**Knee Strengthening Protocol**

### Assisted Chair Squat
Standing in front of a chair
Slowly squat down while reaching for the arms of the chair
Continue until you feel the chair beneath your buttock
Slowly raise back up to a standing position

**Frequency:** 3 sets of 15 reps.  
**Goal:** Improve lower leg strength and balance

### Chair Squat
Standing in front of a chair
Slowly squat down
Continue until you feel the chair beneath your buttock
Hold for 3 seconds and return to standing position

**Frequency:** 3 sets of 15 reps.  
**Goal:** Improve lower leg strength and balance

### Step Ups
Stand in front of step with one leg on the step
Slowly rise up onto the step
Slowly lower down and repeat
Use a railing to assist with balance

**Frequency:** 3 sets of 15 reps.  
**Goal:** Improve lower leg strength and balance

### Single Leg Half Squat
Stand on one leg, next to a stable object like a chair
Keep knee in line with the foot at all times
Slowly bend knee to 45 degrees and hold for 3 sec.
Return to starting position by pushing through the heel.
Work towards performing this exercise without assistance of a chair

**Frequency:** 3 sets of 15 reps.  
**Goal:** Improve lower leg strength and balance
**Knee Strengthening PROTOCOL**

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**Wall Slides**
Stand with feet 18in. in front of a wall  
Feet should be shoulder width apart  
Slowly lower to 45 degree of knee flexion  
Patient can also squeeze a physioball between their knees.

**Frequency:** 3 sets of 45-60 sec.  
**Goal:** Three times per week  
*Improve quad and hip strength*

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**Straight Leg Raise**
Begin in a seated position, resting back on hands.  
Flex quad muscles  
Slowly raise leg up 24 inches and hold 5 sec.  
Slowly lower down.

**Frequency:** 3 sets of 15 reps.  
**Goal:** 3 times per week.  
*Improved quadriceps strength.*

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**Back Bridge**
Lie down with knee bent  
Slowly push heels into ground  
Rise buttock until body is straight  
Hold 3 sec and return to start position

**Frequency:** 3 sets of 15 reps.  
**Goal:** 3 times per week.  
*Improved quadriceps strength.*

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**Chair Walks**
Sit on an office chair with wheels on a hard surface  
Holding onto the chair slowly extend leg  
Pushing heel into the ground, pull body/chair forward  
Continue with the other leg

**Frequency:** 3 sets of 15 reps.  
**Goal:** 3 times per week.  
*Improved quadriceps strength.*