



Exercises Before and After Abdominal Surgery

Whether your abdominal surgery is planned or was urgent, done as day-surgery or requiring a hospital stay, this booklet is designed to assist you in preparing for and recovering from your surgery by guiding you through immediate post-op activities and basic, but very important, abdominal and pelvic floor exercises.

If you are new to doing exercises, these exercises are not strenuous to do. Their effectiveness comes from repeating the exercise a number of times within one exercise set and doing a couple of sets in the course of the day, every day.

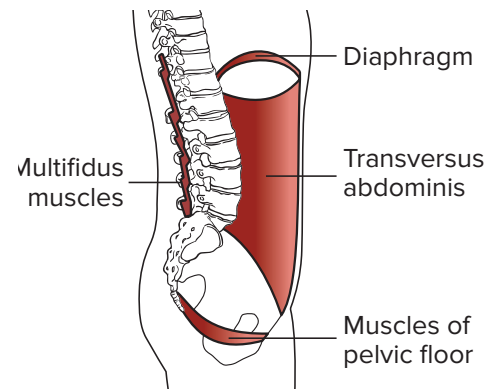
If you have on-going problems with incontinence (such as, leaking of urine when you cough or sneeze or leakage of stool) or should you develop a concern related to incontinence due to the type of surgery you had, please contact a family physician/nurse practitioner or find a physiotherapist who specializes in incontinence or a nurse continence advisor.

What are Core Muscles?

The muscles of your diaphragm, deep abdomen (transversus abdominis), back (multifidus) and pelvic floor are known as 'core muscles' and they are involved in every movement that you do. They also support your spine as well as help to protect your internal organs.

There is a series of exercises you can do (see page 6) to help strengthen these muscles before your surgery and the same exercises will help strengthen them following surgery.

In the weeks following surgery you will be limited in what you can lift, carry, push, or pull, (see page 9), so as not to strain your core muscles. As you resume your daily activities, you will need to engage your core muscles as you do the activities to help to protect the muscles as well as limit the risk of developing a hernia (see page 9).

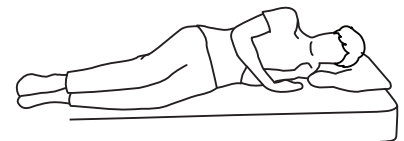


Getting In and Out of Bed

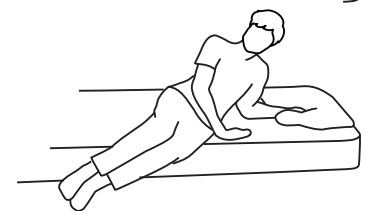
It is safe and beneficial to start getting out of bed right after surgery, but you need to reduce the strain on your abdominal muscles as you do this

Getting Out of Bed:

- Lying on your back, gently bend your knees up.
- 'Log roll' from your back onto your side, by keeping your arm, leg and trunk all together like a log (Figure 1).
- In a slow, gentle movement, lower your feet off the side of the bed and push up from the bed with your hands/arms (Figure 2).
- Sit on the side of the bed.



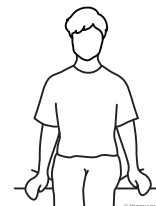
(1)



(2)

Getting Into Bed:

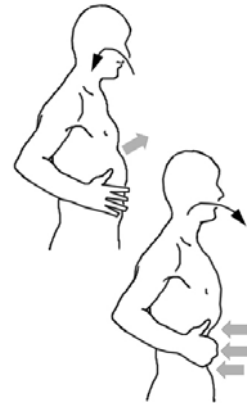
- Sit on the side of the bed.
- Lie down on your side slowly lifting your legs onto the bed (Figure 2). Keep your knees bent unless you have been told not to, as part of your specific post-surgery care plan.
- 'Log roll' onto your back from your side by moving your arms, legs and trunk all together like a log (Figure 1).



Deep Breathing Exercises

This exercise works your diaphragm as well as the rest of your core muscles and helps to get oxygen all the way down to the base of the lungs; oxygen is very important in the healing process as well as overall health of your body.

- Start by placing your hands on your lower ribs or abdomen.
- Take a deep breath in through your nose, slowly expanding your lungs until you feel your lower ribs or abdomen expand into your hands.
- Hold your breath for a count of 3.
- Breathe out slowly through your mouth.
- Repeat 5 times.
- Do the exercise set:
 - While in hospital, every hour while awake.
 - At home, for the first days after your surgery aim for every 2–3 hours while awake.



Clearing Your Chest with a Huff or Cough

This exercise helps clear your lower lungs of any mucous that may have collected during your surgery or when you have been lying in bed most of the day.

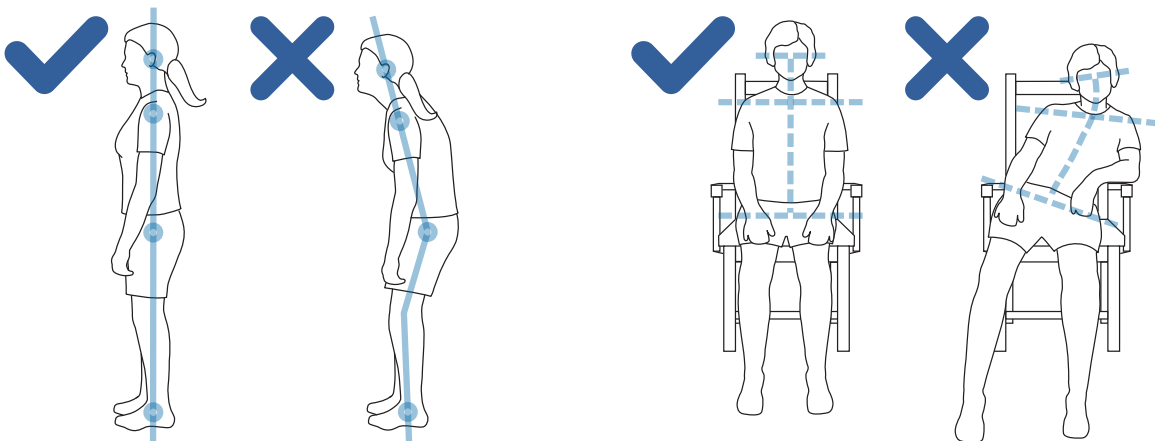
- Huff - Make a 'O' with your mouth and blow out forcefully as though you are fogging up a mirror. Repeat 3 times and then take a deep breath in through your nose.
- Cough - Take a deep breath in through your nose and then cough. Repeat 2-3 times.



Posture

After abdominal surgery, it is common to try to protect your abdomen by slumping. However, slumping can cause lower back pain and other muscle and joint problems.

Aim to have a straight posture when sitting, standing, and moving around. Just being aware of it will make a big difference.



Get Moving

Walking is one of the best exercises to help you prepare for and recover from your surgery.

If your surgery is planned, and you don't usually go for daily walks, then start doing your walking exercise as many weeks before your surgery as possible.

When you are in the hospital, the staff will encourage you to get out of bed to do some short walks as soon as possible after your surgery. They will help you if needed. By the time you leave the hospital, you should be walking around the ward at least three times a day. Once home, continue with your walks.

The goal: to walk for 30 minutes, 5 days a week by the end of week 6 following your surgery.

Tips to get there:

- Wear comfortable clothing and good walking shoes.
- Plan your walk so you can rest afterwards.
- When doing your walks following surgery, make sure you have good pain control before you go.
- If you are not feeling confident when walking outside, ask someone to walk with you or take a phone with you and/or ask for a walker.
- Remember that you need to get home so keep this in mind when planning the length of your walk.
- As your walks get longer in time, you can cut back the number of walks per day.
- Walk at a steady pace, but still be able to talk comfortably.
- Keep a straight posture to stand as tall as you can.
- You may find that using goals help, such as increasing the length of time or distance that you are walking. See page 10 for a chart that can be printed or photocopied to help you keep track of your progress.
- If it has been recommended that you use a walking aid, such as a walker, cane or poles, ensure to use it for your walks. A physiotherapist or other team member can make sure the walking aids are the correct height for you. Remember to stand as straight as you can when walking with a walker, cane, or poles. When using a walker, keep it close to you to prevent you from leaning forward.

Weeks 1–2:

Go for a walk 3 times each day, starting with 5-minute walks on level ground. Increase the time you walk each day by a small amount, (e.g., 1 minute). If you usually use the stairs at home, you can continue to do this from the first day you get home.

Weeks 2–4:

As you start to feel stronger, you can start doing daily activities such as dusting and making light meals. It is still important to keep active, so keep walking further, but make sure that you pace yourself.

Weeks 4–6:

You should now feel comfortable doing more around the home. You still should not lift, carry, push, or pull any heavy items (see page 9). By week 6 you should be able to walk for 30 minutes comfortably.

Weeks 6–12:

By week 12, you should find that you are close to being back to normal. If you have any questions with regards to doing more strenuous exercises, please speak to your family physician/nurse practitioner, surgeon or nurse specialized in wound, ostomy, and continence (NSWOC) if you have an ostomy.

Strengthening Exercises for Core Muscles

When to Start

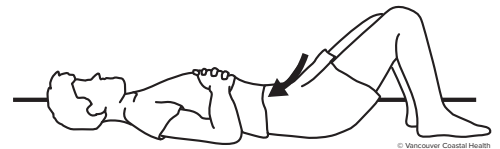
If your surgery is planned, then start doing your exercises as many weeks before your surgery as possible. If your surgery was done on an urgent basis, then you should start the exercises within the first week following your surgery.

Should you have questions regarding the exercises below, please connect with one of your health care team members (physiotherapist, nurse, NSWOC). Ask your questions!

Exercise 1: Pelvic Floor Strengthening/Relaxing

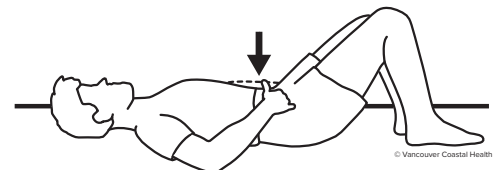
A strong pelvic floor is essential for posture and for control of your bowel and bladder.

- Start by doing these movements lying down on a bed, the floor, (whichever is easiest), or sitting on a chair (not the toilet).
 - If you are lying, be on your back with your knees bent and relaxed.
 - If you are sitting in a chair, check your posture – remember ‘straight and tall’.
- Imagine trying to stop yourself from urinating and/or passing gas. Visualize trying to lift your pelvic floor up inside your body.
- Remember to breathe normally while doing the exercise.
- Hold the “lift and tighten” feeling for a count of 2–3 seconds.
 - Initially this may be difficult or uncomfortable; if so just try a short gentle squeeze. As you get better, you can increase the amount of time that you can hold it.
 - Nothing should move on the outside of your body, so try to avoid clenching your bottom or holding your breath. You are working internal muscles so no one should be able to tell that you are doing the exercise.
- Gently release and allow your pelvic muscles to fully relax.
- Repeat exercise 5-10 times. Work up to holding the ‘lift and tighten’ feeling for 10 seconds.
- Do 3 sets in a day.
- Eventually you should be able to do this exercise when standing, so you can do it many times a day.



Exercise 2: Abdominal Tightening

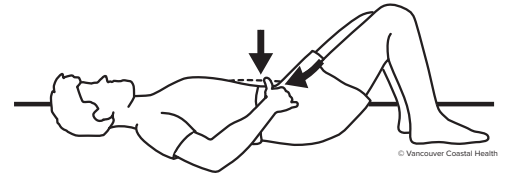
- Lie on your back with your knees bent (bed or floor, whichever is easiest).
- Place your fingertips on each side of your lower abdomen just above your pelvic/hip bones.
- Keep your upper body relaxed and breathe in gently.
- As you breathe out, gently tighten your stomach muscles as if you are trying to pull your belly button away from your hands and in towards your spine. You should feel a gentle muscle tightening under your fingertips but no movement of the spine.
- Hold this position for a slow count of 2–3 seconds and then relax.
- Repeat the exercise 5 times. Gradually build up to hold the muscle contraction for a count of 5.
- Do 3 sets in a day.
- As you become more comfortable with the exercise, try different positions (sitting, standing, and walking).



Exercise 3. Core muscle contraction

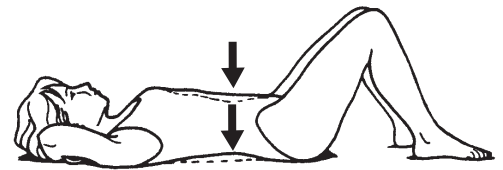
Now put Exercise 1 and Exercise 2 together to work your core.

- Lie on your back with your knees bent (bed or floor, whichever is easiest).
- Place your fingertips on each side of your lower abdomen just above your pelvic/hip bones.
- Remember to breathe normally while doing the exercise.
- Lift and tighten your pelvic floor up inside your body as in Exercise 1.
- Pull down your belly button towards your spine as in Exercise 2.
- Hold for a slow count of 2–3 seconds and then relax.
- Repeat the exercise 5 times. Gradually build up to hold for a count of 5 seconds.
- Do 3 sets in a day.
- As you become more comfortable with the exercise, try doing it in different positions (sitting, standing, and walking).



Exercise 4: Pelvic Tilt

- Lie on your back with your knees bent (bed or floor, whichever is easiest).
- Remember to breathe normally while doing the exercise.
- Gently flatten your lower back into the bed or floor. Rock your pelvis back to take the curve out of your lower back.
- At the same time, gently tighten your deep abdominal muscles as in Exercise 1.
- Hold this position for a slow count of 2.
- Relax and let your lower back return to its slightly curved position.
- Repeat the exercise 5 times. Gradually build up to a count of 5 seconds as able. Breathe normally.
- Do 3 sets in a day.



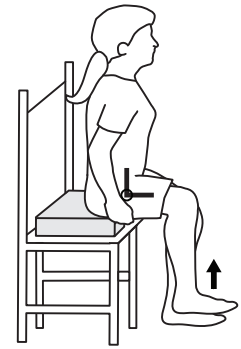
I can't feel anything, am I doing something wrong?

When you are first learning the above exercises, it can be hard to feel that you are lifting and tightening your pelvic floor or pulling in your abdominal muscles.

If you still can't feel anything, connect with a physiotherapist who specializes in pelvic floor/abdominal muscle strengthening.

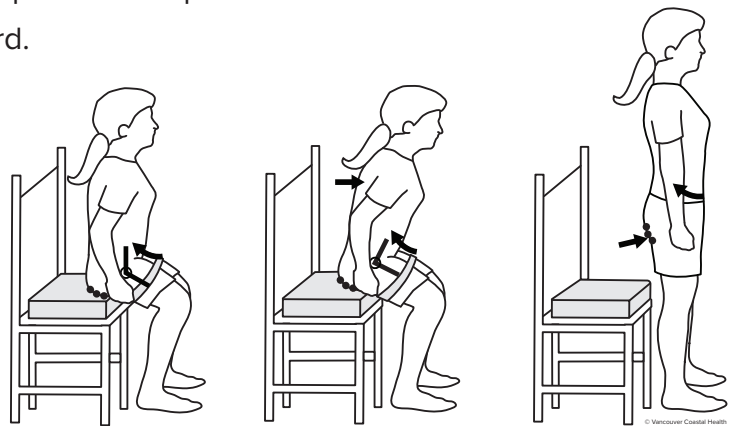
Exercise 5: Chair Marching

- Sit upright and away from the back of the chair.
- You can hold on to the sides of the chair for support.
- Tighten your core muscles and lift your left leg up slowly about 1 cm and then place foot down with control as if you are marching. When your foot is back down relax your muscles.
- Repeat with the right leg.
- Do 5 lifts with each leg for a total of 10 lifts.
- Do 3 sets in a day.



Exercise 6: Sit to Stand

- Sit on a chair that is stable, solid and without wheels. If needed, have a table or walker in front of you to help steady yourself as you stand.
- Place your feet flat on the floor approximately hip-distance apart.
- Come to the edge of the chair, then lean forward.
- Stand up tall using your legs and tightening your core muscles as you rise.
- To return to sitting, push your bottom out and slowly sit back down.
- Repeat the exercise 5 times.
- Do 3 sets in a day.



If You Wish to Progress to Higher Level Exercises Following Surgery

See a Physiotherapist

- If you would like to increase the difficulty of your exercises, it is strongly recommended that you see a physiotherapist. To find a physiotherapist near you, go to: bcphysio.org/find-a-physio.

For those with an ostomy

- Talk with your NSWOC (ostomy nurse) to find a physiotherapist who is knowledgeable of ostomy surgery and recovery.
- The following exercises **should not be done** unless under the direction of a physiotherapy and family physician/nurse practitioner due to the higher risk of hernia development; traditional crunches/sit ups, front or side lying planks, full push-ups or chin-ups or any double leg lifts exercises.

Lifting, Carrying, Pulling & Pushing Following Surgery

In the first six weeks after surgery, you need to be careful when doing your daily activities, such as, lifting, carrying, pushing, and pulling. These activities involve the use of your deep core muscles and they are not yet strong enough for this type of activity.

You should not lift items that weigh more than 5kgs (11lbs) or a weight recommended by your surgeon, as heavy lifting can lead to a hernia (see below). Examples of what not to lift, a baby or a large pet, wet laundry, or heavy shopping bag.

If you use a wheelchair, consider using a transfer board when doing transfers, such as from bed to chair, as the transfer board will help to decrease the strain on the abdominal muscles.

When lifting, carrying, pulling, and pushing, even relatively light weight items, there are important 'how-to's to do the activity safely:

- Start by breathing out, then tighten your core and hold it tight as you do the activity.
- Don't hold your breath while doing the activity.
- Don't strain to do the activity.
- Bend at the hips and knees when lifting.
- When lifting and carrying items, make sure to hold them close to your body.

Although you need to be cautious, it is important to gradually return to your usual activities. Remember to tighten your core muscles before and during your housework, gardening, etc.

What is a Hernia?

Abdominal Hernia

Inside the abdomen, the deep abdominal core muscles hold organs, such as the intestines/bowel, in place. A hernia occurs when there is a small area of weakness in a deep abdominal core muscle; this weakened area allows for a loop of intestine/bowel to slip/bulge through.

A hernia can happen weeks, months, or even years after surgery. You might notice a bulge when you cough, sneeze, laugh or when you use your abdominal muscles to sit up. Most people notice it more when they are standing. It starts gradually and may get bigger over time.

A hernia can cause discomfort and in severe cases, can cause a blockage of the section of intestine that has slipped through the weaken muscle, requiring urgent surgery to fix.

Parastomal Hernia

If you have an ostomy, you are at risk for developing a parastomal hernia. The creation of the stoma requires the end of the bowel to come through a small opening in the deep abdominal core muscles and then up to an opening on the surface of the skin. The opening in the deep abdominal core muscles can provide a passageway for some of the intestine to come through and collect in the area under the stoma, creating a parastomal hernia.

Things you can do to reduce your risk of a hernia

- Stay active and strong, your general physical wellbeing and strength will help you lift and move comfortably and reduce strain on your abdomen.
- Manage your weight, being overweight is one of the main causes of hernias.
- Stop smoking, if you smoke you are 4 times more likely to develop a hernia.
- Use safe lifting techniques (see page 9).
- Strengthen your deep abdominal core muscles, if you have weak abdominal muscles, you are more likely to get a hernia. Follow the exercises in this booklet to strengthen these muscles.

If you think you may have developed a hernia, no matter how small, consult with your family physician/nurse practitioner or your NSWOC.

My Exercise Schedule

1. When and where will I do my walking? _____
2. What is the best time of day for me to do my core exercises? _____

Date:	Date:	Date:	Date:	Date:	Date:
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
WALKS _____ mins _____ mins _____ mins	WALKS _____ mins _____ mins _____ mins	WALKS _____ mins _____ mins _____ mins	WALKS _____ mins _____ mins _____ mins	WALKS _____ mins _____ mins _____ mins	WALKS _____ mins _____ mins _____ mins
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