my pet?
No. Besides THR, other possibilities for treatment of your pet include non-surgical therapy and
several other surgical options. Which treatment should be used on your pet depends on many
factors. The best treatment option will be discussed with you after I have taken a history,
evaluated x-rays, and completed an orthopedic examination of your pet.

It is hoped this has answered your questions about THR. If you do have other questions, please
be sure to ask them at the time of your appointment. Your veterinarian is welcome to call me to
discuss case management.
Image from http://biomedtrix.com