

Total Knee Replacement Rehabilitation Exercises

Stage I Rehabilitation

The goal of the following exercises is to regain range of motion while limiting pain and inflammation. Initiate gentle strengthening exercises with the primary goal of activating the quadriceps. During Stage I, continue with **RICE** (Rest, Ice, Compression, and Elevation).

Heel Slides - Stage 1

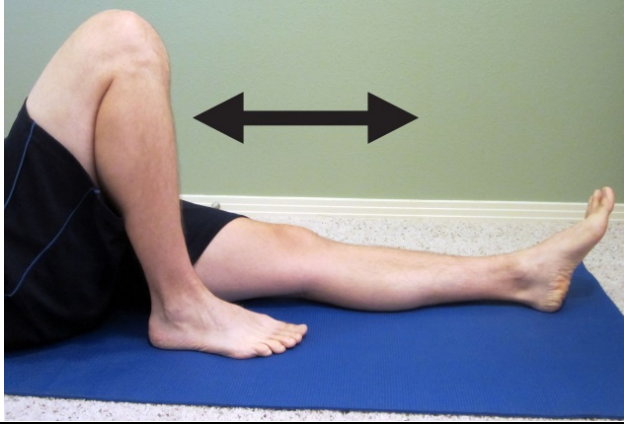
Start by lying on your back. Slowly extend the affected leg out straight if possible. If the knee feels stiff as it **straightens**, go slowly and work toward regaining full knee extension (straightening). This may take several days depending on pain and swelling. The pain should never be more than a mild to moderate discomfort.



Heel Slides - Stage 2

Slowly bend the affected knee by sliding the heel toward your buttocks. Slowly move back and forth. If the knee feels stiff as it **bends up**, slowly work toward regaining full motion. This may take several days depending on pain and swelling. The pain should never be more than a mild to moderate discomfort.

Perform 2 sets of 15 repetitions, 1-3 times per day.



Supine Knee Extension Stretch

Lie on a bed with your affected leg straight and your heel resting on a pillow, towel or foam roller. Do not have any support under the knee. The other leg can be bent or straight. Keep your toes pointed straight up in the air.

Hold in this position for at least 5 minutes at a time. Increase the length of time as possible.

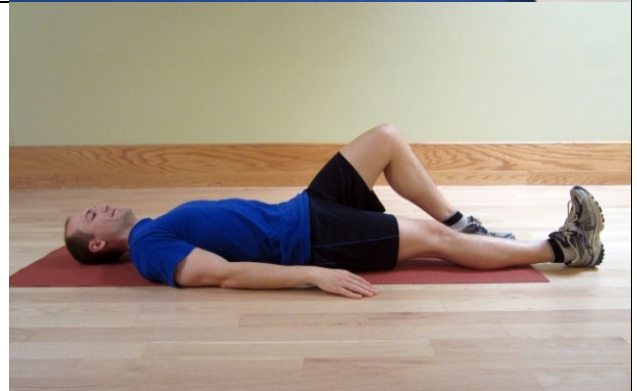
Perform at least 3 times per day. You may place an ice bag or a phone book over the knee for additional weight.



Quadriceps Set

Lie on your back with your affected leg as straight as possible. The other leg can be bent or straight. Keep your toes pointed straight up in the air. Tighten your thigh (quadriceps) muscle like you are attempting to straighten your knee.

Perform 2 sets of 10 repetitions, 1-3 times per day.



Stage II Rehabilitation

During this stage, many of the initial Stage I exercises are continued although the intensity may be increased. The goal remains to improve range of motion while working toward full knee extension and knee flexion. You may be able to begin to use a stationary bike. Continue with quadriceps strengthening and initiate more full leg strengthening (in particular, the gluteus medius in the hip).

Heel Slides - Stage 3

Slowly bend the affected knee by sliding the heel toward your buttocks. Utilize a belt or strap to increase the pressure and to bend the knee further. Slowly move back and forth. If the knee feels stiff as it **bends up**, slowly work toward regaining full motion. This may take several days depending on pain and swelling. The pain should never be more than a mild to moderate discomfort.

Perform 2 sets of 15 repetitions, 1-3 times per day.



Straight Leg Raise - Starting Position

Lie on your back with your affected leg straight. The other leg will be bent. Keep your toes pointed straight up in the air.



Straight Leg Raise

Raise your leg parallel to the bent leg. Don't arch your back. Keep your abdominals engaged. You could also add an ankle weight to increase the difficulty level.

Perform 2 sets of 10 repetitions, 3 times per day.



Seated Knee Extension Stretch

Place your affected side on a stool or chair of similar height. Do not have any support under the knee. Hold in this position for at least 5 minutes at a time. Increase the length of time as possible.

Perform at least 3 times per day. You may place an ice bag or a phone book over the knee for additional weight.



Seated Knee Flexion Stretch (Butt Scoot) - Stage 1

Sit on a chair. Bend your affected knee and slide your heel backward. Bend it as far as you can. Hold your foot firmly down on the ground.



Seated Knee Flexion Stretch (Butt Scoot) - Stage 2

Keep your knee bent and your foot firmly on the ground. Use your arms to assist while you scoot your buttocks forward (causing your knee to bend further). Hold, and then return to your original starting position. Repeat.

Perform 1 set of 15 repetitions, 3 times per day.



Supine Hamstring Stretch with a Strap

Utilize a belt or strap around your foot to help you perform a hamstring stretch on your affected side. Try to keep your knee as straight as possible.

Hold for 30 seconds. Perform 3 repetitions. Repeat 1-3 times per day.



Bridge Exercise - Starting Position

Lie on your back with your knees bent to prepare for the bridge exercise.



Bridge Exercise

Keep your pelvis level as you lift your hips/pelvis and buttocks into the air. Pause, and then return back down to the ground. Do not let your pelvis wobble as you move up and down. Add a weight to your pelvis to increase the difficulty level.

Perform 2 sets of 10 repetitions, 1-2 times per day.



Standing Knee Bends (Mini Squats)

Stand behind a chair or next to a counter top. Keep your feet about hip width apart and perform a mini squat (knee bend). Do not let your knee move forward past your toes. Be sure to extend your buttocks backward as if you were sitting in a chair. As you return to standing, straighten your knee as much as you can and try to lock it backward.

Perform 2 sets of 10 repetitions, 1-2 times per day.



Standing Knee Flexion

Stand behind a chair or next to a counter top. Keep your feet about hip width apart. Try to bend your knee and kick yourself in the buttock. Keep your thighs parallel to each other.

Be sure to perform this exercise on both legs.

Perform 2 sets of 10 repetitions, 1-2 times per day.



Stage III Rehabilitation

Exercises in Stage III continue to focus on range of motion. At this point, you're typically riding a stationary bike regularly. The following exercise program is designed to improve lower extremity strength while still focusing on quadriceps and gluteus medius strength. Try to perform the following exercise variations. Balance drills are typically introduced as well as more advanced gait drills. The goal is return to ambulating without any noticeable abnormalities. In this stage, mobility for basic daily tasks is usually quite good.

Bridge Exercise with an Exercise Band Around Your Knees

Place an exercise band around your thighs above your knees. Keep your pelvis level as you lift your hips/pelvis and buttocks into the air. Pause, return back down to the ground. Don't let your pelvis wobble as you move up and down. Hold your knees 4-6 inches apart.

Perform 2 sets of 10 repetitions, 1-2 times per day.



Clamshell for External Hip Rotation

Lie on your side (with your spine in a neutral position) with your hips flexed and your feet together. Depending on your strength level, perform the exercise with or without an exercise band tied around your knees. Slowly raise your knee upward as far as you can without rolling your pelvis backward. Keep your core engaged. The only movement should be from your knee lifting up.

Perform 3 sets of 15-20 seconds holds once per day.



Wall Squat - Starting Position

Stand with your pelvis, back, and head touching a wall. Your feet will be approximately hip width apart and far enough out from the wall. When you slide down, your knees will make a 90 degree angle. Try to have the knee track toward your second toe to insure proper alignment of the knees.



Wall Squat

From your starting position, slowly lower your body down and hold for time. As you improve, lengthen the amount of time you hold the wall squat. Be sure to keep your pelvis, back, and head against the wall. Keep the movement pain free.

Perform 3 sets of 15-20 seconds holds once per day.



Wall Squat with an Exercise Band

Place an exercise band around your thighs above your knees. It will help to increase the activation of the hip muscles. From your starting position, slowly lower your body down and hold for time. As you improve, lengthen the amount of time you hold the wall squat. Be sure to keep your pelvis, back, and head against the wall. Keep the movement pain free.

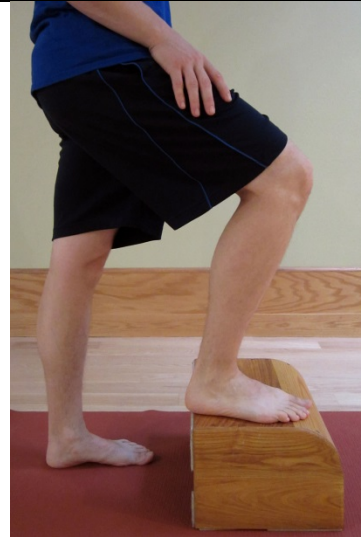
Perform 3 sets of 15-20 seconds holds once per day.



Step Ups

Start with a box height that is comfortable for you to step up on. Be sure to keep your knee in alignment with your second toe. Step up and keep your pelvis level and your knee in alignment. Be sure to engage the buttocks muscles and fully lock out the knee.

Perform 2 sets of 15-20 repetitions once per day.

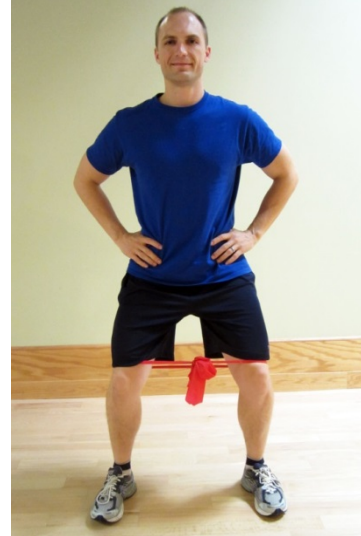


Side Stepping with an Exercise Band

Tie the exercise band above your knees. Move into a slight squat position. Try to side step while keeping your feet facing forward. Move slowly, and try to keep your head at the same level.

Walk sideways for 20-30 feet. Return back again, but don't turn around.

Perform 2-3 sets once per day.



Balancing on One Foot

While standing near a counter top, stand on one foot. Use your hands on the counter top as needed to maintain your balance. Maintain a proper upright posture. The softer the surface you stand on, the more difficult the balance will be.

(If your balance is very poor initially, please stand near a counter or sink for safety.)

Hold for 30 seconds, and 3 repetitions per side.



Balancing on One Foot - Soft Surface

Work on standing on one foot. Once you have mastered it, increase the difficulty level by adding a pillow or standing on any type of softer surface, such as grass.

For normal balance, you should be able to stand on one foot for 30 seconds with both eyes open and with both eyes closed.

(If your balance is very poor initially, please stand near a counter or sink for safety.)



Stage IV Rehabilitation

Exercises in Stage IV should be designed to help maximize your mobility and desired mobility outcome/goal. Exercise intensity continues to increase as you perform balance training. A return to full functional mobility is the desired outcome. In this stage, a majority of the exercises are performed independently. You may intermittently consult with a physical therapist to progress in rehabilitation to insure that you're meeting your goal.

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