

CLUB Z

BALANCE E-BOOK



WHAT IS BALANCE TRAINING AND WHY DOES IT MATTER?

Balance training involves learning to use and strengthen the different muscles that help keep our bodies upright and stable as we move around in our day-to-day lives. The difference between balance training and strength training is that it includes work that challenges the body's balance system. This trains our bodies to stay balanced while we perform movements and activities that are less stable with more ease. For example, walking outdoors in the winter when there is ice on the ground. Our state of balance depends on where our body's center of mass is in relation to its base of support and being able to control our body when our center of mass and base of support moves around or changes size. Center of mass is the area of the body where the total weight of our entire body is concentrated.



In humans, this is approximately one inch below the belly button. Base of support is the area around your body that is in contact with the ground. For example, when we are standing on two feet, our base of support is the area around the outer edge of our feet and the space in between the two feet. A wider stance increases the size of our base of support and therefore increases the stability of our position.

Another example that can be easy to imagine is your stability when standing on a stable flat floor on two feet versus standing on one foot on an unstable surface like ice. Balance training involves becoming comfortable and confident in moving your body (or moving your center of mass) outside your base of support, making your base of support smaller or by moving your base of support while maintaining stability. Being able to maintain balance while performing various activities in different environments is important for doing the things you enjoy confidently and safely.

Balance exercises challenge your balance system and increase your stability as you learn to correct your body's "wobble" when it starts to feel unstable. For example, the single leg stand. In this exercise you have to keep your body over a smaller base of support. At first when you try this exercise you may feel wobbly and have a hard time maintaining your balance. With practice and as your body learns how to adjust to being on only one leg, the stability and ease of the exercise increases.

Did you know? This exercise can then be made more challenging by adding arm movements, closing your eyes, or standing on a cushion. Why is this? Keep reading to learn the different factors that influence our balance!

To maintain balance, our brains take in information from different parts of the body. We receive information from our eyes, our muscles and joints, and our inner ears. This information is then processed in our brains which send a message to our muscles to turn on and maintain our balance. By altering the information that our eyes, muscles, joints, and inner ears receive, we increase the difficulty of maintaining our balance. Therefore, participating in balance training that alters your vision, muscle and joint positions, and inner ear experience allows your body to practice responding to this information quickly to remain balanced. This is helpful when we are placed in an unexpected, unbalanced situation because our bodies are prepared to help us react and remain safe and stable. This is how balance training can help increase safety and reduce risk of injury when you are completing day to day activities. It is also why performing proper balance exercises that incorporate all the factors listed above is important to get the most out of your training.

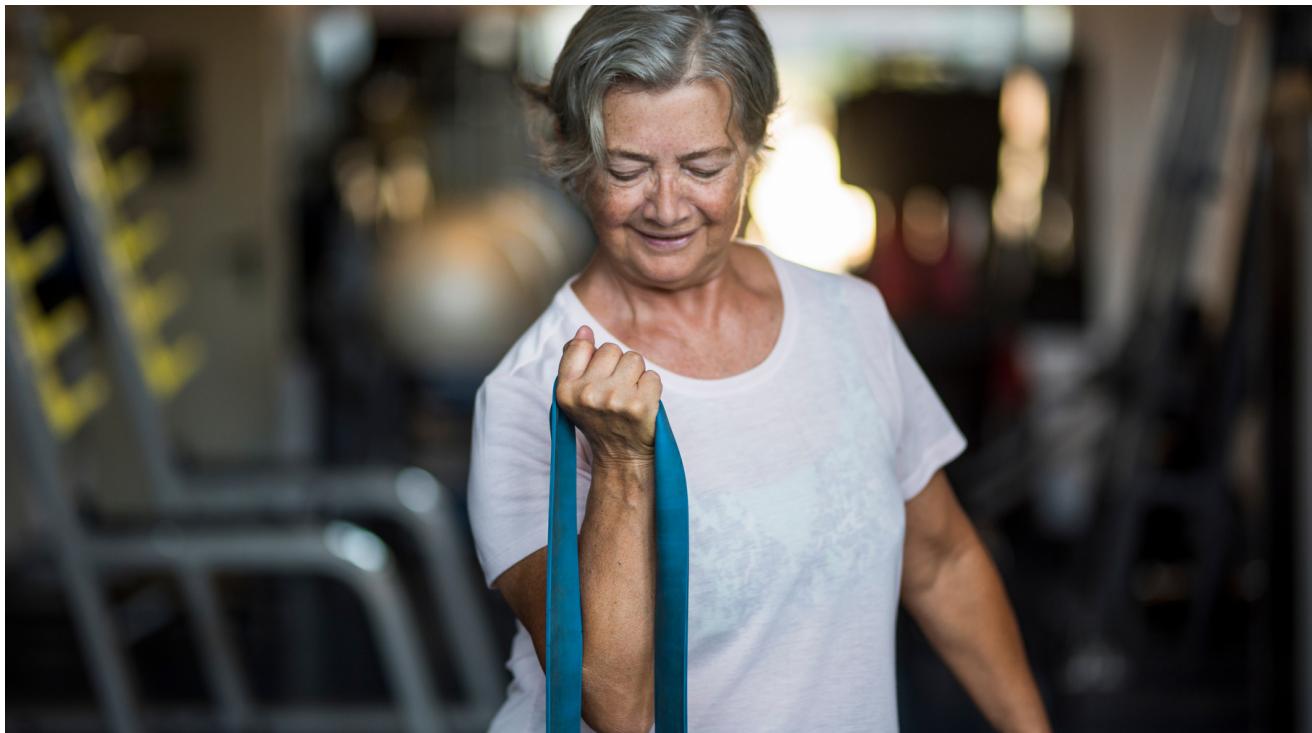
WHAT HAPPENS TO OUR BALANCE AS WE AGE?



Have you noticed that doing some of the activities in your day to day life are feeling less stable or you are finding yourself feeling less confident completing certain tasks? This may include feeling less balanced when walking on different terrains, for example walking on loose gravel and sand versus walking on flat pavement. Or maybe you've noticed that you don't feel as confident when playing with your grandchildren when they want to run and kick a ball or bounce on the trampoline.

As well as daily activities such as putting on your socks or shoes while standing may be more challenging than they once were. If you find yourself feeling less confident or you are interested in learning how to work on your balance to prevent feeling unstable in the future, keep reading!

Regardless of your age, it is never too late or too early to start working on balance. If you think of young gymnasts, they work on balance exercises every time they train! Although we're not suggesting that you need to start working on performing backflips on the balance beam, we are encouraging you to start thinking about how you can incorporate balance training into your fitness routine early. This way you can help prepare your joints and muscles for the years to come!



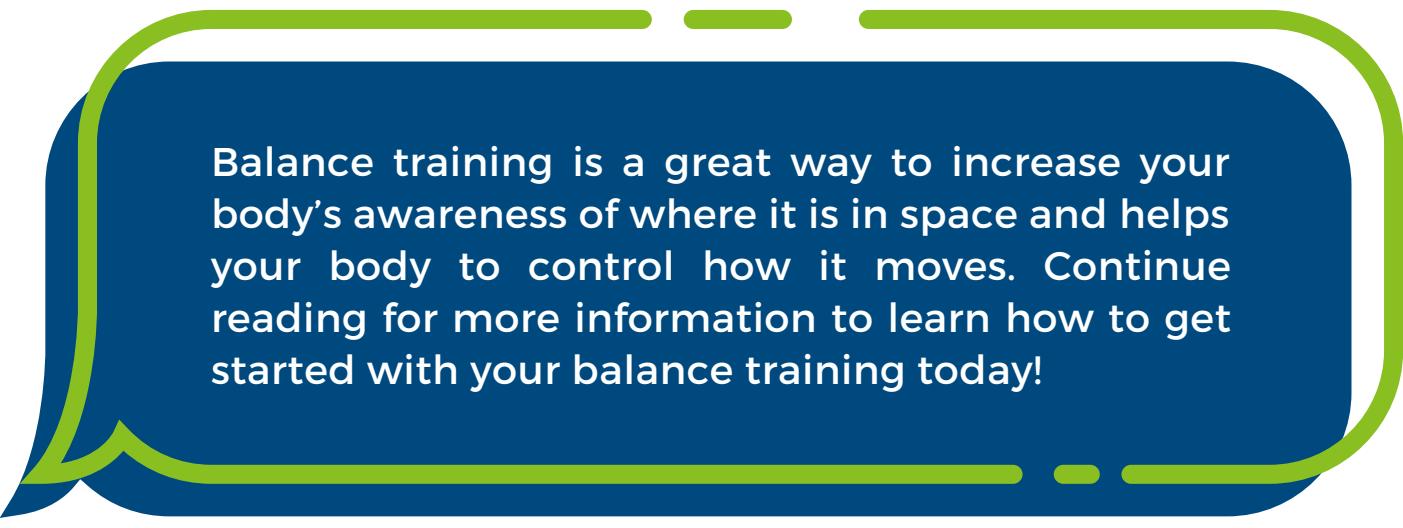


There are natural changes that happen in the body as we age. A decrease in balance is often a change we see. Balance deficits can arise from a number of factors including aging, inner ear infections, different medications, head trauma, and a number of neurological conditions. As mentioned above, to remain balanced our bodies rely on information coming in, integration of this information in the brain, and our bodies reaction to these messages. As we age, the information coming in may become altered or slowed. Working on and practicing how to respond quickly and safely to a variety of inputs can increase the effectiveness and speed of your information input and processing. The quicker we can process our outside world, the quicker we can teach our muscles to respond, turn on, and keep us upright. The more we work on this, our muscles learn to work in a smooth and controlled manner which allows us to move with more ease and a lower risk of injury.

WHAT ARE THE BENEFITS OF BALANCE TRAINING?

The number one benefit of working on your balance early is to increase your safety. Going back to the example of the young gymnast. In order to remain on the balance beam, it takes repetitive practice and training to perform the movements safely and smoothly.

An increase in your stability allows you to move with higher quality and ease. For example, walking in the sand on the beach while maintaining a conversation and enjoying the view. With an increase in your balance, you also improve your movement performance. For some, this may be being able to put your socks on with more ease and without the support of the wall. Performing movements with higher quality and increased stability increases your safety and reduces your risk of injury. This is so important! This allows you to enjoy moving around your world and feeling confident doing activities you enjoy. Additionally, feeling confident and safe throughout the day improves your quality of life!



Balance training is a great way to increase your body's awareness of where it is in space and helps your body to control how it moves. Continue reading for more information to learn how to get started with your balance training today!

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LEARN HOW TO:

- 1. ASSESS YOUR BALANCE AT HOME**
- 2. CHOOSE THE RIGHT BALANCE EXERCISES**
- 3. START A BALANCE TRAINING PROGRAM**

ASSESSING YOUR BALANCE AT HOME:

We love to use different tests that measure where your balance stands. We also often educate individuals where their balance stands in relation to individuals of the same demographics. This can be great for helping you set goals! Completing different balance tests with a healthcare professional is a great way to assess your baseline balance and ensure that your balance routine is effective by re-measuring the tests overtime. How can you quickly test your balance at home?

One of the commonly performed tests that we do is the single leg stand test. This is a test to determine how well your static balance is.

STATIC BALANCE IS HOW WELL YOU CAN MAINTAIN YOUR BALANCE IN A STATIONARY POSITION.

DYNAMIC BALANCE IS HOW WELL YOU CAN MAINTAIN YOUR BALANCE WHILE MOVING YOUR BODY. BOTH STATIC AND DYNAMIC BALANCE ARE IMPORTANT TO WORK ON IN ORDER TO IMPROVE YOUR STABILITY.



HOW TO PERFORM THE SINGLE LEG STAND TEST AT HOME:

To perform this test, it is safe to have someone with you. This way you can perform the test and focus on your balance while the supervisor runs the test.

This test is most accurately done by completing three trials and taking the average time of the three. You will do this on the right and left leg. To do this test you will need an open space and a timer. To start this test, place your hands on your hips and on the count of three lift one leg off the ground and hold this position for as long as you can.



Try your best to not let the leg that is lifted off the ground rest on your balancing leg. The supervisor will start the timer as soon as the leg lifts off the ground and will stop the timer when the lifted leg steps back down onto the ground. The timer is also stopped if the arms come off the hips and sway in the air or if your lifted leg starts to rest on your balancing leg. Record each time spent on each leg. After three trials on each leg, record the average on your left and right leg. This is your score! This is a great way to get a baseline of your balance prior to starting a balance training program.

CHOOSING THE RIGHT BALANCE EXERCISES:

To develop a well-rounded balance program, it is important to choose the right exercises. As mentioned above, there are different factors that influence how our body responds to an unstable environment. These factors include our vision, our muscle and joint positions, and inner ear signals.

There are also different types of balance including static and dynamic. A great balance program will include altering the different factors of balance to ensure your brain learns how to quickly process new information and to ensure your body learns how to quickly respond to an instability.



HERE ARE SOME EXAMPLES HOW YOU ALTER THE FACTORS THAT INFLUENCE OUR BALANCE:

- **CLOSING OR BLINKING YOUR EYES**
- **ROTATING YOUR HEAD FROM LEFT TO RIGHT**
- **STANDING ON A SOFT SURFACE LIKE A CUSHION**

To begin, it is recommended to start with a static balance exercise, for example the single leg stand. Once you are comfortable with your stability and you've increased the time held in this position, you can start altering the balance experience by incorporating the above examples.

This may include holding a single leg stand with your eyes closed, or while standing on a cushion. Next, in order to work on remaining balanced while moving, we need to also incorporate dynamic balance exercises. An example of a dynamic balance exercise is the tandem walk. This exercise involves walking with one foot in front of the other, as if you were walking on an imaginary straight line. Again, once you are comfortable and ready to progress this exercise can be done while rotating the head left and right, walking backwards, or reaching with the arms.



To avoid injury and increase the effectiveness of your balance program, it is important to see a healthcare professional. Seeing a physiotherapist is beneficial to have your balance and overall fitness tested. Based on the outcome, potential deficits, and your goals, a physiotherapist can create a tailored balance program just for you. This ensures that you are incorporating enough variety and challenge in your program, while maintaining safety. A physiotherapist can also be helpful to increase motivation and adherence to a program, as well as keep it fun by altering your exercises to keep you challenged and training all the different systems that influence balance.

At Club Z, we have partnered with a number of physiotherapy clinics who are familiar with our program to provide an initial assessment, as well as quarterly check-ins. The service is typically covered by your insurance and lets you measure your progress over time.



START BALANCE TRAINING NOW BEFORE IT BECOMES AN ISSUE

It is never too early to start balance training. To move well and confidently, balance is important to include in your fitness routine. If the correct balance exercises are started early, it teaches the body how to adapt quickly to unstable situations. Continuing to practice these exercises as we age allows you to remain stable and safe throughout the years.

Starting early allows you to work against the natural aging changes in the body and continue doing things you enjoy. For example, being able to walk or hike on a trail that has uneven terrains, rocks, and hills. The more you practice exercises that challenge your stability, the easier it will be to remain stable as you age. This will increase your confidence to move and reduce your risk of injury and potential falls.

 **HOW CAN WE HELP YOU START YOUR BALANCE TRAINING AT CLUB Z?**

We offer a unique fitness program called Club Z. This is a membership program that includes group fitness classes led by physiotherapists who specialize in care of individuals 50+. These classes are offered both virtually via Zoom and in studio at our Zoomers clinic. We offer a variety of classes for all fitness levels from beginners to more advanced.



One of the tests completed in this assessment is to measure your balance and determine how stable you are. In each one of our classes we incorporate the appropriate level and challenge of balance training. This way we can make adjustments to your exercises as needed to ensure you get the most out of your workout and stay safe.

 **FIT FOR LIFE ASSESSMENT**

Fit for life assessments are for those looking to have an assessment to establish where their current physical fitness stands. In these assessments, we look at how your joints are moving, how strong your muscles are, and how stable your balance is. From here, you will be able to discuss your goals with a clinician. Based on your baseline measurements from the assessment and goals, your physiotherapist will create a tailored exercise program just for you!

While these assessments are beneficial, they are not required to participate in our classes.

We want to help keep you stable and improve your balance for years to come! Our goal at Club Z is to help you continue to live the life you love, and balance is a key part of this!

