



# Exercising with osteoporosis

## Every move counts

Move more and reduce your sedentary time each day by incorporating different types of movement. It is never too late to start, some is always better than none!

## How to get started

Regular exercise helps to increase muscle strength and bone mineral density, significantly slows age-related bone loss and improves your balance, which helps to prevent falls and fractures. Progressive strength training that gradually increases the load over time maintains bone strength for all people with osteoporosis. For people with osteoporosis who do not have vertebral fractures or multiple low trauma fractures, brief bursts of moderate impact exercises on most days promotes bone strength (e.g. stamping, jogging, low level jumping and hopping). For people with vertebral fractures or multiple low trauma fractures, brisk walking is recommended to promote bone strength. Strength and balance training has been shown to be a safe and effective treatment for osteoporosis, alongside medication and good nutrition. Exercise can also help to maintain or improve posture, relieve or lessen pain, and help you carry out the activities of daily living.

Your doctor or healthcare provider can advise on exercises that will help you retain mobility, and help improve bone health. Your exercise plan should be tailored based on a medical evaluation of your:

- fracture risk
- previous fractures
- frailty/muscle strength
- fitness level
- balance
- other diseases or conditions you may have.

**Take all medicines as recommended by your doctor or pharmacist.**

## Warm up and cool down

**Always start your exercise session with a 10–15-minute warm up to loosen up the muscles and raise the heart rate safely.** Warm-up exercises include dynamic stretches, range-of-motion activities and low intensity movements. This can be done standing up, walking around, marching on the spot or seated.

**Always end your exercise session with a 10–15-minute cool-down to ensure your heart rate and breathing rate return to normal safely.** Cool down exercises include slowly decreasing the intensity of your activity and simple stretches.

## Be active

### Some is good, more is better

<b>How much:</b>	Aim for at least <b>150-300</b> minutes a week of moderate intensity or at least <b>75-150</b> minutes a week of vigorous intensity physical activity. For people with osteoporosis who have vertebral fractures or multiple low trauma fractures, low impact exercise on most days at a level up to brisk walking is recommended for 150 minutes a week. Start moving more each day increasing to regular movement every day and add sessions as your strength and stamina improve.
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<b>How hard:</b>	Any movement helps. Aim for moderate to vigorous intensity—aim to get slightly breathless. Take frequent breaks, if necessary.
<b>How long:</b>	Aim to spread out sessions throughout the week. If your fitness level is low, start with 5–10 minute sessions and add 10-minute intervals until you can comfortably exercise for longer.
<b>What type:</b>	All physical activity counts. Try activities within your abilities. Try impact exercises such as jogging brisk walking, skipping, dancing, and stair climbing Recreational team sports such as soccer, tennis or volleyball are great social activities too! Household activities such as cleaning, gardening, vacuuming or walking your dog are great activities for your health (though avoid bending over for too long or with too heavy a weight).

### What will it do for me?

*Weight-bearing/ impact exercise has been shown to improve strength and decrease the risk of obesity, hypertension, type 2 diabetes, some cancers and heart disease.*

## Build strength

<b>How much:</b>	At least twice a week.
<b>How hard:</b>	Start with light muscle strengthening exercises and progress to moderate or greater intensities over time.
<b>How long:</b>	Choose 8–10 exercises targeting the upper and lower body (but avoid spine flexion), and repeat each exercise 8–12 times. Try 1–3 sets of each exercise.
<b>What type:</b>	A variety of strength exercises using free weights, resistance machines or household items such as a can of beans or a weighted water bottle as a weight. Choose exercises that work on the main muscle groups of the hips and spine. A great back extension to protect the spine from vertebral fractures is to lie face down on the floor and lift your shoulders off the floor. Squeezing a tennis ball slowly ten times a day has been shown to improve bone density in the wrist.

### What will it do for me?

*Improving muscle strength helps to conserve bone mass in your legs, improve confidence and mobility, and reduce falls and fracture risk by improving balance and coordination. Spinal extension exercises improve posture and potentially reduce risk of falls and vertebral fractures.*

## Improve balance

<b>How much:</b>	At least three days a week.
<b>How hard:</b>	Try 2–3 balance exercises and repeat each exercise 10-15 times.
<b>How long:</b>	Hold each balance for 10–30 seconds.
<b>What type:</b>	Try yoga, Tai Chi, or simple home balance exercises. Balance exercise can be done standing up using a chair, against a wall or sitting down. Ensure the area you are exercising in and the type of balance exercise is safe. If you are at high risk of falling, do seated balance exercises or use a sturdy chair or wall for support.



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## What will it do for me?

*Practicing balance exercises helps to train your body to react more quickly to a loss of balance and can help reduce the risk of falls, fractures and injuries.*

## Sedentary living

**Reduce the amount of time being sedentary.** Move more and break up sedentary time. Sedentary behavior is defined as time spent sitting or lying with low energy expenditure, while awake in the context of occupational, educational, home and community settings, and travel. Higher amounts of sedentary behavior can increase the risk of heart disease, type 2 diabetes and some cancers.

**Replace sedentary behavior with more physical activity of any intensity (including light intensity).** It is possible to avoid sedentary behaviour and be physically active while sitting or lying, through, for example, upper body led activities, inclusive and/or wheelchair-specific sport and activities. Try seated stretches for those with limited mobility; using active forms of transport; standing while working (within your abilities and environment), and other accessible active options to replace sedentary time.

## Your exercise, your way!

Choose activities that are easy to start with, and that you enjoy. Always exercise within your abilities. If mobility is difficult, adaptive chair-based exercises may be better alternatives. Exercise with friends and family or join a group class to improve your motivation levels and engage in social activities. Try exercising both indoors and outdoors and see which you prefer! Most importantly: **some physical activity is better than none.**

## Helpful resources

Osteoporosis Canada provides great tips to stay active through guidelines and video with the goal of reducing falls and resulting fractures for people living with osteoporosis. <https://osteoporosis.ca/exercise-recommendations/>

## Exercise safety

Because of the varying degrees of osteoporosis and the risk of fracture, certain exercises are discouraged. **Avoid the following:**

- Exercises and postures where there is a high degree of bending forward (spinal flexion), such as touching the toes, sit-ups or using a rowing machine, and activities such as golf, tennis, bowling and certain yoga and Tai Chi poses.
- High-impact exercises such as jumping, running and jogging if you have vertebral fractures or multiple low trauma fractures.
- Exercises that increase the risk of falling.

Avoid exercise in too hot or too cold environments.

Start with shorter sessions (e.g. 10–15 minutes) and slowly build up to the recommended level. Aim to get slightly out of breath, but exercise sensibly and stop the activity if you feel unwell.

Always wear comfortable clothing and shoes that give good support and don't rub or cause discomfort to prevent sores or infection.

Take frequent breaks if necessary and drink water before, during and after exercise.

Ensure you exercise safely during all exercises and ask for assistance and supervision if you are unsure about any exercises.

Choose environments that you can access freely and safely. Choose routes with resting places. Please ask your healthcare provider or local leisure organizations for advice on the best option for you.

Please ask your healthcare provider for information on modification or adaption for exercises within your abilities.

Scan for more physical activity resources!

