

# ECCENTRIC HAMSTRING EXERCISES

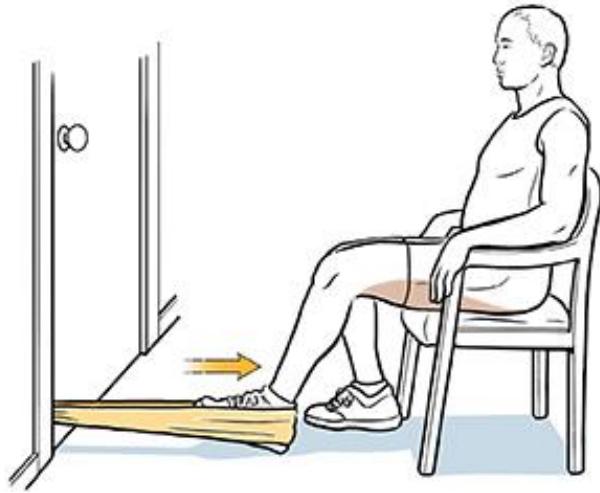
Eccentric hamstring exercises have been shown to prevent initial and recurrent hamstring injuries. These eccentric exercises are a vital part of breaking the cycle of pain, atrophy, weakness and re-injury. The following are several examples of exercises to incorporate into your rehabilitation. These exercises are more difficult and should be incorporated into your routine as your rehab progresses. It is best to get approval of either Dr. Miller and/or your physical therapist. An eccentric contraction is a motion where the muscle is activated while lengthening under a given load. In the case of the hamstring, the eccentric contraction occurs when there is more time and tension during extension (or straightening) of the affected leg. These exercises should not be performed more than 2-3 times per week.

## 1.) PRONE HAMSTRING CURL:



- Place weight or theraband around the ankle of the affected leg (if available). If using a theraband, attach band around both legs as seen in above picture to provide resistance.
- Cue for a 1-2-3 count on the way up and a 1-2-3-4-5 count on the way down emphasizing this tempo to enforce time under tension while extending the leg
- Complete 3 sets of 10-15 repetitions

## 2.) SEATED THERABAND HAMSTRING CURL:



- Place exercise band around ankle of affected ankle and maintain proper seating posture. The other end of the band needs to be fixed to something directly in front of you.
- Cue for 1-2-3 count while bending your leg towards you, then emphasize a 1-2-3-4-5 count while allowing your leg to return to an extended (straightened) position.
- Complete 3 sets of 10-15 repetitions

### 3.) EXERCISE BALL (or glider) BRIDGE WITH CURL:



- Lay supine on the floor placing both feet (heels) on the top of an exercise ball or gliders.
- Start with your knees straight and lift your buttocks from the floor into a bridge position.
- With heels on the ball/glider, curl your legs bringing your heels towards your buttocks. Then return your legs to a straightened position and return buttocks to the floor. Make sure to slowly return legs to a fully extended position to emphasize the eccentric movement. This is one repetition.

- To make this exercise more difficult you can progress to doing the exercise one legged while the opposite leg remains in the air.
- Complete 3 sets of 8-10 repetitions.

#### 4.) NORDIC HAMSTRING CURL:



- While kneeling, lock both ankles down with a piece of gym equipment or with the hands of a helper.
- Slowly lower the torso forward while keeping the thighs in line with your torso, keeping the body in a straight line the whole time. Lower your body slowly until you feel you can not control the movement any longer.
- Place your hands in front of you to lower yourself to the floor. Then use your hands to propel yourself upwards to repeat the longer portion again. Again emphasizing the lowering motion to highlight the eccentric portion.
- Complete 3 sets of 8-10 repetitions

#### 5.) STIFF-LEGGED DEADLIFT:



- Stand tall with the torso straight, feet shoulder-width apart and knees slightly bent. (Weights are optional to make exercise more difficult)
- Keep your knees slightly bent and hinge forward at your hips while keeping your back straight.
- Continue to lower until you feel a stretch in your hamstrings then bring the torso up straight again by extending your hips until you are back at the starting position. This is one rep.
- Complete 3 sets of 10-15 repetitions.

## 6.) SINGLE LEG DEADLIFT:



- Standing on one foot, get a slight bend in that knee. (Weights are optional)
- Similar to the previous exercise, bend forward at the waist hinging at the hips and keeping your back straight while extending the opposite leg behind you (as picture above).
- Your torso and opposite leg should be in line at the end of the movement and should move together as one unit as you return to a standing position.
- Complete 3 sets of 10 repetition on each leg