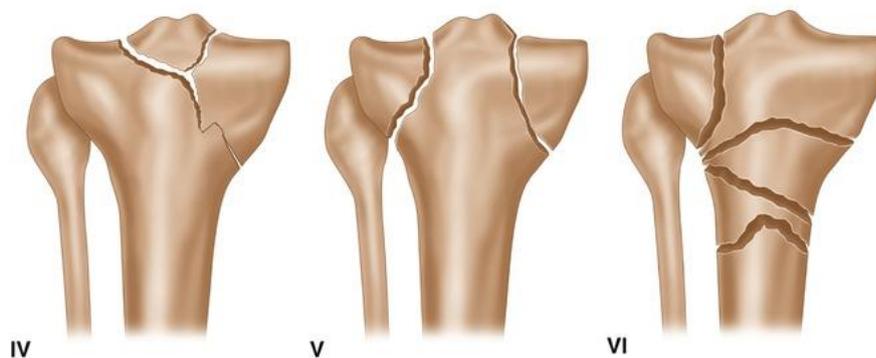


Physiotherapy Following Knee Fractures

A fracture is a broken bone. There are several types of knee fractures; this includes proximal tibia fractures (top of the shin bone). The bone can break straight across (transverse fracture) or into many pieces (comminuted fracture). Sometimes these fractures extend into the knee joint and separate the surface of the bone into a few (or many) parts. These types of fractures are called intra-articular or tibia plateau fractures (shown below). Depending on the severity of your fracture your Consultant will decide whether to treat your broken bone conservatively (Plaster of Paris or Brace) or surgically (Pins/ screws or external fixator). Your Consultant will also decide if you need a period of non-weight bearing or partial-weight bearing to allow your fracture to heal.



Physiotherapy exercises

Stage 1

These exercises can be carried out to maintain lower limb strength even if you are non-weight bearing or wearing a brace.

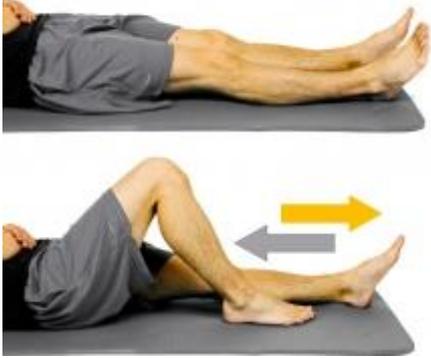
Use ice and elevate your leg to control swelling. Ensure you have adequate pain relief.

<p>1. Quads set</p>		<p>QUAD SET - TOWEL UNDER KNEE</p> <p>Tighten your top thigh muscle as you attempt to press the back of your knee downward towards the table.</p>
<p>2. Short arc quads</p>		<p>Place two rolled towels under the knee to lift it about 5 inches off the mat. Bring your toes towards your head (dorsiflexion) then straighten the knee for a hold of 3-5 seconds. Slowly lower your leg back to the mat.</p>

<p>3. Straight leg raise (SLR)</p>		<p>While lying on your back, raise up your leg with a straight knee. Keep the opposite knee bent with the foot planted on the ground.</p>
<p>4. Hip abduction (side lying)</p>		<p>While lying on your side, slowly raise up your top leg to the side. Keep your knee straight and maintain your toes pointed forward the entire time. Keep your leg in-line with your body.</p> <p>The bottom leg can be bent to stabilize your body.</p>

Stage 2

Only when advised by your Consultant to move your knee, carry out these exercises to regain your knee range of movement.

<p>1. Heel Slides (active / assisted)</p>		<p>Lying on your back with knees straight, slide the affected heel towards your buttock as you bend your knee.</p> <p>Hold a gentle stretch in this position and then return to original position.</p> <p>To assist the movement, place unaffected leg in front (as shown below) and use to add additional stretch</p>
<p>2. Active assisted knee flexion in sitting</p>		<p>While seated, slide your heel towards your buttock with the assist of the unaffected leg as shown</p>

<p>1. Hamstring stretches</p> <p>SLOWLY apply stretch / release -pain free</p> <p>Hold 15-20 secs.</p>		
<p>1. Patella Mobility</p>		<p>Relax the knee cap and gently move the knee cap (painlessly) by lifting and gliding the bone as shown</p>

Stage 3

Only when advised by your consultant that you can fully weight bear, you can then start strengthening your lower limb in standing.

<p>1. 'Mini squat'</p>		<p>In standing: lean your lower back against a wall, you can use an exercise ball against wall. Your feet should be shoulder width apart.</p> <p>Knees should bend in line with the 2nd toe.</p> <p>Do not push into Pain, increase depth of squat as able.</p>
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<p>2. Lunge</p>		<p>Standing with feet shoulder width apart. Take a step forwards with your affected leg and allow your front knee to bend. Ensure heel strikes the ground. SLOWLY return to start position. Ensure good knee control</p>
<p>3. Step ups</p>		<p>Step up onto stool / step with involved leg. Step down with uninvolved leg. You can use support initially if needed/</p>
<p>4. Step-down's</p>		<p>Standing with feet shoulder width apart. Take a step forward with your unaffected leg and allowing your affected knee to bend. Touch your heel on the floor and slowly return to start position. Ensure knee control (knee over toes)</p>
<p>5. Heel raises</p>		<p>While standing, raise up on your toes as you lift your heels off the ground.</p> <p>As you improve progress to single leg heel raises.</p>

6. Balance



Cross your arms over your chest and then stand on one leg. Perform this next to a table or other sturdy object. Hold your balance in this position.

To make this exercise harder close your eyes or move your arms i.e. touch your nose/ head.