

HIGH TIBIAL OSTEOTOMY



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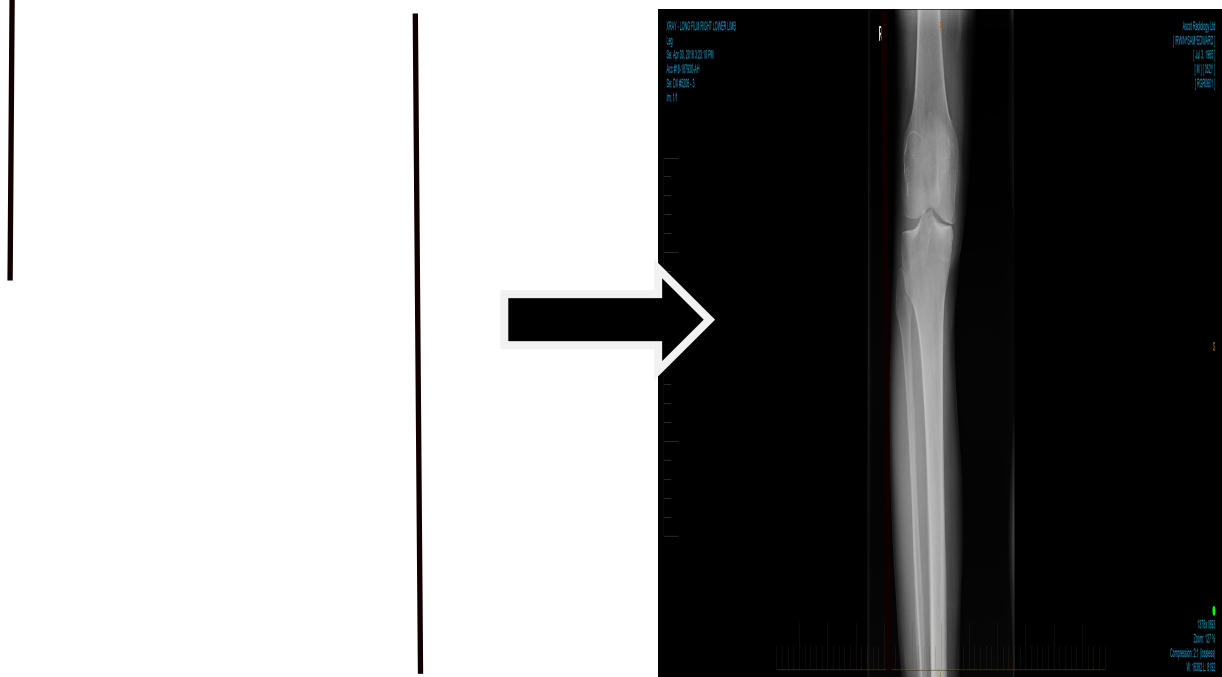
This operation is designed for younger patients who have osteoarthritis or a cartilage lesion confined to outside of your knee . The bones around your knee are knock kneed so most of the weight goes through this damaged outside resulting in pain. The principle of an osteotomy is to realign the lower limb in order to shift the line of weightbearing away from the affected outside of the joint into the good inside half . In other words your osteoarthritis is isolated to the outside compartment, the aim is to shift the weight bearing zone into the inside compartment. This will reduce the symptoms from the osteoarthritis and also slow down the rate of its progression. The aim is to reduce pain, improve function and delay the need for knee joint replacement surgery.

It is important to be aware that realigning the leg will result in an altered appearance of the shape of your leg. If you have medial (inside) compartment osteoarthritis, you are bow-legged. The osteotomy will make you knock-kneed. The opposite applies for lateral (outside) compartment osteoarthritis. Prior to surgery you are knock-kneed, but after surgery you will be bow-legged.

Osteotomies are most commonly performed for medial and lateral compartment osteoarthritis by operating on the upper tibia. A special long X-ray is performed to determine the amount of correction required for your osteotomy.

For medial (inside) arthritis the osteotomy procedure itself involves cutting the bone almost completely. The bone is wedged open. It is held with a metallic plate and screws. If the opening is large a donor bone allograft wedge maybe placed in the gap to stabilise the osteotomy and aid healing. This is fully tested and is safe.

For lateral (outside) arthritis a wedge is taken out from the inside of the tibia to transfer the weight to the inside of the knee





The surgery is usually undertaken under general or spinal anaesthetic with a femoral nerve block and usually takes about 2 hours. You are usually admitted on the day of surgery. Most people are in hospital for 2 to 3 days.

You will be on crutches for up to 6 weeks. After this you put weight through your knee as pain allows. Once the pain is tolerable you can discard the crutches. You will not need a brace. An X-ray will then be taken six weeks after surgery. It will take 4-8 months for your osteotomy to fully heal and up to 12 months for you to get the maximum benefit from your osteotomy.

It is important to understand that this operation is designed to make your knee better however it is unlikely to be normal. It is hoped that this operation will give you 10-15 years of reduced pain and improved function. When this is no longer the case a knee replacement is performed. The osteotomy will not compromise your knee replacement

Complications:

Like all surgery complications can occur. The specific risks of an osteotomy include delayed healing of the osteotomy, a fracture into your knee joint, infection, deep venous thrombosis, numbness around your scars, incomplete pain relief and progression of your arthritis with time.

Delayed or non-union: Because a cut is made through the bone, there is effectively a fracture of the bone which needs to heal. If there is a delayed or non union your plate and screws may break and may need to be replaced. Thankfully this is rare

Infection: Infection is a risk of surgery, not specifically related to osteotomy. Should infection occur, this will usually either be treated with oral antibiotics (tablets) or occasionally with intravenous antibiotics. Occasionally further surgery will be required to clean up the infection. This involves admission to hospital for a number of days during which intravenous antibiotics are given

Deep vein thrombosis (DVT): This is a blood clot in the veins of the leg. Precautions are taken to reduce the risk include foot pumps, aspirin and early mobilization and ankle pump exercises. A small but nonetheless important risk for venous thrombosis is the potential of the blood clot to break off and lodge in the lungs (pulmonary embolus). This can cause significant breathing problems and very rarely can be fatal.

Ongoing pain: Osteotomy in general is a useful procedure for people with unicompartmental osteoarthritis who are not suitable for joint replacement, usually because of their relatively young age. However, the outcome of surgery is probably less predictable than a joint replacement. Although most patients are happy with the result, pain relief is not always complete. In the longer term the underlying osteoarthritis will progress and one can expect knee pain to increase.

In addition, surgery around the front of the knee is often associated with difficulty kneeling. The metallic plate that is used to fix the osteotomy can be prominent, particularly in thin people. The metallic hardware is removed about 12 months after surgery. This is done as a day case.

An animated HTO video can be found at <https://bit.ly/2Q1Jdha>