

KNEE EXERCISES

STRETCHING EXERCISES

1. Quadriceps stretch:



Preparation: Stand and touch wall or stationary object for balance. Grasp top ankle or forefoot behind. Pull ankle or forefoot to rear end.

Execution: Straighten hip by moving knee backward. Hold stretch for 20 seconds. Repeat with opposite side. Do three sets each side.

2. Hamstring Stretching



Preparation: Lie on back and lift knee up. Grasp behind thigh near knee with both hands. Pull knee close to chest.

Execution: Extend knee while maintaining knee close to chest. Hold stretch for 20 seconds. Repeat with opposite leg. Do three sets each side.

3. Calf Stretching



Preparation: Place both hands on wall with arms extended. Lean against wall with one leg bent forward and the other leg extended back with knee straight and foot positioned directly forward.

Execution: Push rear heel to floor and move hips slightly forward. Hold stretch. Repeat with opposite leg.

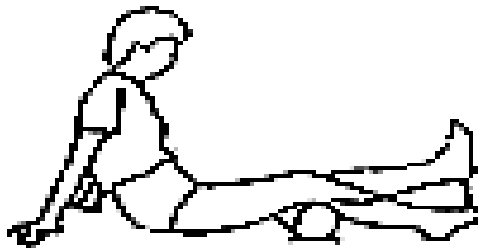
STRENGTHENING EXERCISES

1. Eccentric quadriceps:



On a stair or raised surface, step slowly down with one leg, just touching the surface with your toes and then return to the starting position

2. Static quadriceps exercise



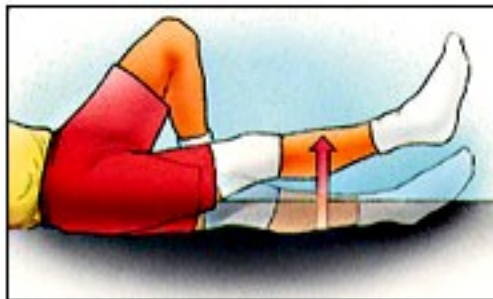
Sit comfortably. Put a rolled towel underneath your knee, Straighten your knee by tightening your thigh muscles. Hold for 20 seconds and relax. Rest for 5 seconds and repeat the same. Do 10 sets each knee.

3. *Partial Squat, with Chair*



Hold onto a sturdy chair or counter with your feet 6-12 inches from the chair or counter. Do not bend all the way down. DO NOT go any lower than 90 degrees. Keep back straight. Hold for 15 seconds. Slowly come back up. Rest for 5 seconds. Repeat 10 times.

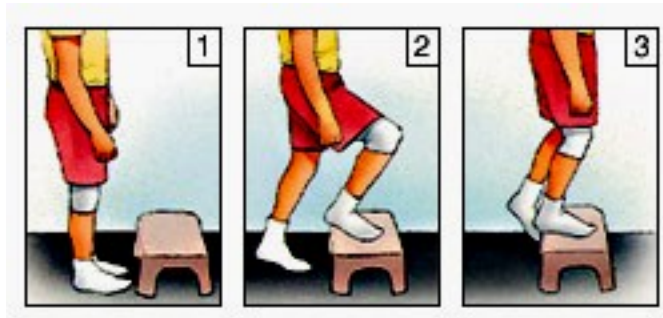
4. *Straight Leg Raises*



Lie on your back, with your uninvolved knee bent. Straighten your other knee with a quadriceps muscle contraction. Now, slowly raise your leg until your foot is about 12 inches from the floor. Slowly lower it to the floor and relax. Perform 5 sets of 10 repetitions.

Advanced: Before starting, add weights to your ankle, starting with 1 pound of weight and building up to a maximum of 5 pounds of weight over 4 weeks.

5. Step-ups, Forward



Step forward up onto a 6-inch high stool, leading with your involved leg. Step down, returning to the starting position. Increase the height of the platform as strength increases. Repeat 10 times.

6. Step-ups, Lateral



Step up onto a 6-inch high stool, leading with your involved leg. Step down, returning to the starting position. Increase the height of the platform as strength increases. Repeat 10 times

7. *Quadriceps, strengthening with theraband*



Sit erect with one leg on the ground and the theraband around the involved leg. Move the knee from the bend position to straighten and hold it for 10 counts and let go. Repeat the same for 10 to 20 times. Caution is to exhale in the hold phase.

8. *Quadriceps strengthening with weight cuffs or sand bags*



sit on the bed or table preferably on a high rise one and tie the sand bag or a weight cuff to the lower leg and from the bend position, straighten the knee and hold it for 10 counts. Repeat the same for 10 to 20 times.

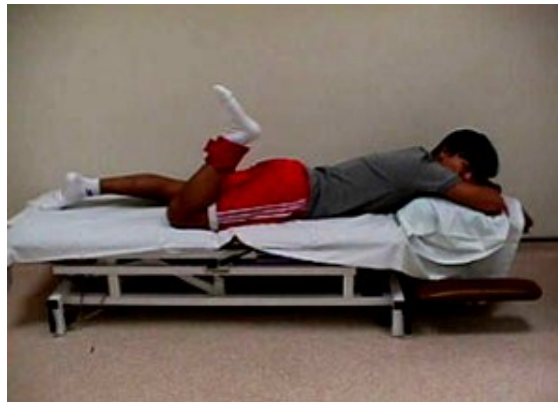
ROM EXERCISES

1. Heel slides:



Lie on the table and slide the heel of the foot towards the buttocks and let go. Repeat the same for 20 times

2. Knee curls



Lie on the table with the face down position and bend the knee to bring as close as possible to touch the buttock and let go. Repeat the same for 20 times.