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## Post-Operative Physiotherapy Information

### High Tibial Osteotomy Exercises

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A high tibial osteotomy is a surgery where the bone of the tibia is wedged open and fixed in a new position in order to realign the leg. This takes the excess stress off the knee joint which was caused by malalignment.

YOUR RECOVERY is greatly dependent on your post-operative routine.

**Controlling pain and swelling** will be some of the most important things to consider in the early post-surgery stage (the first few weeks).

**Rest-** take it easy and don't be up and around on your feet too much.

**Ice-** use ice a minimum of 4 times per day for 20 mins at a time, on the front of the knee and the front of the shin. Always make sure you have a damp cloth between the ice and your skin as ice can otherwise burn. After the first three days ice becomes progressively less important.

**Compression-** tubigrip bandage to be worn over the knee daily until all the swelling has subsided which may take several weeks.

**Elevation-** keep your leg elevated as much as possible when you are resting. Ideally level with your body on the bed or on the couch.

After the first 72 hours use RICE symptomatically as needed

TAKE CARE NOT TO OVERDO IT... when you start to increase your activity levels again LISTEN to your leg. If it is getting sore and swollen after an activity or at the end of the day your leg is telling you that you've over done it. When you over do things and increase your pain and swelling you are delaying your recovery. Use RICE principles to settle the leg back down.

#### CRUTCHES:

Crutches are used following your High Tibial Osteotomy to allow the bone to heal. In the early period you are to remain:

- Non weight-bearing: Placing no weight on your operated leg. This will generally be for six weeks
- Touch weight-bearing: You can put approximately 10% of your bodyweight on your operated leg. This will generally apply for six weeks

Once your surgeon allows you to start increasing the weight-bearing on your operated leg, you will generally start using your crutches for a little while longer until your leg gets used to the increased load and **until you can walk comfortably without a limp**, this may vary greatly from person to person.



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Stairs can put a lot of pressure on your legs, so that you don't aggravate your operated leg when going up and down stairs following your operation stick to the following sequence.

UP STAIRS - Good leg, operated leg, crutches

DOWN STAIRS - Crutches, operated leg, good leg

### **SPLINT:**

You may or may not have a splint on your leg. Depending on your surgeon's preference:

- You don't require a splint at all.
- You only need to wear your splint when you are up and about. You can remove it when sitting or resting.
- You need to wear your splint at all times.

### **EXERCISE PROGRAM:**

There are a few basic exercises we want you to begin the day after your surgery. These will help to prevent your knee stiffening up, and will help maintain muscle strength.

#### **1. Foot and Ankle Pumps:**

For one minute every hour, move your ankle up and down, and side to side fairly vigorously. This helps to keep your circulation going and minimize the risk of a blood clot. It also helps to keep your ankle from stiffening.

Repeat the following exercises 3-4 times each day, without forcing them into pain. For each exercise, start with one set of 10 repetitions, and gently build up to three sets of 10 repetitions as comfortable.

#### **2. Knee Flexion:**

Keeping your heel on the bed, slide it back towards your buttocks, allowing the knee to bend gently. Keep this movement comfortable, there is no need to force it.



#### **3. Quads Contraction:**

With a folded towel placed lengthways under your knee as shown in the diagram, gently (no pain) push the back of your knee into the towel to tighten the muscles at the front of your thigh. Hold for three seconds.



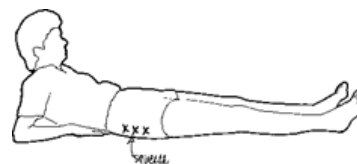
#### **4. Straight Leg Lift:**

Tighten the muscles at the front of your thigh to lock the knee. Once locked, slowly lift your leg 10 - 12" off the bed. Only commence this exercise when it does not cause you any pain.



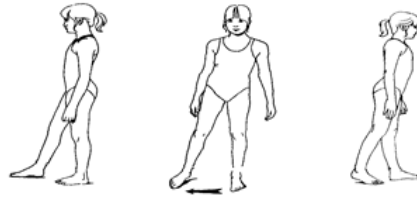
#### **5. Buttocks Contraction:**

Tighten the buttock muscles by clenching and squeezing together. Hold for three seconds.

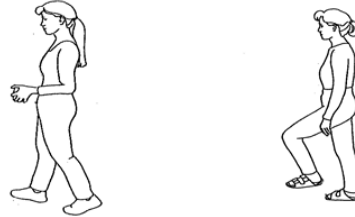


Exercises to commence one week after your surgery (or whenever comfortable to do so):

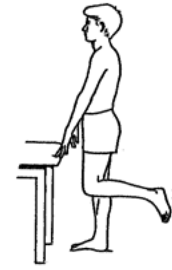
1. Holding on to a firm support, lock your knee straight and lift your operated leg forward, to the side, and backwards. Repeat each direction 10 times. Progress each exercise to three sets of 10 repetitions as comfortable.



2. Holding on to a firm support, start with your leg slightly back as shown in the diagram. Then, bend and lift your knee. Repeat 10 times. Progress to three sets of 10 repetitions as comfortable.



3. Holding on to a firm support bend your knee gently behind you, moving your foot towards your buttocks. Repeat 10 times. Progress to three sets of 10 repetitions as comfortable.



The above are good beginner exercises so keep going with these until your review with your surgeon. At this point, he will generally ask you to start seeing a physiotherapist near home to progress your rehabilitation. This is quite important in continuing to build the flexibility, strength, and the control in your knee. The more strength you build up in the muscles around your knee, the better off your knee will be in the long run, and the smoother your progress back towards other activities will be.

**RETURN TO SPORTS AND PHYSICAL ACTIVITIES:**

Please discuss timeframes and guidelines for returning to specific activities, work, and sports (e.g. the gym, running, swimming, etc.) with your surgeon at your post-operative review. Your physiotherapist will be able to help you work towards these goals.

**Please do not hesitate to call us at our clinic on 9819 2827 if you have any questions regarding your recovery or if we can help you with rehabilitation.**