

High Tibial Osteotomy

Information for the Patients of Dr M R J Coolican

Introduction:

Tibial osteotomy is designed to alter the alignment of the lower limb to take away from the work out part of the knee and transfer weight to less worn areas. Occasionally it is utilised to treat knee ligament instability.

Osteotomy to realign the leg has two specific goals:

- to improve the pain associated with arthritis
- to allow the native knee to survive to an age where if total knee replacement were performed it would out survive the patient.

Hospital and After:

You are admitted to hospital the of surgery and prior to operation the leg is washed, shaved, prepped with antiseptic and wrapped in a sterile towel. You will see the anaesthetist prior to surgery.

The knee is realigned by removing a wedge of bone from the lateral (outside) of the tibia and then correcting the alignment by closing the gap. It is very much akin to a carpenter utting a mitre and is done precisely as possible with a purpose designed jig after determining the correct angle of correction with radiographs. Please see the diagram.

After removing the wedge of bone and closing the gap, the position is held with a plate and screws and a drain inserted. A brace is work for six weeks until the bone is joined. Patients remain in hospital after surgery until they can safely walk with crutches. The physiotherapist in hospital will help you with this. Typically this takes about three days. Crutches are required for approximately six weeks with most patients gradually weaning from crutches at this time initially around the home or office and then outside. A Physiotherapist supervises mobilisation and exercises in hospital especially calf muscle exercises to help prevent clots.

After discharge from hospital, Dr Coolican reviews the wound at two weeks and removes the sutures. A check x-ray is obtained at six weeks and if union is proceeding, the brace is discarded. A walking stick may be required for a few weeks after this especially amongst crowds.

It takes most patients about six months to fully recover from high tibial osteotomy. It is possible to resume a sedentary job three weeks after surgery, with travel to and from work being the major hurdle. It is usually at least 3 to 4 months before physical work is possible.

Rehabilitation with a physiotherapist is commenced 6 weeks after surgery when union is proceeding. Range of motion exercises are commenced as well as gentle quadriceps and hamstring exercises.

Results:

Tibial osteotomy does not give the same quality of symptom relief from arthritis that is usually seen with total knee replacement. It does not reverse arthritis but does stop its rapid progression. Osteotomy is typically used in the young or active patient (less than 60) whose wear and tear is advancing at a rate suggestive the knee will have reached end stage arthritis at an age where knee replacement could not be expected to out survive the patient. Knee replacements do not last forever and whilst there are few certainties, we know from a study in 1987 that 90% of knees replaced on average ten years prior to that were still working well. We believe that today's knee replacements are superior to those of 1977 but obviously it will take some years to be sure. The wisdom of performing an osteotomy is that it will allow the native knee to survive longer. The older a patient is at the time of replacement, the more likely the replacement will see the patient through to the end of their days.

Replacing a knee in a patient who has had a prior tibial osteotomy is slightly more difficult that performing a primary knee replacement but is considerably easier and achieves better results than performing a revision total knee replacement.

Most patients feel improvement in their knee following tibial osteotomy. A few (5-8%) are unimproved and 2% are worse off. The improvement seen following tibial osteotomy lasts a variable time depending on how well the patient looks after the knee as well as the degree of damage already done by arthritis, and the inherited quality of the articular cartilage in the joint. For 65% of patients the improvement following osteotomy lasts for 10 years.

Risks:

Infection: Deep bony infection is very rare but if this occurs and is untreated, serious problems follow.

Blood Clots: Medication and stockings are used to help prevent clots. A clot which travels to the lung can be fatal although this is extremely rare. Chest pain and calf pain can be symptoms of a clot and must be reported to Dr Coolican immediately.

Poor Bone Healing: Although rare, the bone may not fully heal or slip in position whilst healing. This is monitored by x-rays of the bone. Occasionally, revision surgery may be required.

Nerve and Vessel Injury: Major nerves and arteries which supply the leg are in the vicinity of the surgery. Although rare, damage to these is possible.

Other complications include haematoma, superficial infection and knee stiffness. Please feel free to discuss these with Dr Coolican.

Cost:

Dr Coolican charges fees recommended by the Australian Medical Association. These were once the same as the rebates given by Medicare and your health fund but unfortunately these rebates have not kept pace with inflation. This will produce a gap payment which for your surgery will be approximately \$

If you have any questions concerning your forthcoming anterior cruciate ligament surgery including risks, complications or likely outcomes, please do not hesitate to contact Dr Coolican.

