

Quadriceps Ladder Strength

***Use 7 sec. Rule** means 7 seconds work, then 7 seconds rest; ideally repeat seven times a day, but at least three to five times daily.

| | |
|----|---|
| 10 | Weights. Resume normal weight training to level before training |
| 9 | Hop, step and jump. The idea is to travel as far as you can and as this is measurable you can compete with other recuperating athletes. Start with right toe on a line, hop onto right foot, step onto left foot, jump from left foot, land on both feet, or continue to hop. Measure distance travelled. Repeat with left foot. Repeat five times each side. |
| 8 | Depth jumps. Jump down from a 15-20 cm. step then up and over string, or bar as high as you can. Drop this height by 5 cm and repeat 10 times. Then jump rhythmically over the bar with no bounce in between. Start with both legs. Eventually improve to single leg jumps over weeks gradually raising the height of the step but not more than 40 cm. |
| 7 | Bike routine. Use as high a gear as comfortable with a low pedal rate, continuing until the muscle begins to ache, rest 5-10 min. and repeat as fitness allows. Vary the seat height to make the knee work straighter, or more flexed. Maintain rhythm and do not favour the injured leg. Keep the vertically above the foot. |
| 6 | Squats. Sit with back against a wall with thighs parallel to the ground and hold for as long possible. Move on to squatting with light weights position but not below 90° knee bend |
| 5 | Leg press machine. If available use a leg press machine for closed chain work. Leg extensions which are open chain, should not be used for anterior cruciate ligament injuries. |
| 4 | Slow step ups. Step on to a low bench, or stair using alternate feet and the flat of the foot and not the toes. |
| 3 | Balance on injured leg with half squat (see attached half-squat illustration). *Use 7 sec. Rule (see above for details) |
| 2 | Knee extensions. Support upper leg of injured knee and straighten leg into extension, add a weight e.g. 2kg bag of sugar and repeat extensions. Increase weights. (NOT for anterior cruciate ligament). |
| 1 | In a standing position lock knee into extension. Sit and cross heel of uninjured leg over ankle of injured leg and resist quadriceps extension of injured leg. Use * 7 sec. Rule |