

Dr Louis Shidiak

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Hip & Knee Surgeon
Joint Replacement
Hip Arthroscopy Surgery
Hip Preservation

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Knee Strengthening Exercise Guide

Regular exercise to restore your knee mobility and strength is necessary. For the most part this can be carried out at home. Dr Shidiak may recommend that you exercise approximately 20 to 30 minutes two or three times a day. You also may be advised to engage in a walking program.

The following guide can help you better understand your exercise or activity program that may be supervised by a physiotherapist at the direction of Dr Shidiak. As you increase the intensity of your exercise program, you may experience temporary set-backs. If your knee swells or hurts after a particular exercise activity, you should lessen or stop the activity until you feel better. You should Rest, Ice, Compress (with an elastic bandage), and Elevate your knee (R.I.C.E.). Contact Dr Shidiak if the symptoms persist.

Initial Exercise Program

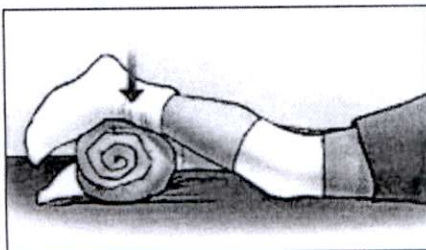
Hamstring Contraction, 10 Repetitions



No movement should occur in this exercise. Lie or sit with your knees bent to about 10 degrees. Pull your heel into the floor, tightening the muscles on the back of your thigh. Hold 5 seconds, then relax.

Repeat 10 times.

Quadriceps Contraction, 10 Repetitions



Lie on stomach with a towel roll under your weak knee. Push ankle down into the towel roll. Your leg should straighten as much as possible. Hold for 5 seconds. relax.

Repeat 10 times

Straight Leg Raises, 10 Repetitions

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Shoulder & Elbow

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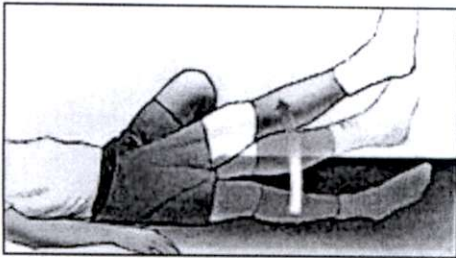
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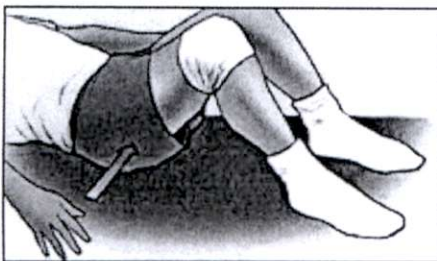
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Lie on your back, with uninvolved knee bent, straighten your involved knee. Slowly lift about 14cms (6 inches) and hold for 5 seconds. Continue lifting in 6-inch increments, hold each time. Reverse the procedure, and return to the starting position. Repeat 10 times.

Advanced Before starting, add weights to your ankle, starting with 500gms of weight and building up to a maximum of 2kgs of weight over 4 weeks.

Buttock Tucks, 10 Repetitions



While lying down on your back, tighten your buttock muscles. Hold tightly for 5 seconds.

Repeat 10 times.

Straight Leg Raises, Standing, 10 Repetitions



Support yourself, if necessary, and slowly lift your leg forward keeping your knee straight. Return to the starting position.

Repeat 10 times

Advanced: Before starting, add weights to your ankle, starting with 500 grams of weight and building up to a maximum of 2kgs of weight over 4 weeks.

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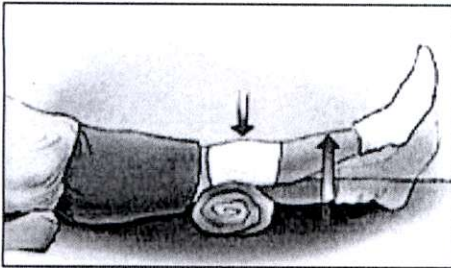
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Intermediate Exercise Program

Terminal Knee Extension, Supine, 10 Repetitions

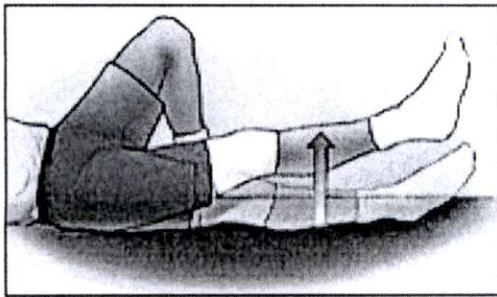


Lie on your back with a towel roll under your knee. Straighten your knee (still supported by the roll) slowly lift about 14cms (6 inches) and hold 5 seconds. Slowly return to the starting position.

Repeat 10 times.

Advanced Before starting, add weights to your ankle, starting with 500 grams of weight and building up to a maximum of 2kgs of weight over 4 weeks.

Straight Leg Raises, 5 Sets, 10 Repetitions



Lie on your back, with your uninvolved knee bent. Straighten your other knee with a quadriceps muscle contraction. Now, slowly raise your leg until your foot is about 30 cms (12 inches) from the floor. Slowly lower it to the floor and relax.

Perform 5 sets of 10 repetitions.

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Partial Squat, with Chair, 10 Repetitions



Hold onto a sturdy chair or counter with your feet 15 – 30cms (6-12 inches) from the chair or counter. Do not bend all the way down.

DO NOT go any lower than 90 degrees. Keep back straight. Hold for 5-10 seconds. Slowly come back up. Relax.

Repeat 10 times.

Quadricep Stretch - Standing, 10 Repetitions



Standing with the involved knee bent, gently pull heel toward buttocks, feeling a stretch in the front of the leg. Hold for 5 seconds.

Repeat 10 times.

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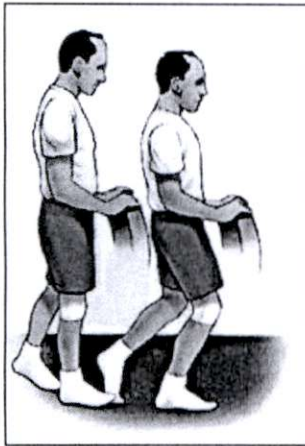
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Advanced Exercise Program

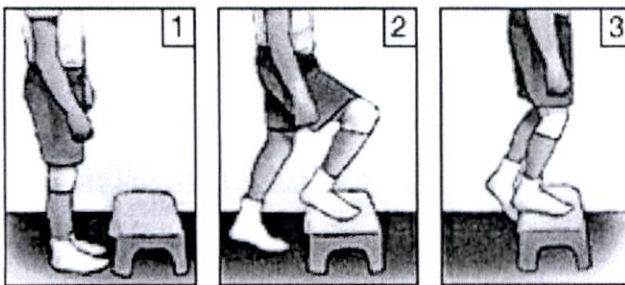
Knee Bend, Partial, Single Leg



Stand supporting yourself with the back of a chair. Bend your uninvolved leg with your toe touching for balance as necessary. Slowly lower yourself, keeping your foot flat. Don't overdo this exercise. Straighten up to the starting position. Relax

Repeat 10 times.

Step-ups, Forward, 10 Repetitions



Step forward up onto a 6-inch high stool, leading with your involved leg. Step down, returning to the starting position. Increase the height of the platform as strength increases.

Repeat 10 times

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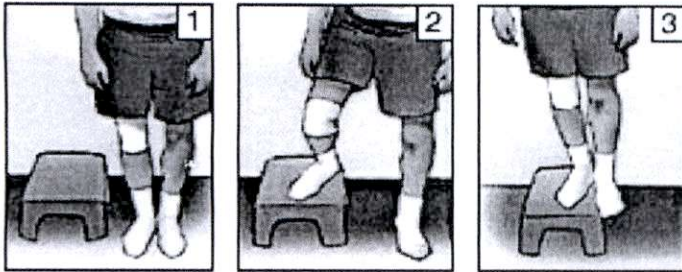
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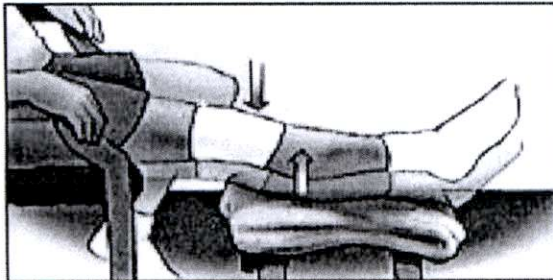
Step-ups, Lateral, 10 Repetitions



Step up onto a 6-inch high stool, leading with your involved leg. Step down, returning to the starting position. Increase the height of the platform as strength increases.

Repeat 10 times

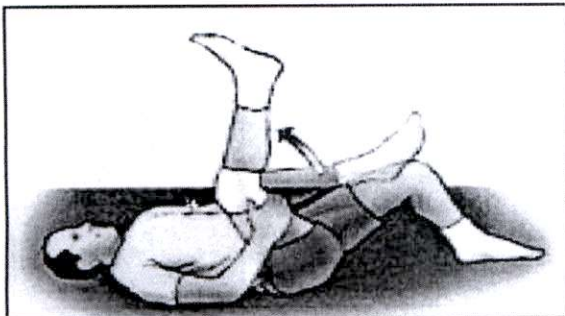
Terminal Knee Extension, Sitting, 10 Repetitions



While sitting in a chair, support your involved heel on a stool. Now straighten your knee, hold 5 seconds and slowly return to the starting position.

Repeat 10 times.

Hamstring Stretch, Supine, 10 Repetitions



Lie on your back. Bend your hip, grasping your thigh just above the knee. Slowly straighten your knee until you feel the tightness behind your knee. Hold for 5 seconds. Relax and repeat 10 times.

Repeat with the other leg. If you do not feel this stretch, bend your hip a little more, and repeat. No bouncing! Maintain a steady, prolonged stretch for the maximum benefit.

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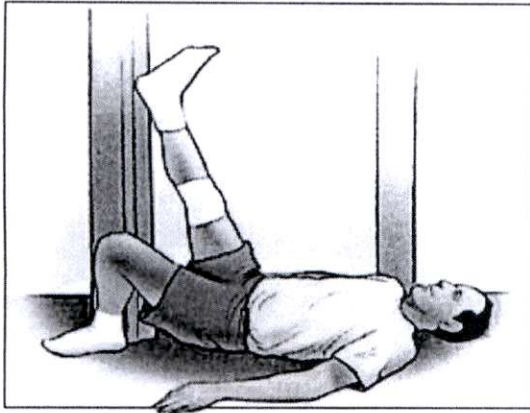
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Hamstring Stretch, Supine at Wall, 10 Repetitions



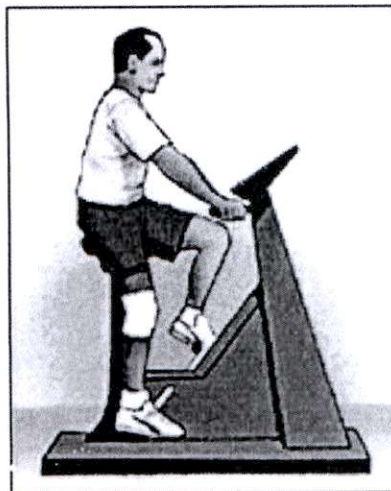
Lie next to a doorway, with one leg extended. Place your heel against the wall, and, with your knee bent, move your hips toward the wall. Now begin to straighten your knee. When you feel the tightness behind your knee, hold for 5 seconds. Relax and repeat 10 times. The closer you are to the wall, the more intense the stretch. Repeat with the other leg.

Exercise Bike

If you have access to an exercise bike, set the seat high so your foot can barely reach the pedal and complete a full revolution. Set the resistance to "light" and progress to "heavy." Start pedaling for 10 minutes a day. Increase the duration by one minute a day until you are pedaling 20 minutes a day.

Walking

An excellent physical exercise activity in the middle stages of your recovery from surgery (after 2 weeks). Running should be avoided until 6-8 weeks because of the impact and shock forces transmitted to your knee. Both walking and running activities should be gradually phased into your exercise program.



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