

Appreciation your Quadriceps muscles

The Quadriceps are the most voluminous muscle of the human body. They form the bulk of the thigh, and collectively are the most powerful muscles in the body. They consist of four individual muscles, three vastus muscles and the rectus femoris. Their purpose is to flex the hip and extend the knee.

The four sub-components being:

- Rectus femoris
- Vastus lateralis
- Vastus medialis
- Vastus intermedius



Attachment

These muscles unite distally above the knee and attach to the Patella, which in turn attaches to the Tibia by a ligament.

The Function of the Quadriceps

The Quadriceps extend (straighten) the knee, and the rectus femoris also flexes the hip. The vastus medialis abducts the thigh from the central line and extends and externally rotates the thigh as well as stabilising the knee. In everyday life, the quadriceps help us to stand up from a sitting, walk, climb the stairs and squatting. They are used in walking and running at the onset of a stride and get used significantly when going downhill.

Exercises and stretches

Some quad exercises place a lot of stress on the knee joint. Be sure to check in with your healthcare provider before starting exercises.

Remember; stop if you feel any increased pain or difficulty during exercises.

Straight Leg Raises

The straight leg raise is a simple way to get your quad muscles working properly.

1. Lie on your back on a flat surface.
2. Bend the knee of your uninvolved leg at the knee to a 90-degree angle, and place the foot flat on the surface.
3. Keep your other leg straight without the knee bent. Point your toes toward the ceiling.



STRAIGHT LEG RAISES

4. Slowly lift the involved leg 12 inches off the floor by contracting the front thigh muscles. Hold for 5 seconds.
5. Slowly lower your leg to the floor. Relax, then repeat 8 to 10 times.

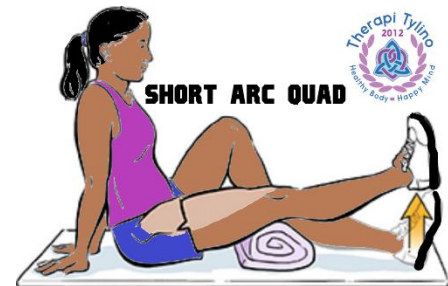
The knee of the raised leg should remain totally straight throughout the exercise.

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Short Arc Quads

The short arc quad exercise is a great way to focus on contracting your quadriceps muscles.

1. Lie on your back. With the knee supported.
2. Slowly straighten your bent knee until it is straight.
3. Tighten your quad muscles, with toes pointed toward the ceiling.
4. Hold it tight for 5 seconds.
5. Slowly lower your leg.



Repeat 10 times.

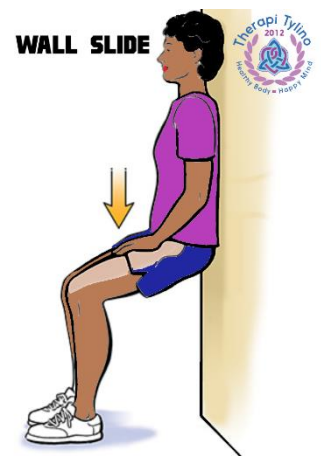
Lift and lower the leg in a slow, steady motion. Make sure the back of your knee stays against the bolster. When the knee is fully straight, contract the quadriceps to fully straighten the knee.

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Wall Slides

The wall slide exercise works multiple muscle groups, quadriceps, hamstrings, glutes, and abductors.

1. Stand upright with your back against a wall with feet shoulder-width apart.
2. Slowly bend your knees, sliding your back down the wall until your knees are bent at a 45-degree angle, for a count of five. Do not bend further than this, as it will put too much strain on the knees.
3. Hold this position for 5 seconds.
4. Straighten the knees, slowly sliding up the wall until fully upright and the knees straight.



Repeat 10 more times.

Things to Keep in Mind

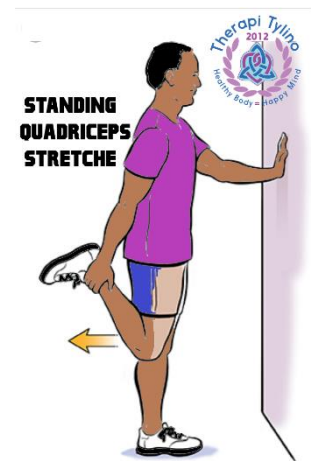
Be sure you lower and lift yourself in a slow, steady way. Don't squat too low; doing so may place too much strain on the knees.

Squatting too low can also make it difficult to rise back up.

Remember; stop if you feel any increased pain or difficulty during exercises.

Standing Quadriceps Stretch

1. Stand on your left foot and grab your right shin by bending your leg behind you.
2. Tuck your pelvis in, pull your shin toward your glutes, making sure your knee is pointing to the ground. Try not to pull the knee backward or sideways.
3. Hold for 30 seconds and then switch sides.



Remember; stop if you feel any increased pain or difficulty during exercises.

Ground stretch

1. Lie on your back at the corner of your bed (where it is the firmest), making sure that your tailbone is at the edge of the bed.
2. Grab one thigh and pull it toward your chest. Make sure that your back is flat and not arched. Let gravity pull down on the leg that is dangling.
3. Relax into the stretch so as not to tense up the muscles. Hold for 1 to 2 minutes and then switch sides



Remember; stop if you feel any increased pain or difficulty during exercises.

Side Lying Stretch

1. Lying on your side on your bed or floor in the position that is most comfortable for you.
2. Bring your ankle to your buttocks while bringing your arm back and holding on to your foot.
3. Gently bring your foot into your buttocks, feeling the stretch in the front of your thighs.



Hold for the set time and repeat on the other leg by safely rolling over and doing the same on the other side.

Remember; stop if you feel any increased pain or difficulty during exercises.

The importance of form

It is not just the stretches or exercises that are performed or the amount of time spent doing them that keep the quadriceps flexible. If they are not done correctly or consistently, it is just a waste of time. Bad technique can make the exercises less effective. In addition to properly stretching the quadriceps muscles, the calf muscles have to be exercised. Strong Quadriceps and Calfs help maximize the ability to move. It can also lower your risk of overuse injury.