ISOMETRIC QUADRICEPS EXERCISES TO REGAIN STRENGTH

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Anyone looking for an easy and effective way to improve quad strength and flexibility can try isometric exercises.

Isometrics is a low-intensity exercise training that is used for strength and rehabilitation purposes.

You can do various isometric quadriceps exercises to rebuild strength and increase muscle endurance.

Doing isometric exercises for quads also bolsters strength, reduces pain, and improves mobility in the knees.

Quads and knees are involved in various activities, from walking, jumping, and running to sprinting, deadlifting, and squatting. So, strengthening them is crucial for overall performance.

Benefits

Here are some benefits you can expect from isometric exercise training:

Strengthen Muscles

The isometric exercises keep the muscles under constant tension and help increase strength and muscle endurance.

A study has shown performing isometric quadriceps exercises at low velocity improves dynamic strength, relieves pain, and helps improve muscle functionality.[1], [2]

Reduce Knee Pain

Research has demonstrated that quadriceps isometric exercises ease knee pain and joint stiffness and increase physical function in patients with knee.[3], [4], [5]

So, you can also perform static exercises to improve knee joint function, reduce knee pain, and improve physical performance where the lower body is primarily involved.

Exercises

1. Lying Prone isometric Quad Contraction
2. Half Seated Isometric Quad Contraction
3. Short Arc Quad
4. Bodyweight Leg Extension
5. Wall Sit
6. Standing Wall Supported Quad Contraction

Note: If you've knee/quad injuries, consult your doctor before performing any exercise mentioned in this article.

1. Seated Isometric Quad Contraction

Static quad contraction is a low-pact exercise that can help you rebuild the strength of your quadriceps.

You can also perform this exercise to stretch your quad before resistance exercises.

Steps to do it:

- Sit on the floor with your legs straight in front of you.
- You can roll a towel and put it under your lower leg (injured one), between the calf and ankle.
- Slightly lean back and place your hands on the floor with your arms straight and fingers pointing back. That's the starting position.
- Flex your right knee slightly and then extend it until you feel the contraction in your quad.
- Pause for five seconds, then repeat. Do it ten times.

You can also perform this exercise by sitting on the floor and resting your back on the wall for support.

2. Lying Prone Isometric Quad Contraction

The lying quad set is another way to activate quadriceps muscles. It isolates the quad from a different angle and helps recover your strength.

Steps to do it:

- Lie prone on the floor with your face down and legs straight. You can place a folded towel below your shin. That's the start.
- Contracting your quad, extend your feet until you feel the stretch in your front thigh.
- Pause for five seconds, then repeat. Do it as many times as you like. You can train each side or only the injured one.

3. Short Arc Quad

The short arc quad helps stretch the quadriceps and treat minor pain. You can also use it to rebuild your quad strength.

Steps to do it:

- Sit on the floor with your legs straight and your back resting on the wall.
- Roll a towel or bed sheet and place it below your knee (the one you want to strengthen). That's the starting position.
- Flex your knee, then extend it fully to get the full contraction in your quad.
- Pause for five to ten seconds, then repeat. Do it ten times.

4. Bodyweight Leg Extension

Doing leg extensions without weight also helps in recovering from quads injury. It is also known as a long arc quad. You can pair it with other static quad exercises to improve your thigh health.

Steps to do it:

- Sit on the bench with your feet flat on the ground.
- Keep your torso upright and grip the sides of the bench for support.
- Extend your leg until your quad is activated.
- Pause for three to five seconds, then bring your leg to the start.
- Do it as many times as needed.

5. Standing Wall Supported Quad Contraction

How to do it:

7. Stand in the hip-width stance with your back resting on the wall.
8. Keep your feet flat on the ground, a few inches away from the wall.
9. Place your hands on your hips and lift your toes off the floor until your quad muscles are fully engaged.
10. Pause for three to five seconds, then lower your toes on the ground and repeat for the desired times.

6. Wall Sit

Wall sit is one of the excellent isometric quads strengthening exercises that keep your muscles under constant tension and help increase strength and muscle endurance.

Depending on your quadricep's condition, you can integrate wall sit exercise into your rehabilitation program.

Here's how you can do it:

- Stand against the wall with your back resting on it.
- Lower into a squat until your knees and hips are in a straight line.
- Keep your chest up and arms bent across in front of your chest.
- Stay in the squat position for five seconds, then return to the start.
- Repeat as many times as you like.

How Often Can You Do Isometric Exercises?

Isometric is a low-intensity exercise training you can do every alternate day. However, be careful with how much you do. If you feel sore, decrease the frequency or discontinue.

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