

# Tibial Tubercle Transfer (TTT)

## What is the knee joint?

The knee is a very important joint in the body and consists of the thigh bone (femur) and shin bone (tibia). It plays an extremely important role in supporting nearly the entire weight of the body and does this with the help of surrounding muscles, ligaments and cartilage.

**Muscles:** You have many muscles around your knee which help provide stability and allow movement. The main muscles surrounding the knee are the Quadriceps (front of thigh), Hamstrings (back of thigh) and Calf (back of lower leg).

**Ligaments:** Ligaments hold your bones together and are therefore integral to stabilising the knee. Anterior Cruciate Ligament (ACL) prevents excessive forward movement of the tibia on the femur. Other important ligaments in the knee are the Posterior Cruciate Ligament (PCL), the Medial Collateral Ligament (MCL) and the Lateral Collateral Ligament (LCL).

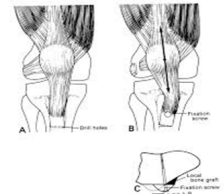
**Cartilage:** 2 main types -

**Menisci:** disc shaped fibrous cartilage that are situated between the femur and tibia. They provide stability, act as shock absorbers, lubrication and allow equal weight distribution.

**Articular Cartilage:** This covers the end of the bones and allows them to move smoothly against each other with less friction. It also helps spread the load applied to the joint

## What happens during my surgery?

A tibial tubercle or tuberosity transfer (TTT) is a surgical procedure to realign the tracking of the kneecap (patella). It involves removing a small piece of bone on the front of the shin bone and reattaching it with anchors or screws to a different position. This can offload the painful portion of the patella or can increase compression to prevent dislocation.



## Knee brace and walking

You are able to start walking on the first day after surgery. You will most likely be wearing a knee brace and you can only remove this for washing and dressing and sometimes for exercises. Your Physiotherapist will advise you further on this.

## Moving your leg

Your operated leg must be supported at all times when you are moving it, either using your hands or your opposite leg. Continue this after discharge until you have been advised otherwise by your Physiotherapist.

## Pain relief

A nerve block is sometimes used during surgery which means your limb may feel numb immediately after your operation. It is normal to feel some pain as the block wears off and you will be provided with some painkillers to help with this. It is important to take these as prescribed to keep pain to a minimum.



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## **Tibial Tubercle Transfer (TTT)**

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### **Ice**

Ice can be helpful to reduce pain/swelling. Protect your dressings from getting wet with a plastic bag. Wrap a bag of ice/frozen peas in a damp towel and apply for 10-15 minutes. This can be repeated every 3-4 hours. For knee surgery, elevating your leg on pillows can also help.

### **Wound care**

Your wounds will need to be kept clean and dry. The nursing staff will provide you with more information about wound care on discharge.

### **Driving and work**

You should not drive whilst using elbow crutches. Please discuss this with your Consultant or Physiotherapist. When you can return to work will depend on what job you do. Your physiotherapist will be able to advise you on this.

### **Leisure and Sport**

This will depend on the healing of your fixation and instructions from your Consultant. Often, you are not allowed to do any impact activities, e.g jogging, until 4-6 months after your operation. Return to contact sports is often 6 to 9 months. Your Physiotherapist can also advise you on this.

If you have any questions or need any advice about your exercises then please contact the Physiotherapy Department between 8am - 4pm Monday to Friday on 0121 685 4120.

### **Instructions for after your surgery:**

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### Personal Exercise Program

#### TTT



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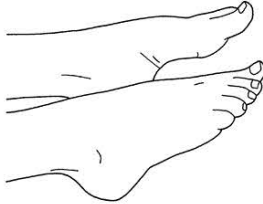
Lying on your back with legs straight.



Bend your ankles and push your knees down firmly against the bed. Hold  
5 secs. - relax.

Repeat 10 times.

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Lying on your back or sitting.

Bend and straighten your ankles and rotate them in circles.

Repeat 10 times.

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Lying on your back.

Bend your leg to maximum of ..... degrees then straighten it.

Repeat 10 times.

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Stand straight holding on to a chair.

Bring your leg backwards keeping your knee straight. Do not lean forwards.

Repeat 10 times.

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## Tibial Tubercle Transfer (TTT)



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Stand straight holding on to a support.

Lift your leg sideways and bring it back keeping your trunk straight throughout the exercise.

Repeat 10 times.



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Hold onto the handrail with one hand and your crutch/crutches with the other hand as shown.

Step up with your good leg first. Follow this with your operated leg onto the same step then bring your crutch up last.

Always go one step at a time.



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Hold onto the handrail with one hand and your crutches with the other as shown.

Place your crutches down onto the step below then step down with your operated leg. Follow this with your good leg onto the same step.

Always go one step at a time.