

Level 1 Function

Potential Inclusion Criteria:

- Diffuse pain through the front of the knee
- Weak musculature surrounding the knee, specifically the quads
- Pain that gets worse with activities (Running or Jumping)

Goals:

- Reduce pain, inflammation and load on the affected structures
- Protect the injury by using patellar taping or stabilizing brace during painful activities

Requirements For Progression:

- 10-14 days of adherence
- Significant decrease in pain/ discomfort

Aerobic Exercise:

Avoid Running, Jumping or any exercise that provokes symptoms. You Can continue exercise with non-weight bearing activities such as swimming or cycling if tolerated.

1. Quadriceps Isometric (Towel Roll)

Sets: 3 | Reps: 8-12 | Hold: 5 Seconds |
Frequency: Daily

Preparation:

- Lie flat on your back with a towel roll under your knee as shown

Execution:

- Tighten the muscles on the top of your thigh by pushing the back of your knee into towel roll
- Relax



2. Straight Leg Raise - VMO Bias

Sets: 3 | Reps: 8-15 | Frequency: Daily

Preparation:

- Lay on your back
- Rotate foot to outside

Execution:

- Keeping your knee straight, lift your leg
- Keep the other leg flat against the floor
- Return to start position



Lie on back



Rotate foot to outside



Raise leg

3. VMO Activation (Ball)

Sets: 3 | Reps: 8-12 | Hold: 5 Seconds |
Frequency: Daily

Preparation:

- Sit on a chair with a small ball between your legs. Feet flat on the floor.

Execution:

- Feel your inner quad muscle just inside and above your knee cap
- Contract these muscles by squeezing your knees into the ball



4. Clamshell

Sets: 3 | Reps: 8-15 | Frequency: Daily

Preparation:

- Lie on your side with your hips at 45 degrees and your knees bent to 90 degrees.
- Your heels are in line with your buttocks.
- Tilt your hips forward towards the ground slightly.



Start position



Lift knees apart

Execution:

- Lift your knees apart (like a clam opening)

5. Hip Abduction + Extension Sidelying - Straight Leg

Sets: 3 | Reps: 8-15 | Frequency: Daily

Preparation:

- Lie on your side with legs straight
- Position your top hand on the top of your hip
- Rotate your hips forwards towards the bed



Start position



Lifting leg up and back using the buttock muscles, moving only at the hip, avoid moving at the pelvis

Execution:

- Extend your straight leg behind you and point your toe towards the floor
- Lift the leg up and slightly behind you using your buttock muscle

6. Thigh Release (Foam Roller)

Duration: 1 Min - 5 Mins

Frequency: Daily

Execution:

- Position foam roll beneath hip, as shown.
- Roll along the foam, towards your knee.
- Whenever you find a sore spot, pause for as long as you can, to stretch this area out.

Note: This exercise is normally quite uncomfortable. If it gets to be too much, give yourself a break.



Start Position



Roll out along foam

Level 2 Function

When Can I Move To Level 2?

- Completed level 1 goals
- Able to tolerate 3 sets x 8 reps without significant increase in knee pain

Goals:

- Increased tolerance to light load and strengthening
- Improve patellar tracking and control

Requirement For Progression:

- Tolerating max reps and sets without pain or symptoms

Aerobic Exercise:

- Avoid Running, Jumping or any exercise that provokes symptoms. You Can continue exercise with non-weight bearing activities such as swimming or cycling if tolerated.

1. Bridge + LE Stabilization (Band)

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Lie flat on your back with your arms across your chest
- Bend knees up so that your feet are flat
- Put a resistive band or belt around your knees

Execution:

- Push your knees out against the belt around your legs
- Lift your hips up in the air to make a bridge
- Lower down in a controlled manner



Start Position



Push knees out, lift hips

2. Hip Abduction Concentric (Band)

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Stand with good posture, feet shoulder width apart
- Hold onto a support for balance if needed

Execution:

- Lift your leg out to the side
- Stop if your trunk starts to lean or bend
- Return to the starting position



Hold support if needed



Lift leg to side

3. Hip Extension Concentric (Band)

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Stand with good posture, feet shoulder width apart
- Hold onto a counter or object for support

Execution:

- Lift one straight leg behind you as if stepping back
- Return to the starting position.



Start Position



Using buttocks, lift leg behind

4. Wall Squat

Sets: 2-3

Hold: 20-45 Seconds

Frequency: Alternate Days

Preparation:

- Stand with back against wall
- Position feet away from the wall

Execution:

- Perform a squatting motion, sliding down the wall
- Squat as far as you can under control
- Rise up, straightening at the hip



Back against wall, feet forward



Squat, knees in line with toes

5. Step Up | Knee Control Focus (Band)

Sets: 3

Reps: 8-15

Frequency: Alternate Days

Preparation:

- Stand in front of a box or step
- Put a band around your knee pulling it inwards

Execution:

- Step up onto the box
- Lower down in a controlled manner



Stand in front of step



Step up onto box



Rise with control



Front view - band pulls knee inward



Step up onto box



Rise with control

6. Calf Raise Concentric | Bilateral

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Stand next to a chair, counter or wall

Execution:

- Stand on your tip toes, lifting your heels as high as you can
- Relax your heels back down to the ground



Start position



Stand on tip toes

7. Cycling Stationary Bike

Sets: 1 | Duration: 5-30 Minutes |
Frequency: Alternate Days

Cycling Stationary Bike



Cycling Stationary Bike

Level 3

When Can I Move To Level 3?

- Completed Level 2 goals

Goals:

- Increase tolerance to load and able to tolerate full weight bearing activities without any pain or symptoms

Requirement For Progression:

- Tolerating max sets and reps without increase in pain or symptoms

Aerobic Exercise:

- Gradual return to running or jumping activities as long as no pain or symptoms are present before or during activity. You can Continue swimming and cycling.

1. Bridge | Single Leg

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

- Lie flat on your back with your arms laying flat next to you
- Bend one knee up so that your foot is flat and straighten one knee up in the air as shown

Execution:

- Lift your hips up to make a bridge using one leg only
- Lower down in a controlled manner



Start Position



Lift hips, use one leg only

2. Side Plank | Forearm and Feet

Sets: 3 | Reps: 8-15 | Hold: 5-10 Seconds |
Frequency: Alternate Days

Preparation:

- Position yourself on your side as shown
- Have your knees, hips and head in a straight line

Execution:

- Push up onto your elbow and lift hips off the floor



Start Position



Hold Plank

3. Squat | Band at Knees (Band + Dumbbells)

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Stand with good posture, feet shoulder width apart
- Free weight in either hand

Execution:

- Initiate squat by bending at the hips
- Rise up at the hips



Front view



Squat - Knees aligned over toes



Side view



Squat - Back straight, bend at hips

4. Side Stepping (Band)

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

- Stand with feet shoulder width apart, band at knees

Execution:

- Squat with good form
- At the bottom of the squat, step to one side
- Bring trailing leg back into good squat position



Start Position -
Good squat
form



Step to side



Bring trailing
leg back into
good squat
position

5. Bridge + Hamstring Curl (Ball)

Sets: 3 | Reps: 8-15 |
Frequency: Alternate Days

Preparation:

- Lie on back, feet up on ball as shown

Execution:

- Lift hips off floor
- Bend knees, rolling ball towards you - keep hips up!
- Hold, then slowly return to the start position



Feet up on ball



Lift hips



Bend knees -
keep hips up!

6. Split Squat (Foam)

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

- Stand in a stride stance, front foot on foam

Execution:

- Lower back knee towards the ground
- Keep your front knee in line with your toes
- Rise back up at hips



Begin in stride stance



Lower back knee towards the ground, rise up at hips

7. Single Leg Balance (Foam)

Sets: 3 | Hold: 30 Sec- 1 Min | Frequency: Alternate Days

Execution:

- Balance on foam



Balance on foam



Hands on hips

8. Graduated Return to Jogging

Frequency: Alternate Days

Graduated return to running
suggested program: Week 1: (start
and finish with 5 min walk)

- 5x (1' run / 1' walk)



Graduated Return to Jogging

Return To Activity / Achieving Your #RISEABOVE Goal

Build back into your activity or sport, progressing slowly and increasing time or intensity by 10% per week. Be sure to discuss sport specific progressions with a G23 physiotherapist

1. Lunge Walk

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Execution:

- Take a big step forward
- Drop the back knee toward the ground
- Pull yourself forward using the front leg
- Repeat, alternating legs



Start position



Lunge



Repeat

2. Squat (Bosu)

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

- Stand with good posture on a Bosu



Feet shoulder width apart



Squat - Knees aligned with toes



Squat by bending at the hip

Execution:

- Perform a squatting motion initiating by bending at the hip
- Rise up by straightening at the hip



Straight back, knees aligned over toes

3. Drop Squat (Box or Step)

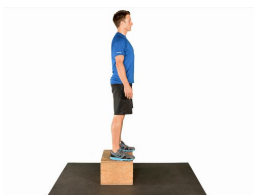
Sets: 3 | Reps: 8-15 |
 Frequency: Alternate Days

Preparation:

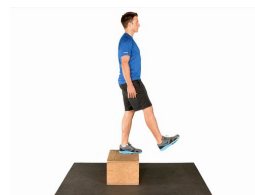
- Start on top of box or step as shown

Execution:

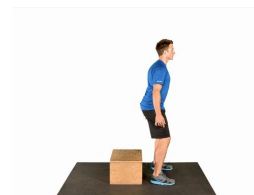
- Step off of box or step
- Land on the floor softly, absorbing the shock with triple flexion (hips, knees, ankles)
- Step back onto box and repeat



Start Position



Step off box



Land softly



Absorb the landing in a good squat position

4. Split Squat Jump

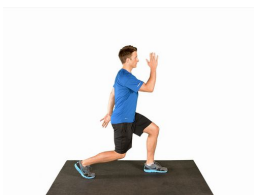
Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

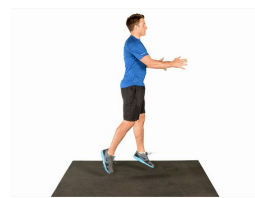
- Start in a lunge position

Execution:

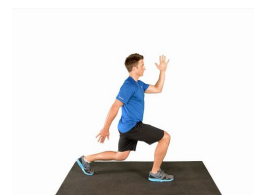
- Jump into the air driving off both legs
- Switch leg position in the air
- Land in a lunge position with the opposite leg forward
- Absorb the shock with triple flexion (hips, knees, ankles)



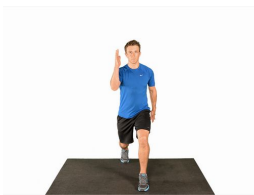
Start Position



Jump, driving off both legs



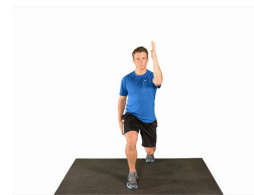
Land in lunge position with opposite leg forward



Start Position



Jump high



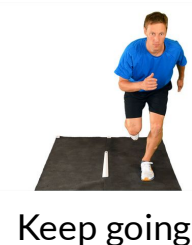
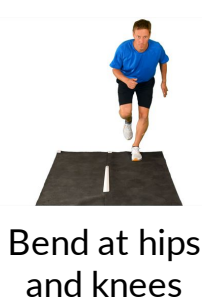
Land soft

5. Bounding

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Execution:

- Bend at knees and hip, propel yourself forward onto the opposite leg
- Immediately jump forward onto other foot
- Continue forward



6. Side Plank | Hand and Feet (Bosu)

Sets: 3 | Reps: 8-15 | Frequency: Alternate Days

Preparation:

- Position yourself on your side, hand on Bosu as shown
- Have your knees, hips and head in a straight line

Execution:

- Push up onto your hand and lift hips off the floor to make a bridge



Plank

7. Jogging / Running

Jogging / Running

- Start with 1-3Km
- Progressively increase one variable at a time
 - Intensity/Speed
 - Distance



Jogging / Running