

# Exercising After Your Lung Transplant

## Information for patients and families

Read this booklet to learn:

- Why it's important to exercise after your transplant
- How to do it safely
- Answers to common questions about exercise
- How to care for your back
- What you need to know about osteoporosis
- Other helpful resources



You've had your transplant, and you're no longer exercising in the treadmill room. But, it's still important to keep up an exercise program either at home or at a community centre.

## Why is exercise important?

Exercising helps you in many ways.

- Helps you become more active
- Increases your strength and endurance
- Helps you become more flexible and coordinated
- Increases your energy level
- Helps prevent osteoporosis (soft, brittle bones)
- Helps prevent low back pain
- Reduces anxiety (stress or worry)
- Helps you keep or reach a healthy weight



## What kinds of exercises or activities can I do?

There are many activities that you can and should do. Keeping active is an important first step to a healthy body. You can choose to do many different activities or exercises, such as:

- low impact aerobics
- Tai Chi
- tennis
- yoga
- biking
- dancing
- backpacking
- brisk walking
- snorkeling
- badminton
- mall walking (in the winter)
- using a Stair Master or elliptical trainer
- pilates
- swimming

Some activities are a little more stressful on your body, so you need to be more careful. These activities are not for everyone. Doing them depends on how fit you are. If you are interested, you can start them 3 months after your transplant. But, remember to start these exercises or activities slowly:

- running
- high impact aerobics
- rowing
- heavy lifting (for example, bench presses, chin-ups or push-ups)
- shoveling heavy snow
- cross country skiing
- squash
- sailing or canoeing



**Avoid these exercises because they can cause injury:**

- Scuba diving and sky diving can cause changes in pressure that can affect your new lungs.
- Contact sports (like football, soccer or baseball) can increase your risk of broken bones.

**Talk to your physiotherapist or doctor if you are not sure about what exercises you can do.**

**How much and how often should I exercise?**

The American College of Sports Medicine (ACSM) suggests that all adults do 30 minutes or more of moderately intense exercise, 5 days a week. Weight training should be done 2 times a week. You can find more information about this on the ACSM website [www.ascm.org](http://www.ascm.org).

# What can I do to make sure I am exercising safely?

## Check how hard you are exercising

You should exercise at a moderately intense pace. This can mean something different for everyone. Here are 3 ways you can check how hard you are exercising:

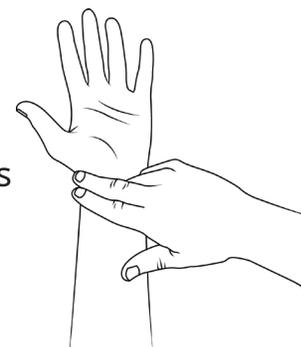
### 1. Check your pulse

To check your pulse:

1. Use your index and middle fingers. Don't use your thumb.



2. Lightly place your 2 fingers just above the skin creases thumb side of your wrist.



3. Count the number of beats you feel in 10 seconds and multiply by 6 to find out what your pulse is per minute (heart rate).

A good way to find out how hard you are exercising is to subtract your age from 220. The answer is your **maximum heart rate**. When you exercise, aim for a heart rate that is 70% to 80% of this number. Your physiotherapist will help you figure out this number.

If you are not used to exercising or just starting out, aim for about 50% of your maximum heart rate. You can gradually increase your exercise until it is between 70% and 80% of your maximum heart rate.



If you are taking heart medicine, this may not be the best way to measure how hard you are exercising. Talk to your physiotherapist about this.

## 2. Use the walk/talk test

You should be able to talk while you are exercising. If you have difficulty talking, you may be working too hard.

## 3. Use the Borg Scale

You may already know about this scale to measure your shortness of breath. You can also use this scale to measure your exercise intensity (how hard you are working). Try to exercise at 3 or 4 on the Borg Scale.

### Borg Scale

Number	Intensity
0	Nothing at all
0.5	Very, very slight (just noticeable)
1	Very slight
2	Slight
3	Moderate
4	Somewhat severe
5	Severe
6	
7	Very severe
8	
9	
10	Very, very severe (maximum)

## Buy good shoes

When you exercise, you need shoes that:

- support your heel and arch
- have enough room for your toes
- have soles with good grip
- are flexible and cushioned



A good cross walking or running shoe can be a little more expensive.

## Stretch

Stretch after you have done a light warm-up (for example: walking quickly or high stepping). Stretching helps your muscles become more flexible, so they are less likely to injure. Remember to hold each stretch for 10 to 15 seconds.



## Prepare for the weather

In the summer, it's important to wear sunscreen. Wear light-coloured clothes made of material that is breathable (like cotton). Drink a lot of water before, while and after you exercise. This will help you get back any fluids you lost from sweating. **Don't exercise on very hot and humid days.**

In the winter, make sure you dress warmly. Wear layers and waterproof clothes. You should still put sunscreen on your face and hands and drink a lot of fluids.

## Avoid exercising when you are sick

Take time off or reduce your exercises when you are sick. When you start to feel better, slowly bring your exercise level back up to where it was before.

## **Increase your exercise gradually**

There are a few ways you can add to your exercise program. For aerobic exercises, first try to increase how much time you spend exercising. Then increase the workload (for example, the resistance on a bike or the incline or speed on a treadmill).

When adding to your weights exercises, first increase the number of times you repeat a move. Then increase the weight once you are able to lift it 8 to 15 times easily. You can also try doing 2 sets. Talk to your physiotherapist if you'd like more information.



## **Answers to common questions about exercise:**

### **How long do I need to do my exercise program?**

You will need to make exercise a part of your daily life – for the rest of your life. This may mean working out at a gym most days of the week or going for brisk evening walks. The key to success is to find activities that you enjoy and will do!

Even small changes can help. For example, take the stairs for a few flights instead of the elevator. Park your car farther away in the parking lot, or try walking instead of driving short distances.

### **How can I lose extra weight?**

The best way to lose extra weight is to combine a good diet with aerobic exercises like walking briskly or biking. You should do these kinds of exercises for at least 20 to 30 minutes, most days of the week. Try to build up to 60 minute sessions and increase the speed or incline to burn more calories.

Losing weight takes time, but try not to get discouraged. It's worth it. Reaching and keeping a healthy weight helps prevent diabetes, high blood pressure, high cholesterol, and heart disease. Strengthening exercises are important to keep your muscles and bones healthy, but won't help as much with weight loss.

## **Why are my legs so weak?**

You may find that your leg muscles (quadriceps, hamstrings, calves and shins) get tired with exercise. They may even cramp or burn. This can be caused by many things.

- Taking Prednisone can cause muscle weakness. This is a common side effect of taking this medicine, especially in people who are not active.
- Your leg muscles will be weaker after your transplant, especially if you didn't exercise before. It will take time to get back your strength (up to 1 year).
- Even if you exercised before your transplant, you can expect your legs to feel weaker. Before your transplant, the amount of exercise you were able to do and how active you were in your daily life was limited by your breathing.
- Long or even short hospital stays can also cause your leg muscles to become weaker.

## **Can I start jogging or running?**

Running is a difficult activity. It can be hard on your body, even if you are in good shape. If your goal is to run or jog, you may be able to do it depending on your health, age and fitness. Since you have a higher chance of fractures (broken bones) and muscle and joint problems, start this activity very gradually.

Increase your speed and how long you run slowly. Start with a walk/run program. For example, run for 1 minute then walk quickly for 5 minutes, and then repeat. Always remember to do a warm up and a cool down. Your legs may feel very weak at first, and you may not be able to run more than a few steps.

Running and other high impact activities add extra force (up to 2 to 4 times your body weight!) on your knees and feet. This can lead to stress fractures, osteoarthritis, sprains, and strains. For some people, speed walking can be a safer choice. Talk to your physiotherapist before starting a running program.

## What about swimming?

Swimming is a good upper body and aerobic workout. You can start swimming in a pool after 3 months.

Avoid swimming in a lake in the first 6 months after your transplant. This reduces your risk of infecting your healing incision (cut from surgery).



## Is it safe to do weight lifting in a gym?

Yes, if you progress slowly. It's usually fine to start after 3 months. You can also start abdominal (also called stomach muscle) exercises after 3 months.

When you start, do more repetitions with lower weights. For example, do 2 to 3 sets of 8 to 15 lifts with a low weight. This will build your strength and endurance. Avoid doing 1 repetition of a very heavy weight.

Always lift weights slowly and control your breathing. When you're ready, you can gradually increase the amount of weight you lift.

Be careful when you do bench presses or other exercises with weights that strengthen your chest. These exercises can strain the area around your incision (cut from surgery). Only do these when you are sure your chest bone is stable and healed. Ask your doctor or physiotherapist when it's safe to start.

## Taking care of your back

It's common to have low back pain when you begin to exercise more. It happens because your back muscles are not used to working so hard. Weak stomach muscles may lead to less support for your back.

Put a hot pack on your lower back for 20 minutes to help with any pain. If your pain continues, please see your doctor or physiotherapist.

## Tips to help you care for your back

### Lifting

When lifting heavier things, follow these 3 steps to protect your back:

1. Bend your knees and keep your waist and back straight so your leg muscles do the work.
2. Bring the load close to your body so that you don't have to lean forward.
3. Don't twist at your waist because this can lead to muscle strains. Instead, turn with your feet by either stepping or pivoting.



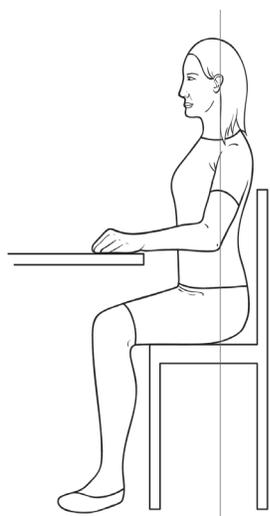
### At work

If you work at a computer, your work station should be at the right height. It's a good idea to take many breaks to stretch your neck, wrists and back. If you stand for a long time, put a small stool under 1 foot to reduce strain on your lower back.

### Keeping your back straight (posture)

You may have developed poor posture because you had trouble breathing before your surgery. Now, it's important to remember to keep your back straight when you sit or stand.

Break bad habits like rounding your shoulders, slumping or poking your chin out. Good posture will help prevent back pain.



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## What do I need to know about osteoporosis?

Osteoporosis is a disease that makes your bones thinner and weaker. This increases your risk of fractures.

## Am I at risk for this disease?

Yes, you have a higher risk of getting this disease because you take Prednisone.

Your risk increases if you:

- are older than 50
- are post-menopausal
- don't exercise
- are a woman
- took Prednisone a long time before your transplant
- drink a lot of caffeine



**Osteoporosis can affect any bone but is more common in your hip, wrist, and spine.**

## Can it be treated?

There are many different treatments for osteoporosis. Talk with your doctor about which treatment is best for you.

## How can I prevent it?

To help prevent or slow down osteoporosis:

- Eat foods high in calcium.
- Exercise regularly, especially low impact weight-bearing exercises such as walking or jogging.
- Keep a good posture.
- Don't drink too much caffeine.
- Follow proper steps for lifting to protect your back.



## **Where can I find more information?**

Here are some other helpful resources with information that can help you fit exercise into your daily life:

### **Air Quality Index Readings for Ontario**

Website: [www.airqualityontario.com/reports/summary.php](http://www.airqualityontario.com/reports/summary.php)

- Click on your city to find out the air quality reading to help you avoid exercising when the air quality is poor. or air quality.

### **Osteoporosis Canada**

Website: [www.osteoporosis.ca](http://www.osteoporosis.ca)

- Find information, programs, and resources about osteoporosis.

### **World Transplant Games Federation**

Website: [www.wtgf.org](http://www.wtgf.org)

### **Canadian Transplant Games**

Website:

[www.organ-donation-works.org/english/events/canadian-transplant-games](http://www.organ-donation-works.org/english/events/canadian-transplant-games)

- These websites promote successful organ donation and transplants.
- They give examples of the healthy and active lifestyle you can have after your transplant.
- Go to the games to meet athletes who have had transplants. Enjoy the sports and community spirit.
- Sports at the games include badminton, bowling, cycling, golf, race-walking, running, swimming, tennis and track and field.

## Helpful apps

If you have a smart phone, look around for some apps that can help you keep track of your walking or other exercise goals.

### Some examples are:



MapMyWalk: This is a free app that has a GPS. It can track your time and distance. It also measures your pace and calories burned.



Pacer – Pedometer: This is a free app that can track your number of steps, time and distance when your phone is in your hand, in your jacket, on an armband or in your purse.



My Fitness Pal: This is a free app that helps you track your calories and exercise each day.



Fooducate: This is a free app that helps you track your progress as you lose weight and make better, healthier food choices.

University Health Network does not support or advertise these apps. This list is for your information only.





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