



Exercising with brain injury

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 improves stamina and balance, helps prevent and treat depression, and increases muscle strength and coordination. It increases nerve impulse travel and blood flow to the brain, aiding your cognitive abilities such as how quickly you process information and focus on tasks.

The goal of your exercise program should be to improve fitness, increase muscle strength and improve your range of motion, in order to increase independence, mobility and the ability to do the activities of daily living.

Plan your exercise activity to get maximum benefit from each type of exercise. Having a written reference of the exercises in your plan may be helpful. Structure your workout to reduce poor goal-orientated behaviour often associated with changes in memory and initiation tasks.

If you feel fatigued, reduce how many exercises you do. Planning activities at appropriate times can help enormously (e.g. certain times of the day, carefully timed bursts of activity).

Take all medicines as recommended by your doctor or pharmacist. It may be helpful to understand if and how your medicines are affecting your body during exercise. Discuss with your doctor or health care provider and ask for a specific exercise and medication plan.

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

How much:	Aim for at least 150-300 minutes a week of moderate intensity or at least 75-150 minutes a week of vigorous intensity physical activity. Start moving more each day increasing to regular movement every day and add sessions as your strength and stamina improve.
How hard:	Any movement helps. Start with low intensity—aim to get slightly breathless. Aim for moderate to vigorous intensity. Take frequent breaks, if necessary.
How long:	Aim to spread out your session 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.

What type:	All physical activity counts. Try activities within your abilities: Start with low impact exercises such as walking, cycling and water exercises and progress to high intensity exercise when your stamina increases.
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What will it do for me?

Regular exercise improves physical, emotional and cognitive symptoms, such as sleep problems, depression, irritability and forgetfulness. It also helps you become more engaged and functionally independent.

Build strength

How much:	At least twice a week.
How hard:	Start with light muscle strengthening exercises and progress to moderate or greater intensities over time.
How long:	Choose 8–10 exercises targeting the upper and lower body and repeat each exercise 10–15 times. Try 1–3 sets.
What type:	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. Reduced motor control may restrict your ability to do certain exercises; use equipment that can be modified to meet your specific needs. Avoid overloading of the joints to prevent injury.

What will it do for me?

Strength training improves muscle strength and keeps your body healthy, making it easier to undertake the activities of daily living by reducing the symptoms of muscle weakness that can result from injury and surgery.

Improve balance

How much:	At least three days a week, increasing to daily if necessary.
How hard:	Try 2–3 balance exercises and repeat each exercise 10–15 times. Do 2 sets of each exercise.
How long:	Hold each balance for 10–30 seconds.
What type:	Start with chair-based exercises to develop confidence and progress to more challenging exercises when you are comfortable. Balance exercises should be avoided alone if you are at high risk of falling. Ask for assistance or join a class where you can exercise safely.

What will it do for me?

Practising 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.



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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, adapted cycling, swimming and 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

Brain Injury Canada provides tips on how to safely return to physical activity after a brain injury. <https://braininjurycanada.ca/en/living-brain-injury/exercise/>

Exercise safety

Always exercise within your abilities. Avoid busy and crowded environments. You may need to do certain exercises with family, friends or an 'exercise buddy'.

Always wear protective headgear when cycling and avoid exercises that could increase your risk of falling. The rate of second injury is three times greater after one head injury.

You may need adapted or support equipment due to muscle weakness and reduced balance. Discuss these requirements with your doctor or healthcare practitioner.

Ensure you are comfortable with each exercise before progressing in intensity or duration. Always ask for help or a demonstration on how to perform exercises effectively and safely.

If you become fatigued or have increased muscle cramps or spasms, stop exercising and modify your plan with your doctor or healthcare practitioner.

If you are at high risk of falling, use a chair for support or do a chair-based exercise programme.

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

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

Scan for more physical activity resources!

