Functional problems associated with the knee—Part 2: Do tight hamstrings only need stretching?

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Most active people and trainers place a great deal of emphasis on stretching tight hamstrings. Sadly, the tightness usually only decreases for a short time only to come back over and over again. If a muscle is very tight it is better to find out the cause of the tightness, rather than to continue to treat the symptom (e.g. poor flexibility, pulled muscles).

One of the main factors associated with knee problems is weak hamstrings. Most people utilize the front of their thighs (the quadriceps) too much which puts added stress on their knees. A key way to help reduce knee pain and improve stability is to strengthen the hamstring muscles in the back of the thigh and knee. This will also help the muscles to stay relaxed since they will not be constantly getting overloaded causing a vicious cycle of overload → reactive tightness → more overload.

It is simple to strengthen the hamstrings using a bridge exercise on a gymnastic ball.

Bridge up and down

- Place your heels on the apex of the ball.
- Press your heels into the ball to bridge your body up.

- Lower down.
- Perform 8–12 repetitions (see Figs. 1a and b).
- To progress the exercise either attempt the Curl exercise or perform with a single leg (see Fig. 2).
- Perform with your arms at your sides for better balance.
Curls

- Place your heels on the apex of the ball.
- Press your heels into the ball to bridge your body up.

- Without lowering down curl the ball back towards your buttock.
- Then push the ball out until your legs are straight, but stay in an elevated position.
- Perform 8–12 repetitions (see Figs. 3a and b).
- To progress the exercise either attempt the Short-arc curl exercise or perform with a single leg (see Figs. 4a–c).

Short-arc curls

- Bend your knees to a right angle and place your heels on the apex of the ball.
- Press your heels into the ball to bridge your body up while curling the ball all the way in towards your buttock.
- Then lower your buttocks to the floor while pushing the ball out until your knees are bent at a right angle.
- Perform 8–12 repetitions (see Figs. 5 and b).
- To progress the exercise perform with a single leg (see Figs. 6a and b).