

## **TOTAL HIP REPLACEMENT IN THE DOG**

Pre-operative client information sheet

Total hip Replacement is an operation for alleviating painful conditions of the hip joint. The most commonly treated condition of the hip joint is degenerative joint disease (arthritis).

The hip is a ball and socket joint. Total Hip Replacement surgery involves removal of the abnormal ball (head of the femur) and socket (acetabulum) of the hip joint and replacement with prosthetic (artificial) implants. The new ball is made from cobalt-chromium metal alloy and the new socket from high-density polyethylene plastic.

### **WHAT CAUSES HIP ARTHRITIS IN DOGS?**

- Hip dysplasia in dogs is a developmental condition of dogs that has a strong genetic component.
- In early life as the puppy grows and develops, the hip joint becomes lax which results in instability; this results in remodelling of the bone and further instability with causes abnormal shape of the hip and hip arthritis.
- Hip dysplasia typically affects large breed dogs such as Labradors, German Shepherds and Rottweilers but can affect any breed of dog.
- Other causes of hip arthritis include dislocation of the hip, fracture of the hip, infection of the hip or loss of blood supply to the hip. These are much less common than hip dysplasia.

Many dogs cope well despite having hip arthritis but others do not: they can be very lame, may be depressed and unwilling to exercise.

### **IS MY DOG A SUITABLE CANDIDATE FOR HIP REPLACEMENT?**

In general terms, the selection criteria for Total Hip Replacement are:

- Your dog has an abnormal hip that is causing significant pain and altered exercise tolerance.
- Your dog must be skeletally mature (finished growing). Generally this occurs by 12 months of age.
- The size and conformation of your dog's hips are suitable for a Total Hip Replacement; this is determined by measurements taken from X-rays.
- Your pet is otherwise well and does not suffer from other conditions such as kidney failure, diabetes, pyoderma (infected skin) or recurrent cystitis (urinary tract infections)
- Non-surgical treatment methods (see below) have not worked.
- You are prepared to accept the risk of complications that may happen following Total Hip Replacement surgery, and the cost of treating such complications

**A dog with arthritic hips that has pain-free, normal function is not a candidate for total hip replacement.**

### **AIMS OF SURGERY**

The goal of surgery is to return your dog to pain-free, mechanically sound, normal hip function. Following Total Hip Replacement surgery, many owners report their dog can do things they have not done since they were a puppy. Increase in muscle mass, improved hip motion, and increased activity levels should be expected. The aim is for the new artificial hip to work almost as well as a normal hip.

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### DOGS WITH BOTH HIPS AFFECTED

4 out of 5 dogs (80%) with arthritis in both hip joints only require one hip to be operated on to return them to a satisfactory and comfortable life. The decision on which hip to be replaced is based on your observations of which leg appears to be causing the most pain, and our physical examination findings and X-ray results. Your opinion of which leg is worst for your dog is important in making the right decision.

### AFTERCARE

Post operative care of your dog is critical. **The activity level of your dog must be strictly controlled.** Inside the house your pet should avoid slippery floors and climbing stairs should not be allowed. When your dog is not under your direct supervision or control, he / she should be kept confined to a small room or cage.

1. For the first month after surgery, your dog should be allowed outside, **on a lead at all times**, to go to the toilet and for short walks.
2. During the second post-operative month, similar restrictions apply but you may begin to take your pet on slightly longer **lead** walks. The length of lead walks will depend on your dog's abilities.
3. After the end of the third month you may return your pet to full activity.

Absolutely no running, jumping, or playing is allowed for the first 3 months after surgery.

A check up and check X-rays will be required 6 to 12 weeks after surgery and thereafter once yearly.

### POSSIBLE COMPLICATIONS

As with any surgery, Total Hip Replacement can result in complications. These include:

- Bacterial infection, either associated with the surgery or this can happen many months or years later, usually as a result of an infection somewhere else in the body that reaches the Hip Replacement implants via the blood stream.
- Hip Dislocation. This usually occurs in the first few days to weeks after surgery.
- Fracture of the femur. This usually occurs within a few weeks following surgery but can also happen a long time later.
- Loosening of the implants. This usually happens months or years after surgery.

One or more of these complications will affect about 10% of dogs that undergo Hip Replacement surgery. These complications nearly always result in further surgery being necessary. Some complications can be resolved with further surgery but some complications result in removal of the Total Hip Replacement system i.e. failure of the surgery.

It is important to remember that the cost of treating complications can be more than the cost of the original Total Hip Replacement surgery.

### ALTERNATIVES TO TOTAL HIP REPLACEMENT

When Total Hip Replacement goes well, there is no doubt that it is the best form of treatment to return a dog's hip comfort and function to as close to normality as is possible.

However, it is important to remember that Total Hip Replacement is a salvage procedure. In other words, it is only performed once all the other options, as listed below, have been exhausted comprehensively and shown not to work.

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Total Hip Replacement is not the only treatment method available. Many dogs do very well with alternative treatment methods:

### *Conservative Management*

This means managing your dog's hip discomfort by means other than surgery including:

1. Weight control – keeping your dog's body condition lean and slim
2. Pain-killer / Anti-inflammatory medication such as Rimadyl, Metacam, Zubrin or Previcox
3. Exercise control – controlling your dog's exercise to levels that do not cause lameness. Short frequent walks are better than long infrequent walks
4. Physiotherapy and hydrotherapy to build muscle mass.

Many dogs respond extremely well to conservative management and never require surgery. Conservative management should always be fully explored before hip surgery such as Total Hip Replacement is considered.

### **Femoral Head and Neck Excision Arthroplasty**

An alternative surgical treatment to total hip replacement is Femoral Head and Neck Excision Arthroplasty (FHEA).

This surgery involves removing the head and neck of the femur more (ball part of the hip joint). This prevents the abnormal and painful head of the femur from contacting the abnormal and painful hip socket and therefore provides pain relief. Scar tissue develops around the surgical site, holds the hip joint together and in some ways takes over the function of the old ball-and-socket part of the hip joint. This creates a false joint called a pseudo-arthrosis.

Like Total Hip Replacement, this is also a salvage procedure and is only performed when conservative management has been showed to be ineffective.

It is a good alternative to Total Hip Replacement because:

- post-operative function is generally good
- the rate of complications is low and complications are generally not severe
- the cost is significantly less than Hip Replacement.

However, hip function does not return to normal – some degree of restricted range of movement and hip pain will be present despite surgery.

When complications occur after Total Hip Replacement that cannot be corrected by other means and the implants have to be removed, Femoral Head and Neck Excision Arthroplasty is effectively the procedure that will be performed as a salvage.

Which treatment option is most suitable for you and your dog depends on many factors. Conservative management is almost always the first option recommended. If this option is not effective then surgical options can be considered.

**The best treatment option will be discussed with you in detail once we understand the needs of you and your dog, and once we have completed a thorough examination of your dog including gait evaluation, physical examination, X-rays, blood tests and/or urine tests as appropriate.**