

Exercise Program for the Prevention of Osteoporosis

Why are these exercises important?

Bone loss is a common side effect of certain types of breast cancer treatment. It can lead to lower bone density, osteoporosis, and higher risk for fracture. Specific exercises are important to maintain your bone strength. The three types of bone-healthy exercises are:

- 1) Aerobic weight-bearing
- 2) Strengthening
- 3) Balance and posture training

Perform a combination of these exercises on a regular basis to maintain your bone strength and reduce your risk for falls and fractures. In addition to keeping your bones healthy, this exercise program can help manage some treatment side effects. This program includes exercises to improve your posture, strength, balance, and flexibility.

When should I do these exercises?

This exercise program can be done before, during, and after breast cancer treatment, **unless**:

- You have difficulty moving your arm or shoulder on the treatment side.
- You have been specifically informed by your healthcare team to stop exercising

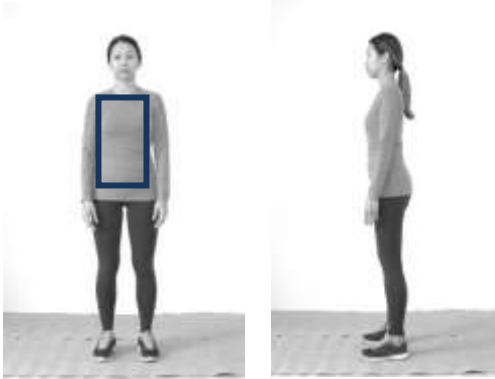
Consult a physiotherapist before starting this exercise program, especially if you have lymphedema, metastatic cancer, chronic injury, or movement restrictions.

How should I do these exercises?

- For maximal benefit, this exercise program should be done in addition to regular aerobic weight-bearing exercise, such as brisk walking or stair climbing. Work toward doing 150 minutes of moderate intensity aerobic weight-bearing exercise each week.
- Aim to perform this exercise program two to three times a week.
- Use a lymphedema sleeve, if required.
- When you are doing these exercises, dress comfortably in loose clothing, do them slowly, and breathe deeply. Listen to your body and progress at your own pace.
- Some exercises have more advanced versions. Progress to the more advanced version when the initial version is no longer challenging.
- These exercises can be done safely at home or at your local gym. If you need help getting started, a kinesiologist is an exercise specialist who can help you.
- Talk to your care team if you have any changes or discomfort, such as pain, swelling, or dizziness when exercising.
- If you have osteoporosis, try the Breast & Bone Health Exercise Program for Osteoporosis Management.

POSTURE EDUCATION

1. The Box



- Imagine your torso is a box. The corners of the box are at your shoulders and hips.
- Lift breast bone slightly as if to show off a necklace/bowtie.
- Keep box intact as you go about your daily activities.

2. Hip Hinging



- Start by standing with good postural alignment.
- Place hands in the crease of your hips.
- Bend at the hips over your hands while sticking your bottom back slightly.

3. Unloaded position



- Lie flat on your back with your knees bent and arms by your side, palms face up.
- Make sure chin is pointing straight up to the ceiling.
- Relax in position.

HOLD: 5 minutes REPEAT: 2 times per day

STRENGTHENING

1. Sit to Stand



- Place feet hip-width apart, hands in crease of hips.
- Push your hips backwards and stick your bottom out.
- Slowly bend your knees and lower yourself gently into a sitting position in the middle of the chair.
- Lean body forward and push off to stand.

SETS: 2 REPETITIONS: 8 – 12

2. Wall Push Up



- Place hands on wall a little wider than shoulder-width apart and just below shoulder height.
- Bend at the elbows and stop before your forehead touches the wall.
- Go back to start position.
- Keep your spine in a straight line throughout the entire movement.

SETS: 2 REPETITIONS: 8 – 12

3. Bridge



- Lie with knees bent and arms placed at your sides, palms face up.
- Push lightly into the floor with the back of your shoulders.
- Squeeze your buttocks, thighs and abdominal muscles to lift your pelvis. Do not use your back.
- Lower slowly until you reach the ground.

SETS: 2 REPETITIONS: 8 – 12

4. Seated Row



- Sit at the front edge of the chair, elbows are straight but slightly bent.
- Squeeze your shoulder blades together and slightly lift breast bone.
- Pull the elastic and bring your elbows back and your hands at your sides
- Return to start position and relax your shoulder blades.

SETS: 2 REPETITIONS: 8 – 12

5. Static Lunge



- Stand with your feet hip-width apart.
- Take a large step forward and keep core strong and back straight.
- Lower your body straight downwards by bending both knees.
- Keep hips stable and knees in line with hips.
- Straighten knees to return to start position.

SETS: 2 REPETITIONS: 8 – 12

6. The Sash



- Hold elastic with both hands and place your left hand over your right hand.
- Pull the elastic up and diagonally over your chest.
- Return to start position with control.
- To change sides, place right hand over the left hand.

SETS: 2 REPETITIONS: 8 – 12

7. Side Pull



- Hold elastic in both hands.
- Lift arms up to shoulder height and keep elbows straight.
- Pull elastic straight out to the side, across the chest.
- Return to start position with control.

SETS: 2 REPETITIONS: 8 – 12

8. The Overhead



- Hold elastic in both hands at hip level and shoulder-width apart.
- Keeping elbows straight and a steady tension in the elastic, bring arms overhead as far as possible.
- Keep your back completely flat on the floor during the entire movement.
- Return to initial position with control.

SETS: 2 REPETITIONS: 8 – 12

9. Heel Touches (1 leg)*



- Lie down on back, raise one leg keeping your knee bent.
- Flatten your lower back on the floor by pulling your navel slightly in.
- Lower one leg at the time to tap your heel on the floor, and then lift your heel back up without losing the abdominal contraction.
- Repeat and switch foot.

SETS: 2 REPETITIONS: 8 – 12

10. Active Extension Progression



- Start by gently pressing pelvic bones into the floor.
- Holding the pelvic press, place hands in lower back and raise just your forehead off the floor and hold.
- Bring arms out to side and raise body slightly higher and hold.
- Bring arms straight out above head while lifting even further.
- Relax and release pelvic press.

SETS: 2 REPETITIONS: 8 – 12

11. Plank (on knees)*



- Lie on your forearms and knees with elbows under your shoulders.
- Contract abdominals and lift yourself up in a straight line from head to knees.
- Do not arch your lower back.
- Hold position for required time

SETS: 2 HOLD: _____seconds

12. Superman (arms only)*



- Place hands directly under shoulders and knees directly under hips.
- Back is straight in a neutral position.
- Tighten abdominal muscles and lift arm straight out in front of you while keeping the body still.
- Hold for 2-3 seconds and slowly return to initial position.

SETS: 2 REPETITIONS: 8 – 12

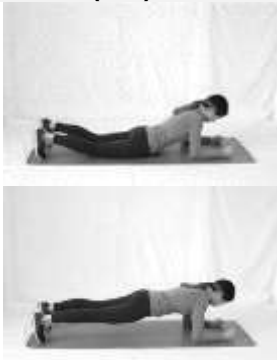
***Advanced - Heel Touches (2 legs)**



- Lie down on back raise both legs keeping your knees bent.
- Flatten your lower back on the floor by pulling your navel slightly in.
- Lower one leg at the time to tap your heel on the floor, and then lift your heel back up without losing the abdominal contraction.
- Repeat and switch foot.

SETS: 2 REPETITIONS: 8 – 12

***Advanced - Plank (full)**



- Lie on your forearms and knees with elbows under your shoulders.
- Contract abdominals and lift yourself up in a straight line from head to toes.
- Do not arch your lower back.
- Hold position for required time.

SETS: 2 HOLD: _____ seconds

***Advanced - Superman (legs only)**



- Place hands directly under shoulders and knees directly under hips.
- Back is straight in a neutral position.
- Tighten abdominal muscles and lift leg straight out behind you while keeping the body still.
- Hold for 2-3 seconds and slowly return to initial position.

SETS: 2 REPETITIONS: 8 – 12

***Advanced - Superman (arm and leg)**



- Place hands directly under shoulders and knees directly under hips.
- Back is straight in a neutral position.
- Tighten abdominal muscles and lift opposite arm and leg while keeping the body still.
- Hold for 2-3 seconds and slowly return to initial position.

SETS: 2 REPETITIONS: 8 – 12

BALANCE AND AGILITY

1. Tandem Stance



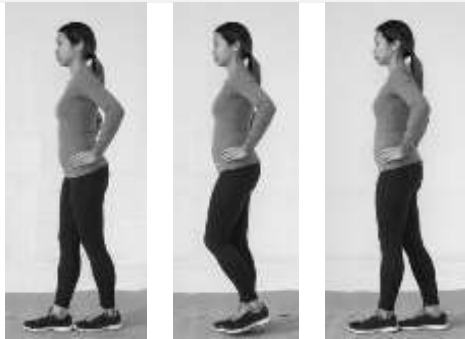
- Stand beside a steady chair or wall.
- Place heel of one foot in front of toes of the other foot.
- Hold position for 20 seconds.
- To increase difficulty, try with eyes closed

2. Single Leg Stance



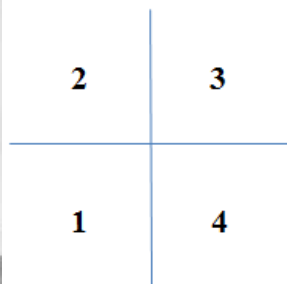
- Stand beside a steady chair or wall.
- Transfer weight to one foot and lift other foot off the ground.
- Hold position for 20 seconds.
- To increase difficulty, try with eyes closed.

3. Tandem Walk



- Make sure to perform this exercise near a wall or counter top for increased safety.
- Walk forwards by placing one foot directly in front of the other, heel to toe.
- To increase difficulty, try to walk backwards.

4. Four Square*



- Start in square 1, facing square 2.
- Step into each square as fast as possible following this sequence:
1-2-3-4-1-4-3-2-1
- Be sure that both feet must step into each box.

SETS: 2 – 3 REPETITIONS: 3 – 5

*Advanced - Front Step Over



- Place elastic on floor.
- Stand facing elastic and take a big step forward to step over the elastic.
- Continue to face forward while you take a big step backwards to return to initial position.

SETS: 2 – 3 REPETITIONS: 3 – 5

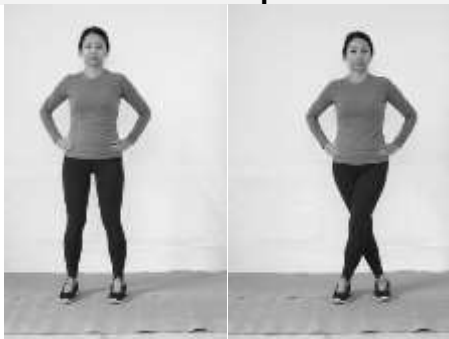
*Advanced - Side Step Over



- Place elastic on floor.
- Stand with the elastic at your side and take a big step sideways to step over the elastic.
- Continue to face forward while you take a big step sideways to return to initial position.

SETS: 2 – 3 REPETITIONS: 3 – 5

*Advanced - Karaoke Step



- Make sure to perform this exercise near a wall or counter top for increased safety.
- Walk sideways by crossing one foot directly in front of the other.
- Repeat in opposite direction by crossing the other foot in front.

STRETCHING

1. Hamstring*



- Sit at the front edge of the chair with back straight.
- Place leg straight out in front of you with your heel on the ground and toes pointing up.
- Lean forward to feel pull behind leg while keeping knee straight.

SETS: 2 HOLD: 30 seconds

2. Hip



- Sit at the front edge of the chair with back straight.
- Place outside of ankle on knee.
- Lean forward to feel pull in hip.

SETS: 2 HOLD: 30 seconds

3. Quadriceps



- Stand close to a chair for support with back straight.
- Grab top of ankle and bring heel to bottom until you feel a gentle stretch in front of the thigh.

SETS: 2 HOLD: 30 seconds

4. Chest



- Stand straight in front of the wall.
- Place your forearm against the wall with elbow bent to 90°. Your elbow should be at shoulder height.
- Slowly rotate your body away from the wall until you feel a gentle pull in front of the shoulder and chest.

SETS: 2 HOLD: 30 seconds

5. Triceps



- Stand straight in front of the wall.
- Place your forearm against the wall with elbow bent to 90°. Your elbow should be at shoulder height.
- Slowly rotate your body away from the wall until you feel a gentle pull in front of the shoulder and chest.

SETS: 2 HOLD: 30 seconds

6. Chest (hands behind back)



- Stand up straight with your shoulders back and back straight.
- Place both hands behind your back and interlock your fingers.
- Slowly raise your until you feel a gentle stretch across your chest and in front of your shoulders.

SETS: 2 HOLD: 30 seconds

*Advanced Hamstring (lying)



- Lie on your back and place elastic around your forefoot, holding the ends with your hands.
- Lift your leg straight up, keeping your knee straight and pulling gently on the elastic with your hands until you feel a gentle stretch behind the thigh and calf.

SETS: 2 HOLD: 30 seconds

This information should not be considered as medical advice. It is not to be used in place of a visit with a doctor, nurse, physiotherapist, or other healthcare professional. If you have questions about your individual medical situation, please consult with your healthcare professional.

The Quebec Breast Cancer Foundation is proud to promote bone health in women with breast cancer through financial support of the Breast & Bone Health Program.



Fondation
cancer du sein
du Québec

Quebec
Breast Cancer
Foundation



HOPE & COPE
L'ESPOIR C'EST LA VIE