Liver Transplant Physiotherapy Program
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Liver Transplant Physiotherapy Program

Staying active is very important while you wait for your liver transplant. People who are in better physical shape before their surgery are more likely to get better faster and with fewer complications.

A transplant is like a marathon. It takes hard work and commitment to get your body ready. Make the most of your waiting time by getting yourself in the best shape possible.

You should be up and about for most of the day. Short rests are OK, but be careful not to spend most of your day on the couch or in bed.

The one year survival rate of those in good physical condition before their liver transplant is almost twice that of those in poor physical condition.

What are your questions? Please ask. We are here to help you.
Why is activity so important?

- Staying active improves your strength and endurance.
- It helps you to keep your function and quality of life.
- It improves your mental health.
- You will lose strength while in hospital. By improving your strength while you wait for transplant, you will recover more easily from surgery.
- It helps to prevent bone thinning (osteoporosis).

Main parts of your exercise program

› Stretching exercises
› Strengthening exercises
› Cardiovascular exercises

This pamphlet is just a guide. If you have questions, please talk to your health care provider. We are here to help you.
Stretching exercises

Do these stretches before and after each exercise session. Stretching can help to avoid muscle injury, help muscles get better after exercise and prevent muscle stiffness. Stretches should be done slowly, without bouncing. For each stretching exercise:

• Hold for 20 seconds.
• Repeat 2-3 times on each leg.

1. Heel stretch

This exercise stretches the calf muscles and heel cord.

Stand a couple of feet away from a wall. Lean on the wall for support. Place one foot in front of the other. Keep your back knee straight with your heel on the floor. Slowly move your hips forward.

Or

Stand on a step holding onto a railing. Slide one foot back so your heel is over the edge. Let your heel drop down. You should feel a stretch on the back of your heel and calf.
2. Quadriceps (thighs)
This exercise stretches the muscles in the front of the thigh.

Stand on one foot using a chair for balance. Bend your other knee and grasp your ankle. Pull your ankle backwards until you feel a stretch in the front of your thigh. It is important to stand straight during this exercise. **Do not do this exercise if you have balance problems.**

Or

Lying on your side, slightly bend your bottom leg for balance. Grasp the ankle of your top leg and pull backwards until you feel a stretch on the front of your thigh.
3. Hamstring stretch
This exercise stretches the muscles at the back of the thigh.

Sit sideways on a firm couch or bed. Keep one leg straight and the other bent, with your foot on the floor. Put your hands on the thigh of your straight leg and lean forward, bending at the hip.

**Strengthening exercises**

Muscle loss is very common in people with liver disease. As you lose muscle, everyday tasks can get harder. It is important to exercise so that you lose as little muscle as possible.

The following leg and arm exercises should be done **at least 3 times per week**. When you can do an exercise easily 15 times, you should progress by adding more weight and doing fewer repetitions at first. You can work back up to more repetitions as the added weight gets easier for you to manage. Avoid lifting a weight that makes you strain and hold your breath, as this will increase your blood pressure.
Leg exercises

1. Bridging
Lie on your back, with your knees bent and feet flat on the bed.
Keep your feet flat on the bed. Raise your hips off the bed.
Hold this position for 5 seconds.
Repeat 15 times.

2. Straight leg raise
Lie on your back with your left leg straight and right knee bent with your foot flat on the bed.
Lift your left leg straight up, stopping at the height of your right knee.
Repeat 15 times.
Switch your legs and repeat the entire exercise.
3. Abduction
Lie on your side, with your top leg straight and bottom leg bent. Lift your top leg up and then slowly lower it.
Repeat 15 times.
Turn onto your other side and repeat with the other leg.

4. Quadriceps (thighs)
Sitting on a chair, slowly straighten your right leg. Keep your back straight. Hold for 5 seconds, then slowly lower to the starting position.
Repeat 15 times.
Repeat with your left leg.
5. Wall slides
Stand with your back against a wall, placing both feet one step away from the wall. Bend your knees and slide down the wall.
Hold for 5 seconds, then straighten up and rest.
Repeat 10-15 times.

6. Sit to stand
Sitting on a chair, practice standing up and down slowly. You may use your arms if you need to.
Repeat 10-15 times.
**Arm exercises**

You can do these exercises while sitting or standing. You can do one arm at a time, or both at the same time.

1. **Shoulder press**
   Hold a weight in your left hand with your elbow bent. Push the weight up over your head. Repeat 15 times. Repeat with your right arm.

2. **Abduction**
   Hold a weight in your left hand. Lift your arm out to the side to shoulder height. Repeat 15 times. Repeat with your right arm.
3. Biceps curls

Hold a weight in your left hand and bend your elbow to touch your shoulder. Repeat 15 times. Repeat with your right hand.

Cardiovascular (cardio) exercise

Cardiovascular or endurance exercises are the most important part of your program. Endurance means a steady activity that lasts for at least 15-20 minutes. The length of time you exercise is important for increasing the health of your heart, lungs and muscles. Start exercising slowly and gradually increase the intensity.

You should do your cardio exercise at least 3 times each week. If you are only able to exercise for a short time (for example, less than 15 minutes) try to do it every day until your endurance improves.
Walking
Take note of the time you start walking. Walk for 3-5 minutes at a slow pace, then walk briskly and continuously for your exercise time. Start with a 10-minute walk and slowly add to your time over the next few weeks until you are walking for 30-40 minutes per day. At the end of your walk, take 3-5 minutes to walk at a slow pace, to cool down.

While you are exercising, you should not get short of breath. You should be able to ‘walk and talk’. If you cannot comfortably talk while walking, slow your speed or take a rest.

Other types of cardio exercise
If you have an exercise bike, you may use this instead of walking. Start cycling for a short period of time (for example, 5 minutes) and add to your cycling time little by little each day. Do not add resistance until you are able to cycle for 15 minutes without a problem.

Remember to warm up and cool down.
Sample Exercise Program
Exercise 3-4 times per week:
1. Stretching exercises
2. Strengthening exercises
3. Cardiovascular exercise (for example, walking)
   › 3-5 minute warm up
   › 10-40 minutes of exercise (depending on your exercise tolerance)
   › 3-5 minute cool down
4. Stretching exercises

This routine is only a suggestion. You may need to adjust your routine based on how you are feeling and what works for your schedule. For example, you may choose to do your strengthening exercises every second day and walk on the other days. If you can only do short periods of exercise, you should be exercising every day so you can do more bit by bit.

General activity is very important. Exercise alone will not improve your strength if you are resting for the rest of the day. It is important to take part in everyday activities as you are able, such as self-care, housework and errands.

Be sure to find an activity that you enjoy!
Things to avoid after surgery

• Don’t lift more than 15 pounds for 3 months after surgery.

• Never hold your breath when lifting.

• Don’t do abdominal exercises (stomach exercises, such as sit-ups) for 3 months after surgery.

• You may go back to your gym program at any time as long as you follow the restrictions above.

• You will not be able to drive for a period of time after surgery. Talk to your doctor before you go back to driving.

What are your questions? Please ask. We are here to help you.

In Nova Scotia you can call 811 to talk with a registered nurse about your health care questions 24/7.
Saving energy

It is important to **balance rest and activity** so that you avoid feeling too tired.

- Know the time of day when you feel the most tired. Plan your day so that you are able to lie down and rest during this time.
- Plan to take rest breaks often when doing an activity and allow for enough time to rest after the activity.
- Plan your day so you are able to finish the tasks most important to you first. Leave the less important tasks for another day.
- Ask for help with some chores or activities to avoid using all your energy during one task.
- Pace yourself. Try to make the energy you have last throughout the activity rather than rushing and getting tiring before you are able to finish it.
- Listen to your body! If you feel muscle soreness, tiredness or that your movements have slowed, stop the activity and take a rest.
- If you find walking is getting very hard, you may want to think about a walking aid (walker or cane). Your physiotherapist will talk with you about what is best.
QEII Health Sciences Centre is made up of 10 buildings located on two sites

**Halifax Infirmary Site**
1a. Halifax Infirmary
1b. Emergency Dept.
2. Abbie J. Lane Memorial Building
3. Camp Hill Veterans' Memorial Building

**VG Site**
4. Nova Scotia Rehabilitation Centre
5. Bethune Building
6. Mackenzie Building Laboratories
7. Centre for Clinical Research
8. Dickson Building
9. Victoria Building
10. Centennial Building

Please do not wear scented products when you come to the QEII.

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Contact
If you have any questions or concerns about your exercise program, please get in touch with us.

Physiotherapy Department
Phone: 902-473-2151