



# EXERCISE AND DIABETES

LET'S GET YOU FEELING BETTER!

BALANCE AND FALL PREVENTION



NeuroMotion Wellness

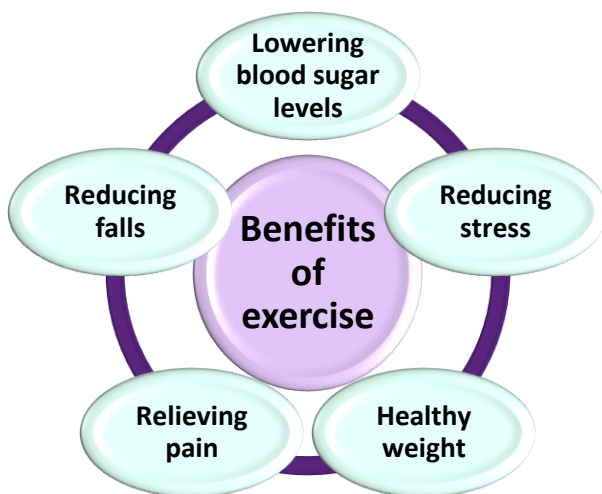
[www.neuromotionwellness.com](http://www.neuromotionwellness.com)





# The Program

Movement, whether organized in an exercise class or simple physical activity, like gardening, cleaning, or playing with your grand children is an integral part of life. Moving regularly has many benefits for the human body, including controlling blood sugar levels, lowering blood pressure and cholesterol, keeping the heart healthy, relieving pain and keeping a healthy weight.



**Figure 1.** Benefits of exercise for people with Type 2 Diabetes.

Diabetes mellitus is a chronic disease that, if left untreated, can result in high blood sugar levels which can cause heart disease, strokes, and nerve damage that can result in blindness, pain or numbness in the hands and feet among other symptoms. Type 2 diabetes or pre-diabetes affects 11 million Canadians and its prevalence increases with age. However, if you have diabetes or pre-diabetes, you can



get it under control and potentially reverse its effects by exercising regularly and eating as healthy as possible.

At NeuroMotion Wellness, we offer weekly live virtual exercise classes which can further motivate you to keep moving. In these classes, you can also get a sense of community by attending our coffee time and chatting with other participants, which can be difficult to do safely during the pandemic.

After a few months of consistent exercise, you can then consider doing the other programs with us, including the mobility and general fitness program and the heart and brain health program (available in September 2021) or join the live virtual fitness classes on Zoom which are available at <https://www.neuromotionwellness.com/virtual-classes>. Virtual classes promote a sense of community and will empower you further on your health journey.

## What is the balance and fall prevention program?

Starting at 30 years old, many normal physiological changes occur in the body, including increased heart rate and blood pressure, elevation of blood glucose, and lower metabolic rate, loss of muscle mass (sarcopenia), osteoporosis (which is more pronounced in women) and joint degeneration and become more pronounced over time. Even though these changes are part of normal aging and are irreversible, a wide range of these changes can be mitigated by living a healthy lifestyle. For example, lung capacity can be maintained and even improved with regular cardiovascular exercise and loss of muscle and bone mass can be slowed down or stopped completely with consistent strength training.



Another important aspect of aging is impairment in locomotion, which, in combination with osteoporosis, can increase the risk of fractures. Improving balance therefore becomes an important aspect of mitigating the signs of aging and this program aims to do just that.

## What will I get from this program?

The program is composed of a warm-up, a work-out and a cool-down. Do it once a week to get in shape, twice a week to get visible benefits in terms of mobility and balance within weeks and three times a week to improve your posture and general fitness further.

Other benefits of doing this program regularly include lowering your blood glucose levels and cholesterol, increases in bone and muscle mass, improved lung capacity and a feeling of accomplishment, like you are doing something great for yourself.

Bonus: you can also make the warm-up part of your morning routine and do the cool-down before going to bed at night.



# Warm-up

*YouTube video link: coming soon*

The purpose of the warm-up is to get your body and your mind ready to exercise safely and to get you in the right mindset for exercising. The mind-body connection is often undervalued but it can make the difference between feeling good and getting injured after a workout.

The focus of this warm-up is to improve mobility at the shoulders, hips, and spine, so that you can move and feel better and getting your body and mind ready to improve your balance.

## Exercises

### Sitting

- |                                    |                |
|------------------------------------|----------------|
| 1. Head: yes/no/head rolls         | 30 sec each    |
| 2. Shoulder rolls forward and back | 30 sec each    |
| 3. Side leans alternating          | 6 x 3 sec hold |
| 4. Cat/cow                         | 6 x 3 sec hold |
| 5. Ankle rolls                     | 1 min          |

### Standing

- |  |             |
|--|-------------|
| 1. Hugs                                    | 30 sec      |
| 2. Washing machine                         | 30 sec      |
| 3. Internal/external rotation of shoulders | 30 sec      |
| 4. Hip circles                             | 30 sec/side |
| 5. Hip external rotation                   | 30 sec/side |



# Work-out

*YouTube video link: coming soon*

This workout focuses on general mobility and fitness, including cardiovascular endurance, strength with a focus on balance to prevent falls.

Equipment:

- a chair
- a wall
- enough space to hold both arms out freely

You are encouraged to go through all **6 exercises at least twice** (for a 45 minutes workout) or three times (for a 1 hour workout).

You should aim for **20-60 seconds active rest between exercises** (marching or walking). If you can, avoid sitting down after a hard exercise because movement helps blood return to your heart and prevents you from getting light-headed (i.e. getting low blood pressure because not enough blood gets to the heart).

## Exercises

- |                        |            |
|------------------------|------------|
| 1. Modified jacks      | 1 min      |
| 2. Squats              | 20         |
| 3. Body weight changes | 10/side    |
| 4. Wall push ups       | 1 min      |
| 5. Single leg stance   | 30 sec/leg |
| 6. Oblique crunch      | 1 min      |



# Cool-down

*YouTube video link: coming soon*

The purpose of the cool down is to bring the heart rate and blood pressure down and prepare the body for recovery. Stretching can have healing benefits after a workout in that it can help muscles recover faster and will reduce muscle soreness. Stretching will also make you feel better and more relaxed physically as well as mentally, similar to meditation.

You should go through the cool-down exercises at least once. If you feel tight and/or stressed, you can go through it two or three times. You can also use the cool down on its own, in the morning after you wake up or at night before going to bed.

## Exercises

### Sitting

- |                       |                 |
|-----------------------|-----------------|
| 1. Cat/cow            | 5 x 5 sec hold  |
| 2. T-spine rotations  | 4 x 10 sec hold |
| 3. Quadriceps stretch | 45 sec/leg      |

### Standing

- |                                   |                 |
|-----------------------------------|-----------------|
| 1. Chest stretch                  | 2 x 45 sec hold |
| 2. Hamstring stretches            | 45 sec/leg      |
| 3. Overhead reach to forward fold | 3 reps          |



## Conclusion

This program is a great way to start getting back into shape, increase your general fitness level, improve your balance or get your diabetes or pre-diabetes under control. Because of the focus on mobility and general fitness, any (older) adult will benefit from this program. The key to improving fitness is consistency, which means that moving a little every day will get you and keep you healthier for longer.

Information on virtual classes can be found at <https://www.neuromotionwellness.com/virtual-classes>. Virtual classes are happening on Tuesdays at 9 am ET (Toronto time) and. The Summer session start on May 11<sup>th</sup> and goes until August 31<sup>st</sup> (17 classes) with a suggested donation of \$150.

If you are interested in learning more about this program, the virtual classes, Dr. Loïse or Neuromotion Wellness, visit [www.neuromotionwellness.com](http://www.neuromotionwellness.com) or send an email at [loisehp@gmail.com](mailto:loisehp@gmail.com). I hope to see you in class this Tuesday!



Take care and stay healthy!

Dr. Loïse