Post Lung Transplant Exercises
Post Lung Transplant

Physical activity improves our strength and stamina, maintains optimal functioning of our major organs and increases our vitality, energy and overall sense of well-being. After transplant, exercise is important for maintaining a healthy weight, reducing the adverse effects of some medications and allowing you to return to activities you once enjoyed.

Research shows that patients have the best recovery when they find a balance between activity and rest after injury/surgery. Think about the next 8 to 12 weeks as your recovery time. Use regular daily activities (like washing, dressing, walking, and so on) as a starting point for activity once you are home again. Patients who find a balance between activity and rest say their overall experience is better – they say they have less pain; use less medication; move better; and get better sooner. Often, patients who are not “up-and-about” do not do as well – they are more likely to have complications and have a longer recovery time.

When you do activities, keep in mind the following:

**Increasing Activity Levels**

Your overall strength and ability to do activities will improve gradually. Do not try to rush the rate of recovery, but it is very important that you are active throughout the day, every day. As your tolerance for activity increases you can add more activities into your day; do things for longer periods of time; or do things with less help. Continue to monitor your breathlessness, pulse and blood pressure.

**Pain Management**

It is normal to have some pain when being active. Think about the pain scale you use in the hospital (0 = no pain and 10 = worst pain). If your pain level rises from a 2 to a 4 after you walk, wash, or get dressed – this is okay. If your pain level quickly rises from 2 to a 7 or 8, or rises over time and then stays high for a long time, you may not be ready for the activity or you need to go about it in a different way.

**Exercises**

- The exercises below will help you reduce pain and recover from your transplant surgery.
- Perform only the exercises indicated and instructed to you by your physiotherapist.
- Do these exercises every day while you are in the hospital
- Be aware of your posture at all times and be careful to maintain good posture (neutral spine) during the exercises.
- These exercises should not cause pain. If the exercises increase pain, stop the exercise and try them again the next day. If you are unable to do the exercises due to pain, consult your healthcare provider (e.g. surgeon or physiotherapist).
- You will be progressed through these exercises with your physiotherapist while you are in hospital.
Sternal Precautions

During the course of your operation, your sternum (breastbone) was surgically divided. The bone is now held together securely with wire sutures which are permanent.

It takes 8 to 12 weeks for the bone to heal solidly, and during this time care must be taken to avoid stressing it, as this may delay healing and increase pain.

During the weeks after your surgery:

- DO NOT push with hands on bed or chair when moving
- DO NOT push or pull with one hand
- DO NOT lie on your stomach
- DO NOT lift or carry over 10 lbs (4.5 kg)
  (includes laundry, groceries, lawn mowing, vacuuming)
- AVOID movements that cause pain or clicking of sternum
- DO NOT swing your arms too vigorously while walking
- SUPPORT incision when coughing or sneezing

You may raise your arms over your head if the movement does not cause pain or clicking, but do not push, carry or lift.

- You may lie on your side if it is not painful.
- You may get in and out of bed through side-lying.

Sitting Up

Log roll onto your side with arms in front and knees bent, close to the edge of bed.

Drop legs over side of the bed and at the same time GENTLY push sideways with elbow and arm. Use your trunk muscles to help you sit up without pushing hard.

If this is too much effort or causes pain, ask for help and for pain medication.

CONTINUE THESE PRECAUTIONS UNTIL THE TRANSPLANT TEAM TELL YOU OTHERWISE
Good Posture

Good Posture: How to Find a ‘Neutral Spine’

Good posture helps you hold your spine in the correct position. We call this position ‘neutral spine’.

Before starting an exercise, always find a neutral spine position as follows:

**Neutral spine standing or sitting**
- Stand with your feet shoulder width apart, or sit evenly on both sitting bones.
- Imagine a string attached to the top of your head that is gently helping you become taller, but without causing any pain.
- Use your stomach muscles to keep your spine in the neutral spine position.
- Gently squeeze your shoulder blades together and down your back.
- Your shoulders should now be aligned over your hips.
- Tuck your chin slightly so that your neck is lengthened.

**Neutral spine lying on your back**
- Lie on your back with your knees bent and feet flat on the bed.
- There may be a small space between your low back and the bed. Your lower back should be halfway between arched and pressed flat to the bed.
- Imagine a string attached to the top of your head that is gently lengthening your spine, but without causing any pain.

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Core Exercises

Core muscles are deep muscles in that support your spine and pelvis. They provide stability, control and good posture when you move.

It takes practice to feel these muscles working. With practice these muscles will get stronger.

- Lie on your back with your knees bent and feet flat on the bed.
- Find your neutral spine position.
- Place your fingertips on each side of your lower abdomen just above your pelvis.
- Keep your upper body relaxed and breathe in gently.
- As you breathe out gently tighten your stomach muscles as if you are trying to pull your bellybutton in towards your spine. Feel your stomach move out into your hands. You should feel a gentle muscle tightening under your fingertips but no movement of the spine.
- Remember to keep breathing while you tighten your muscles.

Hold each contraction ______ seconds.
Repeat ______ times.

As you become more comfortable with the exercise, try to hold the gentle muscle contraction for longer periods of time. Also try this in different positions (sitting, standing, walking).

Do these exercises ______ times per day.
Breathing Control

Breathing control is gentle, relaxed breathing used to help breathlessness. You can use it to gain control of your breathing during exercise, daily activities, stress or a lung infection. Start by doing it at rest as outlined below until you can easily do it at any time.

- Sit in a comfortable, well-supported position.
- Keep your upper chest, shoulders and neck relaxed and use your lower chest/ribs to breathe.
- Place one hand on your upper stomach to feel your breathing movement.
- Breathe in gently and smoothly through your nose. Your hand should rise up and out. Your shoulders and upper chest should not rise.
- Slowly let the air out (you may want to use pursed lips at first) taking 2 to 3 times longer than breathing in. Your hand should sink down and in. Never force the air out.

Breathing Exercises

Do these exercises lying own with knees bent up or sitting up. Do each exercise daily, 10 times each unless your therapist tells you otherwise.

- Breathe in as you raise arms over head. Breathe out as you lower arms. Repeat _____ times.

Shoulder Rolls

- Roll your shoulders backwards in a big circle.
- Repeat, rolling them forwards. Repeat _____ times in each direction.

Trunk Rotation

- Cross arms over your chest and breathe out as you turn your body and head to the side. Breathe in as you come back to the middle. Repeat to the other side. Repeat _____ times each side.

Shoulder Squeezes

- Sit with back straight and feet firmly on floor.
- Squeeze your shoulder blades together.
- Hold for 5 seconds. Repeat _____ times.
Level 1: Post Transplant Exercises

**Ankle Circles and Pumps**
- Draw a circle with your toes, moving only your ankle. Repeat in opposite direction. Repeat _____ times with each ankle.
- “Pump” your foot up and down, moving only at your ankle. Repeat _____ times with each ankle.

**Sideway Slides**
- Lie on your back with your resting leg bent and your exercising leg straight with your toes pointing to the ceiling.
- Slide your leg out to the side keeping your knee straight.
- Hold for 5 seconds and slowly return to starting position. Repeat _____ times with each leg.

**Knee Bends**
- Slide your heel towards your bottom as far as you can go, then slide back down until your knee is completely straight. Repeat _____ times.
Bottom Lifts
- Squeeze buttocks together gently, as if holding a pencil between your buttocks.
- Lift bottom up and hold for 5 seconds, lower slowly back to the bed.
  Repeat _____ times.

Seated exercises:
Chair Marching
- Lift your knee up towards chest and slowly lower.
  Repeat _____ times with each leg.

Kicks
- Lift your foot up and hold knee straight for 3 seconds, then slowly lower.
  Repeat _____ times with each leg.

Stand-ups
- Stand up out of a chair, then sit down. Do not press legs against back of chair.
  Repeat _____ times.
Standing exercises

Sideways Step
- Holding lightly onto a table, stand with your feet together.
- Step to the side then move the other to join it.
- Repeat in the opposite direction
  Repeat ______ times with each leg.

Heel Toe Raises
- Stand, holding lightly onto a table.
- Rise up on toes, then slowly lower your heels to the ground.
- Lift your toes off the ground, then slowly lower your toes back to the ground.
  Repeat ______ times.

Knee Bends
- Stand with your feet shoulder width apart, holding lightly onto a table.
- Keep your heels on the floor at all times.
- Push hips back and bend knees as if starting to sit down.
- Bend your knees half way to sitting.
  Do not let your knee go past your toes.
- Hold ______ seconds.
- Slowly straighten to standing.
  Repeat ______ times with each leg.

Marching
- Stand, holding lightly onto a table.
- Lift your leg up and hold ______ seconds.
- Slowly lower your leg down.
  Repeat ______ times with each leg.
Walking

Walking is one of the best exercises to help you recover from surgery. When walking, always make sure you keep your good posture with a neutral spine.

- Wear comfortable clothing and footwear such as good walking shoes.
- If you are unsure when walking outside, ask someone to walk with you.
- Start with frequent, short walks on level ground. Use any walking aids recommended to you. Make sure they are the correct height to support your good posture.
- Stand as straight as you can. This is especially important if you are walking with a walker, cane, or poles. Keep the walker close to you to prevent the need to lean forward.
- Each day increase the amount of time you spend walking. Speak to your healthcare provider to give you guidance on how long or far to walk.
- Walk at least 3 times a day while you are in hospital.
- As your walks get longer, cut back the number of walks per day. This will allow you to increase your walking time and prevent getting too tired or sore.
- Build up to 30 minutes of walking a day. This can be broken up into 10 minute intervals at different times during the day.
1. What is the best time of day for me to do my exercises? 

2. What are daily/weekly activities that I enjoy that I can include in my exercise regime? 

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# MY EXERCISE SCHEDULE

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2. What are daily/weekly activities that I enjoy that I can include in my exercise regime? __________________________

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