



# Exercise guide

## Knee

Throughout the following exercises, the emphasis is on slow, controlled movement.

If you are currently receiving physiotherapy only do the exercises that your therapist has prescribed under your current treatment plan.

When carrying out the exercises make sure you are safe and stable, using support of counters or tables if needed. Make sure all exercises are pain free and if they cause pain stop doing them or go to an easier exercise. Do not exert yourself beyond your own capabilities.

### **Knee extension in sitting**

- Start in sitting with knees bent to 90 degrees
- Slowly raise the affected leg in front of you until completely straight
- Hold for 5 seconds before slowly returning to the starting position
- This exercise can be progressed by extending the duration holding the straight leg or the addition of a heavy boot or ankle weight

Complete three sets of 10 repetitions holding five seconds at a time unless directed otherwise by your physiotherapist.

### **Knee extension – gravity assisted**

- Sit on a chair with the ankle of the affected side resting on a small chair or stool in front
- Allow the leg to fully straighten
- If required add a light stretch by gently applying pressure with your hands above the knee

Complete three sets of 10 repetitions holding 10-15 seconds at a time unless directed otherwise by your physiotherapist.

### **Bridging**

- Lie on your back with your feet on the floor and knees at 90 degrees
- Lightly contract your stomach and gluteal muscles
- Pushing down through your heels to slowly raise up your hips
- Ensure a straight line is formed between your shoulders, hips and knees
- Hold for 5 seconds before slowly controlling the movement back to the starting position

Complete three sets of 10 repetitions, holding for 5 seconds unless directed otherwise by your physiotherapist.

**Proprioception – single leg stance**

- Stand with feet shoulder width apart
- Ensure your pelvis is kept level and slowly raise one knee up to 90 degrees
- Hold your balance and stretch your arms out if required
- This can be progressed by taking the arms in front, above and to the side while holding balance on a single leg or taking the non-standing leg out to the side and in front of you
- Further progressions can include holding your balance while closing your eyes or throwing and catching a ball
- If you have difficulty initially it can be useful to perform this exercise in front of a long mirror or chair for support

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

**Jogging on the spot – 1 2 3 holds**

- Start with feet a shoulder width apart
- Lift one knee to around 90 degrees
- Try to prevent your pelvis from tilting
- Slowly preform a small hop and control the landing
- Return to start position with a level pelvis and knee at 90 degrees before repeating
- This can be progressed by hopping forward, backward and to either side always return to the starting point

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

**Single leg hopping**

- Start with one foot a stride length in front of the other and upper body upright
- Slowly dip until both knees are around 90 degrees, control the movement back to the starting position
- Ensure you keep your chin up and don't look down during the exercise
- Repeat with the legs reversed
- This can be progressed by increasing the length of hold or holding weights

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

**Lunge**

- Start with one foot a stride length in front of the other and upper body upright
- Slowly dip until both knees are around 90 degrees
- Control the movement back to the starting position
- Ensure you keep your chin up and don't look down during the exercise
- Repeat with the legs reversed
- This can be progressed by increasing the length of hold or holding weights

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

**Psoas stretch**

- Stand facing a wall or chair for balance with another chair just behind you
- Place the toes of one foot on the chair behind you and gently push your hips forward until you feel a stretch in the front of your hip
- Keep your foot on the chair and repeat

Complete three sets of 10 repetitions, holding each stretch for around 10-15 seconds unless directed otherwise by your physiotherapist.

**Quadriceps strengthening – step up, down and sideways**

- Stand facing a step
- Place one foot on the step, ensure your pelvis is level and slowly step up until your leg is straight
- Control the movement back until your rearmost foot gently brushes the ground
- Repeat 10 times on each side
- The key to this exercise is controlled movement throughout
- Repeat this process stepping down and to the side from the step
- For these exercises allow your heel to just touch the floor before immediately controlling the movement back to the starting position
- Ensure you don't let your hips and pelvis dip throughout the exercise
- If using an exercise step you can progress to a step through where you combine the step up and down phases
- For this exercise standing in front of a long mirror can aid your balance

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

**Static quads**

- This exercise is best performed sitting on the floor or bed with your back against a wall but a chair can also be used with the foot supported
- Fully straighten your legs
- Keeping your toes pointing upwards, push the back of one knee into the floor as far as possible to tighten your quadriceps
- Hold for 7 seconds and relax
- Repeat on the other side
- Complete a total of 10 repetitions per side, have a brief rest before repeating the whole process a further two times
- If your leg fatigues stop and decrease the number of repetitions and slowly build up
- To progress you can increase the length of contraction

Complete three sets of 10 repetitions, holding for 7 seconds at a time unless directed otherwise by your physiotherapist.



### **Quadriceps strengthening – straight leg raise**

- This exercise is best performed sitting on the floor or bed with your back against a wall but a chair can also be used with the foot supported
- Fully straighten your legs
- Keeping your toes pointing upward push the back of one knee into the floor as far as possible to tighten your quadriceps
- Slowly raise the whole leg up so the heel is 6-8 inches off the floor
- Ensure the leg is kept completely straight
- Hold for 7 seconds and relax
- Repeat on the other side
- Complete a total of 10 repetitions per side, have a brief rest before repeating the whole process a further two times
- If your leg fatigues stop and decrease the number of repetitions and slowly build up
- To progress you can increase the length of contraction or use a weight such as a heavy boot or ankle weight

Complete three sets of 10 repetitions, holding for 7 seconds at a time unless directed otherwise by your physiotherapist.

### **Quadriceps strengthening – straight leg raise with abduction**

- This exercise is best performed sitting on the floor or bed with your back against a wall but a chair can also be used with the foot supported
- Fully straighten your legs
- Keeping your toes pointing upward push the back of one knee into the floor as far as possible to tighten your quadriceps
- Slowly raise the whole leg up so the heel is 6-8 inches off the floor
- Then take the leg a further 6-8 inches out to the side
- Ensure the leg is kept completely straight
- Hold for 7 seconds and relax
- Repeat on the other side
- Complete a total of 10 repetitions per side, have a brief rest before repeating the whole process a further two times
- If your leg fatigues stop and decrease the number of repetitions and slowly build up
- To progress you can increase the length of contraction or use a weight such as a heavy boot or ankle weight

Complete three sets of 10 repetitions, holding for 7 seconds at a time unless directed otherwise by your physiotherapist.



### **Inner range quads**

- This exercise is best performed sitting on the floor or bed with your back against a wall but a chair can also be used with the foot supported
- Roll up a towel or pillow and place underneath your knee
- The knee should be raised by 3-4 inches
- Keeping the toes pointed upward, push the knee down and raise your heel up until the leg is completely straight
- Hold this position for 3 seconds before controlling the knee bend to the start
- To progress you can increase the speed of movement or use a weight such as a heavy boot or ankle weight

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

### **Assisted knee flexion – sitting**

- Start sitting upright on a bed or the floor
- Bend your knee as far as able using your hands to add an extra stretch
- Hold this for 15-20 seconds before returning to the start position

Complete three sets of 10 repetitions, holding for 15-20 seconds unless directed otherwise by your physiotherapist.

### **Clams**

- Lie on your side with your feet and knees together
- Bend knees to 90 degrees
- Lightly contract your stomach and gluteal muscles, keep feet together and raise the top knee as far as comfortable
- Ensure your body doesn't roll backwards during movement
- Slowly lower knee back to the starting position and repeat

Complete three sets of 10 repetitions, holding for 3-5 seconds unless directed otherwise by your physiotherapist.

### **Sit to stand**

- Start in a seated position
- Slide your bottom forward toward the edge of the chair
- Ensure your feet are planted firmly on the floor a shoulder width apart
- Place your hands on your hips, maintaining a flat back, lightly contract your stomach muscles
- Bend forwards from your hips
- Slowly stand up until completely upright before slowly sitting back down
- Repeat this 10 times



- Try to not use your hands throughout the exercise however if needed use them to lightly facilitate the movement

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

### **Quadriceps stretch**

- This exercise can be performed in standing with a wall or chair for balance
- Slowly bend your affected leg at the knee and grasp with the corresponding hand around the foot or ankle
- Draw heel towards bottom as far as comfortable
- Keep both knees together, maintaining the position of your pelvis and avoid tilting your back
- Hold this position for 15-20 seconds before releasing the leg and repeating

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.

### **Squat against a wall**

- Lean back against a wall
- Take around a half step forwards with your feet before slowly sliding your back down the wall into a squat
- Control the movement back to the starting position
- This can be progressed by shifting your weight on to one side and repeating the exercise or performing a single leg squat

Complete three sets of 10 repetitions unless directed otherwise by your physiotherapist.