

Strengthening Exercises: Lower Limbs

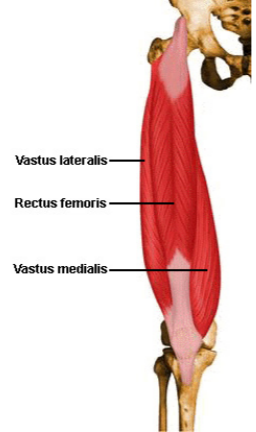
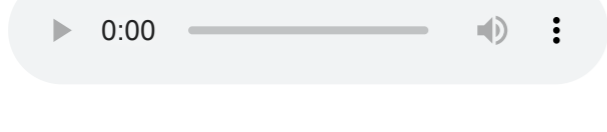
Bending Hips With Knees Bent - Rectus femoris

Bend your left knee 90 degrees. Try to lift your left thigh while pushing down with your left forearm and hand. Resisting works your triceps. Repeat this exercise using your right thigh as the working leg and your right as the resisting arm.

For a variation that is not isometric, but more like lifting weights, bend your left knee and lift your left thigh 30 times. In this variation, the weight of your leg produces the resistance. Repeat on the right.

See a fun fact about the rectus femoris.

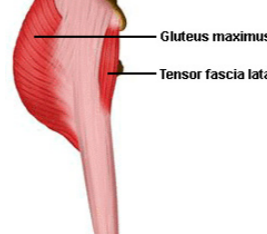
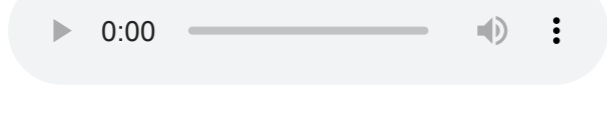
Listen to Bending Hips with Knees Bent Instructions



Moving hip and thigh to the back: Gluteus Maximus

The gluteus maximus is hard to target when sitting. If you have room to stand, here's a non-isometric exercise to target this muscle. Stand on your right leg. Keeping your left knee straight, lift your left leg out to the back. Your trunk will shift slightly forward. Slowly return to the starting position. You can do this with your foot pointing forward or to the side. Repeat 30 times. Now stand on your left leg and lift your right leg to the back.

Listen to Moving Hip and Thigh to the Back Instructions



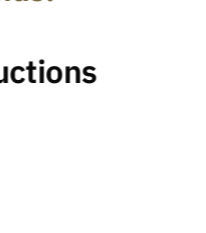
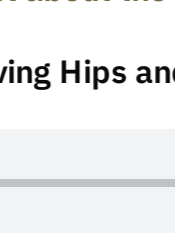
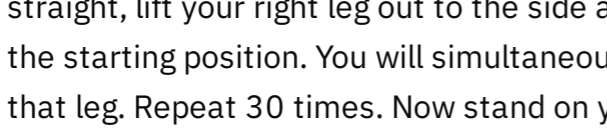
Moving Hips and Thighs to the Side - Gluteus Medius and Minimus

Bend your knees 90 degrees. Put your right palm against the outside of your right knee and your left palm on the outside of your left knee. Keeping your feet flat on the ground, try to push your knees to the outside while resisting with your arms. Resisting works your pectoral muscles.

Non-isometric variation: if you have room to stand, put all your weight on your left leg and keeping your right knee straight, lift your right leg out to the side about 30 degrees. Your trunk will shift slightly toward the left. Slowly return to the starting position. You will simultaneously use the same muscles on your left leg to stabilize having all your weight on that leg. Repeat 30 times. Now stand on your right leg and lift your left leg out to the side.

See a fun fact about the gluteus medius and minimus.

Listen to Moving Hips and Thighs to the Side Instructions



Targeting Many Hip and Thigh Muscles at the Same Time

The Clock Exercise - Standing. Holding your arms out to the sides will help your balance and also work shoulder and arm muscles. If you have room to stand, imagine that you are standing in the center of a clock. Lift your right leg slightly off the ground at 12 o'clock and move it to 1 o'clock, letting your foot touch the ground at 1 o'clock. Then lift your leg then touch down at 2 o'clock. Keep going, touching down at each number until you get to 6 o'clock. Your right leg is now behind you.

Reverse the semi-circle you've just made by returning your right leg to 12 o'clock, touching down at 5, 4, 3, 2, and 1 o'clock. You'll be using muscles on the outside of your hips and thighs on both your moving leg and supporting leg.

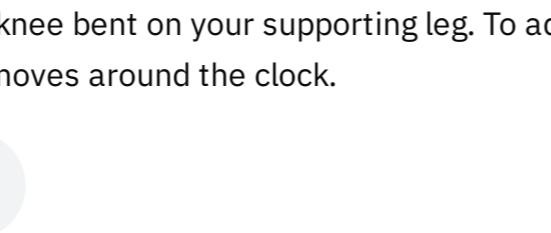
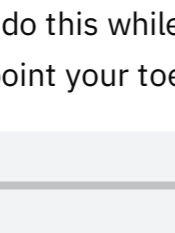
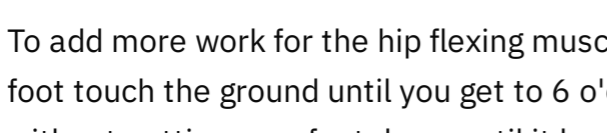
Now stand on your right leg and repeat with your left leg going from 12 o'clock to 11, 10, 9, etc. Repeat 10 times.

To add work on your quad muscles on your supporting leg, bend your knee slightly on your supporting each time your moving leg stops to touch down at a clock number. You're effectively doing mini squats on the supporting leg.

Make sure that your bending knee stays lined up with the foot on that leg. Don't let your knee or foot lean toward the moving leg. If your kneecap starts to hurt, don't do this variation.

To add more work for the hip flexing muscles on your moving leg, make these half clock circles without letting the moving foot touch the ground until you get to 6 o'clock. Or, make the half-circle to 6 o'clock, as well as the return to 12 o'clock, without putting your foot down until it has reached 12 o'clock.

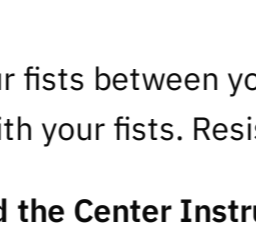
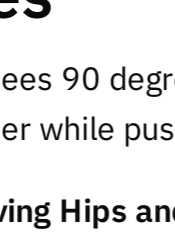
You can also do this while keeping your knee bent on your supporting leg. To add work to your calf muscles on the moving leg, point your toes as your leg moves around the clock.



Moving Hips and Thighs toward the Center - Adductor Muscles

Bend your knees 90 degrees and put your fists between your knees. Keeping your feet flat on the ground, try to pull your knees together while pushing outward with your fists. Resisting also works your deltoid and triceps muscles.

Listen to Moving Hips and Thighs toward the Center Instructions

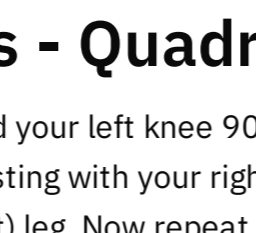
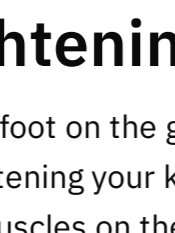


Straightening Knees - Quadriceps

Put your left foot on the ground and bend your left knee 90 degrees. Try to move your left leg forward (as though you were straightening your knee) while resisting with your right foot placed **in front** of your left ankle. Resisting works the hamstring muscles on the opposite (right) leg. Now repeat this exercise using your right thigh as the working leg and your left as the resisting leg.

See a fun fact about the quadriceps.

Listen to Straightening Knees Instructions



Bending Knees - Hamstrings

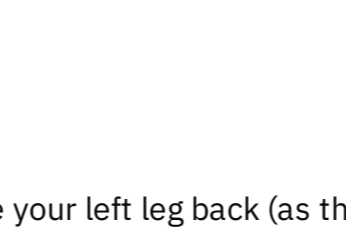
Put your left foot on the ground and bend your left knee 90 degrees. Try to move your left leg back (as though you were bending your knee) while resisting with your right foot placed **behind** your left ankle.

Resisting works the quadriceps muscles on the opposite (right) leg.

Now repeat this exercise using your right thigh as the working leg and your left as the resisting leg.

See a fun fact about the hamstrings.

Listen to Bending Knees Instructions



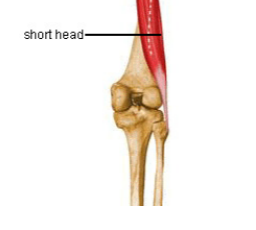
Lifting Heels - Gastrocnemius and Soleus

Bend your knees 90 degrees and start with your feet flat on the ground. Keep your toes on the ground and lift your heels. To add resistance, push down on your thighs with your hands. Resisting uses your triceps and forearm muscles.

If you have room to stand, place your feet facing forward and hip width apart. Count to 5 while slowly lifting your heels until you're standing on your toes. Count to 5 again while slowly lowering your heels back to the ground. Keeping your heels on the ground count to 5 a third time while bending your knees very slightly so that you're doing a mini-squat. Finally count to 5 while straightening your knees and returning to the starting position. Repeat 10 times.

See a fun fact about the calf muscles.

Listen to Lifting Heels Instructions

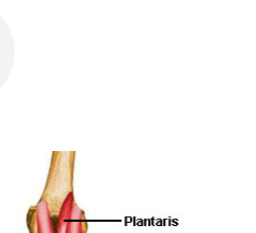
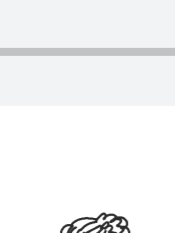
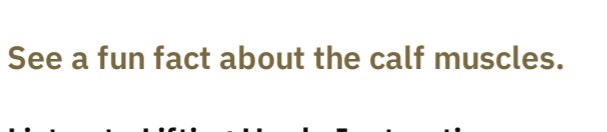


Lifting Forefoot - Tibialis Anterior

Bend your knees 90 degrees and start with your feet on the floor in front of you. Lift your toes and the front part of your feet, leaving only your heels on the ground. This simultaneously stretches one of your two calf muscles.

To add resistance, work one foot at a time, pushing down with the opposite foot on top of the one you are raising.

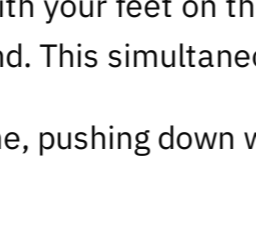
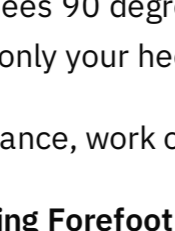
Listen to Lifting Forefoot Instructions



Rotating Feet Outward - Peroneal Muscles

Bend your knees 90 degrees. Keeping your heels on the ground and touching each other, lift your feet, rotating the fronts of your feet outward.

Listen to Rotating Feet Outward Instructions



Scrunching Toes - Flexor Digitorum and other Foot Muscles

With your feet on the ground, scrunch your toes.

Listen to Scrunching Toes Instructions

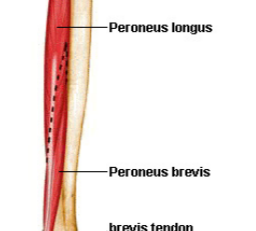


Spreading Toes - Intrinsic Muscles of the Foot

Work both sides simultaneously. Try spreading your toes. Don't be discouraged if you can't do this. These muscles aren't used frequently unless you often walk barefoot, especially in sand, or do ballet or modern dance.

See a fun fact about the toe muscles.

Listen to Spreading Toes Instructions



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Department of Orthopaedic Surgery and Sports Medicine

University of Washington
 1959 N.E. Pacific St.
 Box 356500
 Seattle, WA 98195-6500

