

Advanced knee exercises

Information and advice



**Leicestershire
Partnership NHS Trust
Riverside House
Bridge Park Plaza
Bridge Park Road
Thurmaston
Leicester
LE4 8PQ**

Advanced rehabilitation of your knee

Do **NOT attempt any of these exercises unless advised by your physiotherapist.**

Your physiotherapist will demonstrate and guide you on how to complete the exercises correctly.

All the exercises within this leaflet are advanced physiotherapy exercises for the knee. The exercises focus predominantly on strength and proprioception.

Regular strength and proprioception training will help you to prevent re-injury.

Strength

These exercises train the muscles to work at optimal level to support the joints and limbs during functional and sporting activities.

Proprioception

This is the body's ability to sense movement. Proprioception consists of balance, agility and co-ordination.

Completing proprioception exercises will help you develop balance to maintain stability and perfect agility so that you can react to direction changes quickly and safely, for example when playing football.

Squats: four levels

☐ Level one:

Wall squats

Stand leaning with your back against a wall and your feet about 20 cm from the wall.

Slowly slide down the wall until your hips and knees are at right angles. Return to starting position.

Hold secs. Repeat times.



☐ Level two:

Squats

Stand straight with feet hip width apart and facing forwards. Slowly bend your knees and return to the starting position.

Hold secs. Repeat times.



Squats continued

☐ Level three:

Squats with resistance band

Stand straight with feet hip width apart and pointing forwards with a resistance band around the knees. Slowly bend your knees keeping tension on the band. Slowly return to starting position.



Hold secs. Repeat times.

☐ Level four:

Squats on rocker/wobble board

Stand on a rocker/wobble board and bend your knees. Maintain your balance on the board and slowly return to starting position.



Hold secs. Repeat times.

Single leg dips: three levels

☐ Level one: Single leg dip

Stand on your affected leg and bend your knee in a controlled manner. Ensure the knee is aligned with the second/third toe.

You can use a step if available.

Hold secs. Repeat times.



☐ Level two: Single leg dip with resistance band

Stand on your affected leg with a resistance band around your affected knee. Bend your affected knee in a controlled manner, ensuring your knee is aligned with your second/third toe. You should feel the tension from the band.

Hold secs. Repeat times.

☐ Level three: Single leg dip on a rocker/wobble board/cushion

Stand on a rocker/cushion, on your affected leg and bend your affected knee slowly with control. Return to the starting position.

Hold secs. Repeat times.



Bridging: six levels

☐ Level one: Bridge

Lying on your back with knees bent and arms crossed over your chest lift your pelvis off the floor and maintain position for 5 seconds. Return to starting position.



Hold secs. Repeat times.

☐ Level two: Bridge with resistance band

Lying on your back with knees bent, arms crossed over your chest and a resistance band around your knees, pull the resistance band and lift your pelvis off the floor .



Hold secs. Repeat times.

☐ Level three: Bridge with wobble cushion or gym ball

Repeat level one as the starting position with your feet on a wobble cushion or a gym ball.



Hold secs. Repeat times.

Bridge continued

☐ Level four: Single leg bridge

Lying on your back with knees bent and arms crossed over your chest, lift your hips up and keep them straight. Shift the weight over to one leg and straighten the other leg.



Hold secs. Repeat times.

☐ Level five: Single leg bridge with resistance band

Place a resistance band around your knees and repeat level four.

Hold secs. Repeat times.

☐ Level six: Single leg bridge with wobble cushion

Repeat as level 4 but place your foot on a wobble cushion.

Hold secs. Repeat times.

Plank: four levels

☐ Level one: Elbow knee

Face down on the floor, with elbows and knees resting on the mat and feet off the floor. Head positioned down so that you are looking at your hands and maintain the position.



Hold secs. Repeat times.

☐ Level two: Plank

Face down on the floor, with elbows and toes resting on the mat. Head positioned down so that you are looking at your hands and maintain the position.



Hold secs. Repeat times.

☐ Level three: Shoulder plank

Face down on the floor, with hands and toes resting on the mat. Head positioned down so that you are looking at your hands and maintain the position.



Hold secs. Repeat times.

Plank continued

☐ Level four: Gym ball plank

Use a gym ball and rest your knees or shins on the ball and hands on the floor. The exercise is more challenging if you have the ball further away from your core. Contract your abdominal muscles and hold the position.



Hold secs. Repeat times.

Lunges: four levels

☐ Level one: Lunge

Stand with one leg slightly forward and bend your knees. Return to the starting position.

Hold secs. Repeat times.

☐ Level two: Lunge walking

Repeat level 1 but step forward into each lunge.

Hold secs. Repeat times.



Lunges continued

☐ Level three: Reverse lunge

Repeat level 1 but step backwards in a lunge position.

Hold secs. Repeat times.

☐ Level four: Multi-directional lunge

In a lunge position step in different directions. (Right, left, backwards, and forward).

Hold secs. Repeat times.

Proprioception with equipment: three levels

☐ Level one: Balancing on rocker/wobble board

Place both feet on the rocker or wobble board and balance, ensuring that the board does not touch the floor.

Hold secs. Repeat times.

☐ Rocker Board

☐ Wobble Board.



Balance with equipment continued

☐ Level two: Double leg squat

Stand on the rocker/wobble board with both feet, Bend your knees keeping the board balanced and return to start position.

Do not allow the board to touch the floor.

Hold secs. Repeat times.

☐ Rocker Board

☐ Wobble Board



☐ Level three: Single leg dip

Stand on the rocker/wobble board on the affected leg and bend the knee. Keep the board balanced.

Do not allow the board to touch the floor.

Hold secs. Repeat times.

☐ Rocker Board

☐ Wobble Board



Proprioception without equipment: three levels

☐ Level one:

Single leg stance with head turns

Stand on your affected leg and turn your head to the right and left, maintain your balance.

Hold secs. Repeat times.

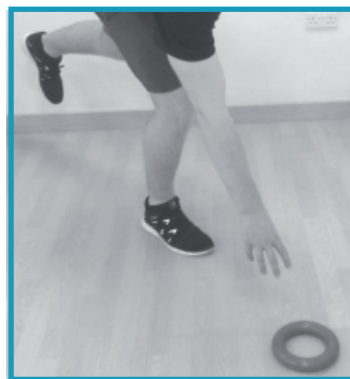


☐ Level two:

Single leg stance with reach

Stand on your affected leg and lean forward. Return to the starting position.

Hold secs. Repeat times.



Prioprioception without equipment continued

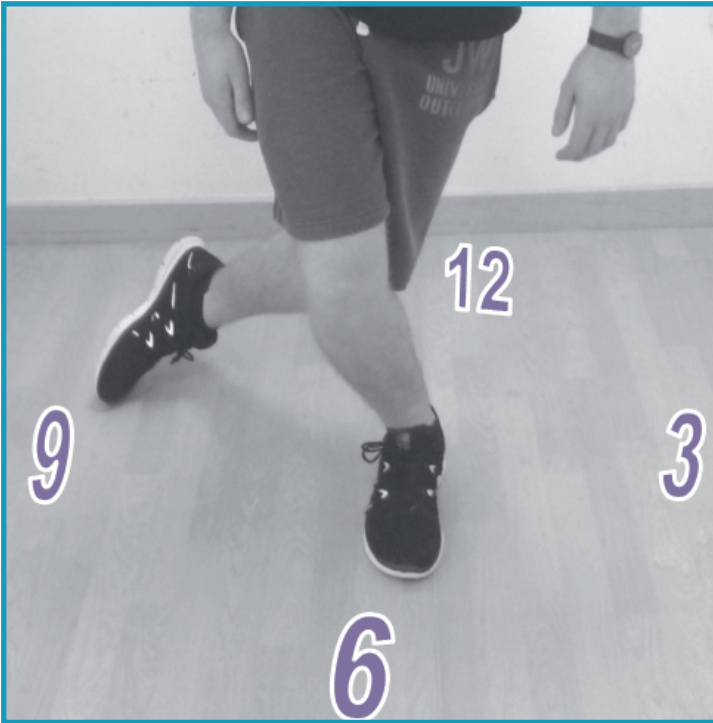
☐ Level three:

Star excursion

Stand on your affected leg and use your unaffected leg to reach for-ward, backwards, and sideways.

(Imagine there is a clock on the floor and you are trying to reach as far as possible towards the different numbers on the clock).

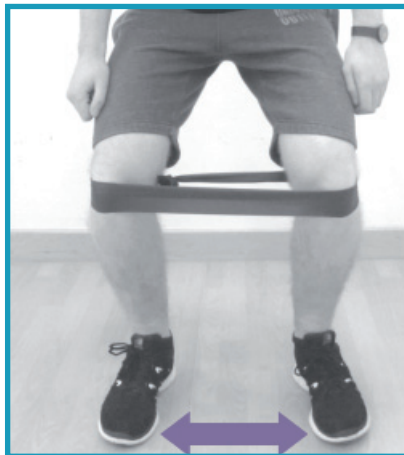
Hold secs. Repeat times.



Additional Exercises

☐ Crab walking

Place a resistance band around your ankles/knees. Position your feet shoulder width apart and bend your knees to 'mini squat', keeping the knees in line with the toes. Slide step gliding "like a crab".



Hold secs. Repeat times.

☐ Cowboy walking/"monsters"

Place a resistance band around your ankles/knees, bend the knees to 'mini squat' then step forward 5-6 times and return walking backwards.



Hold secs. Repeat times.

Sports Specific Exercises

The exercises below are essential to practice prior to returning to sport. Your physiotherapist will advise you what you need to do to return to your specific sport.



Static jumps



Zig-Zag hops



Linear jumps



Multi-directional hops



Multi-directional jumps



Hops on and off steps



Jumps on and off steps



Linear running



Squat jumps



Multi-directional/around
cones running



Squat to hop and land



Figure of 8 running



Static hops



Linear hop and land



Quick starts and stops.

Notes

**If you
need help to
understand this
leaflet or would like it
in a different language
or format such as large
print, Braille or audio,
please ask a
member of
staff.**

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