

Level 1 Function:

Potential inclusion criteria:

- Uncomfortable to pressure through outside of thigh and hip
- Unable to touch heel to buttocks, unable to cross leg (with foot on opposite knee) and bring knee to 90° (level with floor)
- Build tolerance to tissue loading prior to strengthening for 10 days.

Goals:

- Improve tolerance to tissue stretching
- Able to foam roll with mild discomfort 5 min daily

Requirement for progression:

- 10 days of diligent adherence to program

Aerobic Exercise:

Avoiding running, and jumping. Continue to exercise with non-weightbearing exercises like swimming and cycling if tolerated well.

1. Thigh Release (Foam Roller)

Sets: 1 | **Intensity:** 3/10 discomfort | **Duration:** 1 min - 5 min per sensitive area | **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

2. Gluteus Release (Foam Roller)

Sets: 1 | **Intensity:** 3/10 discomfort |
Duration: 1 min - 5 min per sensitive area |
Frequency: daily

Execution:

- Roll your buttock muscles out on the foam roll.
- Stop on tight portions of the muscle to allow them to release.



Roll buttock muscles on foam roll



Stop over tight muscles

3. Deep Gluteal Stretch | Table

Sets: 3 | **Hold:** 30 seconds |
Intensity: 4/10 discomfort | **Frequency:** Daily

Preparation:

- Position leg up on table as shown

Execution:

- Lean forward from the hip
- Rotate toward hip



Lean forward from the hip



Rotate toward hip

4. Quadriceps Stretch (Box)

Sets: 3 | Hold: 30 seconds | Frequency: Daily
Intensity: 4/10 discomfort

Preparation:

- Kneel on the ground with back foot on box or step as shown
- Rotate your pelvis slightly backward, flattening your lower back

Execution:

- Lean back slightly to feel a stretch



Keep pelvis rotated

5. Iliopsoas Stretch | In-line Lunge

Sets: 3 | Hold: 30 seconds | Frequency: Daily
Intensity: 4/10 discomfort

Preparation:

- Kneel on the ground, uninvolved leg forwards.
- Front foot is directly inline with the back knee.
- Tuck your tail bone under (flattening your lower back)

Execution:

- Lean forwards, while maintaining straight posture and keeping your head up.
- Avoid arching your lower back.



Squeeze buttocks, lean forward, back straight



Front foot directly inline with back knee

6. Hip Abduction Sidelying- Bottom Leg Bent

Sets: 3-4 | **Reps:** 8-15 | **Hold:** 1-2 seconds |
Frequency: Alternate days

Preparation:

- Lie on side, bottom leg bent

Execution:

- Raise top leg from the hip
- Do not arch back



Lie on side



Raise top leg from the
hip

Level 2 Function

Requirement for inclusion:

- Completion of level 1 goals
- Able to tolerate 5 reps 3 sets without significantly increase knee pain.

Requirement for progression:

- Tolerating max reps and sets without significant increase in knee pain.

Aerobic Exercise:

- Avoiding running, and jumping. Continue to exercise with non-weightbearing exercises like swimming and cycling if tolerated well.

Goals:

- Increase tolerance to load and strengthen patellar tendon.

1. Step Up | Gluteal Focus

Sets: 3-4 | Reps: 8-15 | Hold: 1-2 seconds |
Frequency: Alternate days

Preparation:

- Stand in front of a step

Execution:

- Place foot on step
- Lean forward, keep chest up
- Step tall, driving with the midfoot
- Keep your knee aligned over your foot



Lean forward,
keep chest up



Step tall, driving
with the
midfoot



Knee aligned
over foot

2. Squat | Heels Raised

Sets: 3-4 | **Reps:** 5 | **Hold:** 5-10 seconds

Frequency: Alternate days

Preparation:

- Stand with good posture
- Heels are raised on a small box, book, etc

Execution:

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



Start position - Heels raised



Squat - Keep back straight



Front view



Knees aligned over toes, bend at hips

3. Chair Squat (Chair)

Sets: 3-4 | **Reps:** 8-15 | **Hold:** 1-2 seconds

Frequency: Alternate days

Preparation:

- Stand in front of a chair or bench, feet shoulder width apart

Execution:

- Perform a squat by bending at the hip
- Stop when your bum touches the chair or bench
- Rise up by straightening at the hip



Start Position



Squat - Bend at the hip, back flat



Knees aligned with toes



Finish Position

Level 3 Function

Potential inclusion criteria:

- Completion of level 2

Requirement for progression:

- Tolerating max reps and sets without significant increase in knee pain.

Aerobic Exercise:

- Avoiding running, and jumping. Continue to exercise with non-weightbearing exercises like swimming and cycling if tolerated well.

Goals:

- Increase tolerance to load through hips, achieve hip and knee alignment in single leg stance. Able to tolerant full body weight load through range through patellar tendon.

1. Squat | Proper Alignment

Sets: 3 | **Reps:** 5-8 | **Tempo:** 5 second lowering phase |
Frequency: 3x weekly |
Depth: As deep as good technique can achieve

Tips to Remember:

When going from sit to stand, squatting, jumping **avoid:**

- Knees falling inwards
- Rounded lower back
- Bending forward excessively at the trunk and ankles



Incorrect knee alignment



Correct alignment - front view



Incorrect back



Correct alignment - side view

2. Single Leg Squat (Chair)

Sets: 3 | Reps: 5-8 | Tempo: 5 sec lowering phase |
Frequency: 3x weekly

Preparation:

- Stand on one foot in front of a chair or bench as shown

Execution:

- Perform a single leg squat to the depth of the chair or bench
- Use both legs to return to standing



Start Position



Squat on one leg with good form



End at the depth of the chair or bench



Start Position



Lower with control



End at the depth of the chair or bench

Return to activity

Build back into your activity or sport, progressing slowly 10% per week in increase time or intensity.