

Knee Strengthening Program

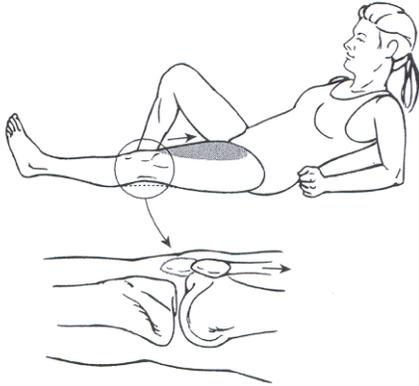


Fig 1: Quadriceps Isometrics. Lie with leg straight, tighten quad as you push the back of the knee flat on the ground. Hold and repeat.



Fig 4: Isometric Quadriceps Strengthening. Sit with knee bent 75- 90 degrees. Palpate the muscle just above the kneecap on the inside of the thigh (VMO). Push foot into the floor, tightening the thigh, concentrate on the VMO. Hold and repeat.



Fig 2: Short Arc Quadriceps. Place a roll or bolster under the knee, and tighten the front of the thigh while lifting the heel off the floor. Hold and repeat.

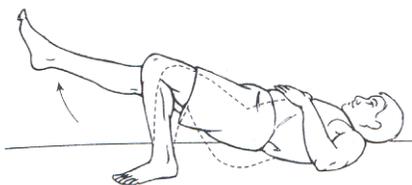


Fig 3: Hip Extension. Lie on your back with knees bent. Raise hips/buttocks off the floor, keeping the pelvis straight. Start with two feet on the floor progress to one on the floor.



Fig 5: Standing Quarter Squats. Start standing with weight on both legs, then progress to weight on the affected leg. Do not bend more than 45 degrees.

Knee Strengthening Program

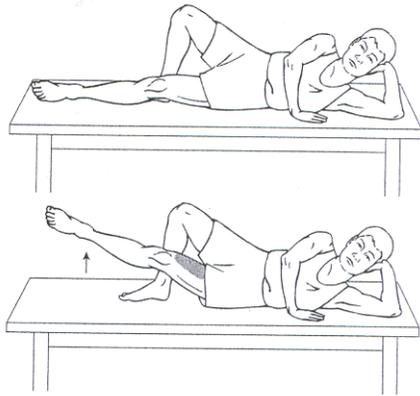


Fig 6: Hip Adduction. Lie on the side with the weak side down. Use upper leg to balance and slowly raise the lower leg as shown. Hold, lower and repeat.

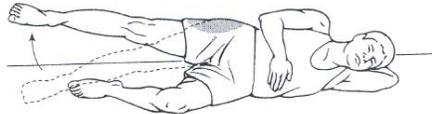


Fig 7: Hip Abduction. Lie on the side with weak side on top. With upper leg straight, lift up leading with the heel. Hold, lower and repeat.

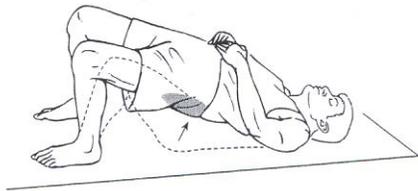


Fig 8: Hip Extensors. Lie on the back, feet flat on the floor. Tighten buttocks, push down through feet and raise buttocks as high as possible. Hold, lower and repeat.

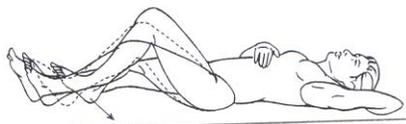


Fig 9: Hamstring Isometrics. Lie on the back, bend your knee up to 90 degrees hold

while pulling heel into the floor. Hold, relax and repeat.

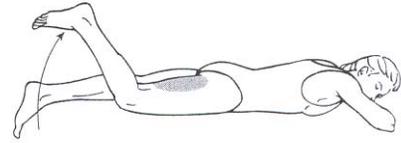


Fig 10: Hamstring Curls. Lie on the stomach, bend knee to 90 degrees. Hold, slowly return to start and repeat.

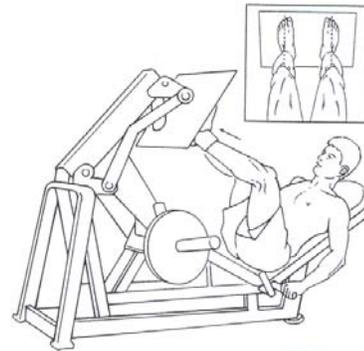


Fig 11: Leg Press. These are best done with one leg at a time always with a low weight and high repetitions (3 sets of 20 reps). Do not bend the knees further than 45 degrees.



Fig 12: Stationary Bike and Elliptical machine are also lower impact cardiovascular exercise that promotes strengthening.