



Total Hip Replacement

These notes do not cover all aspects of total hip replacement, please ask if you require further information.

Why is total hip replacement needed?

Arthritis, dislocation and fracture are possible reasons for considering a total hip replacement. A number of conditions can cause the hip joint to become arthritic. The most common cause of this is a failure of the hip to develop normally when the dog is young (hip dysplasia). In most patients any resulting arthritis is mild and manageable, sometimes only becoming a problem in old age. For a small minority of patients, however, there is marked progression of the arthritis and this causes severe pain and disability. Total hip replacement is indicated for patients with this severe and disabling level of disease. Hip dysplasia often affects both hips, but one hip is usually clinically much worse than the other. Despite this bilateral disease, only 1 in 5 patients ever need a second hip replacement as replacing the worst hip provides a satisfactory improvement in function for most cases.

Total hip replacement is not indicated in dogs with only mild clinical signs

What is involved?

Total hip replacement is a major surgery. We have an operating theatre especially prepared on the day before surgery. The original ball and socket joint is removed with cutting tools (reamers) and replacement parts are cemented in place. The replacement socket is made of a high density polymer (plastic) and this is cemented into the pelvis. The ball part of the joint is replaced with a metal ball and stem that are cemented into the thigh bone. Sometimes "cementless" implants may be used which "press fit" into the bone".



How successful is it?

Total hip replacement is a very successful surgery. Approximately 95% of cases have a successful outcome with very good results, marked relief of pain and improvement in function.

What can go wrong?

With 95% success, it is obvious that 5% of cases (1 in 20) have an unsatisfactory outcome. Total hip replacement is a very demanding and complex surgery and there are a number of possible complications.

- Death rates during surgery for total hip replacement are higher than for many other surgeries. This relates to the risks of the cementing procedure. Some estimates suggest approximately a 1/1000 risk of a fatal complication during the procedure.

- Infection is one of the biggest worries. An infection in a replaced hip can mean there is no option but to remove all of the implants. This is another major surgery and will generally leave the patient with poor hip function.
- There is a small risk that the replaced hip will dislocate and this risk is greatest in the first few weeks after surgery. Though this problem might be remedied by a repeat surgery, this would be another major operation and is best avoided. Careful management in the post-operative period is of key importance.
- The thigh bone can fracture either during surgery or in the weeks after surgery because of the changed forces placed on it by the new metal stem. Rather like a dislocation, this can often be remedied, but requires another major surgery.
- Implant loosening. The life-expectancy of a replacement hip is 10 to 15 years, but a number of factors can cause the implants to work loose sooner than planned. Removal of the implants may be necessary. They can sometimes be replaced, but these so-called 'revision' surgeries carry a higher risk of complications, especially infection.

What are the logistics?

With such a major surgery and with the risk of complications, it is important to ensure care at every step with a total hip replacement patient. We can divide the management into 3 stages:

1. Evaluation:

The first step towards total hip replacement is an examination by an orthopaedic surgeon. This will involve both a general examination and an orthopaedic examination. General health is important as many factors can constitute a contra-indication for total hip replacement (infections, general illness, and some long-term medications). Furthermore, many dogs that we see for total hip replacement have other orthopaedic problems such as back problems and knee ligament injuries. Sometimes, these problems can be of more significance to the lameness than the hip disease. If the orthopaedic surgeon is satisfied that the dog is a total hip replacement candidate, further tests are also performed. These include radiographs to measure for the appropriate size of implants and blood tests to check on the general health of the patient. Only if the patient passes all of these tests is the final go-ahead given for total hip replacement.

2. Pre-operative preparation:

We ask owners to bathe their dog on the day before admission. The dog is then normally admitted on the day before surgery. On the day of surgery a sedative is given early in the morning before the patient is anaesthetised. Sedation is continued in the evening after the surgery with morphine used extensively for pain control.

3. Post-operative care:

Most dogs are well enough to go home within 48 hours of surgery. We supply antibiotic and painkilling drugs. Strict rest is essential in the first four weeks and we advise restriction to downstairs in the house with only the shortest possible lead walks for 'toilet breaks'. In the early stages it is also advisable to support the dog using a 'belly band' and we will demonstrate how to do this. Most dogs use the leg on the day after surgery and improve steadily thereafter so progress should be good. Your own vet will normally deal with stitch removal and we usually plan to re-examine cases after the first four weeks. We should be alerted sooner if progress is not good or if there are other complications. If all is going well at week four, we will advise short lead walks with a gradual increase in activity. At week twelve, we normally perform another re-

examination and admit the dog as a day patient to obtain check radiographs under sedation or anaesthesia. If all looks well at this check and on the radiographs, a further increase in activity is allowed, returning to normal activity, albeit in a controlled manner usually by six months after surgery. Regular clinical and radiographic checks are advisable annually thereafter.