


AGING WELL
IN OTTAWA



Strong and Steady

Resource Manual for Leaders

December 2024

Adapted from *Zoomers in Balance Volunteer Leader Resource Manual* created by University of New Brunswick. Adaptation created by the collaboration of Ottawa Public Health and African, Caribbean & Black Wellness & Resource Centre.

Acknowledgment

Acknowledgment of contributions to the adaptation of *Zoomer in Balance* by the University of New Brunswick, Horizon Health Network, Fitness New Brunswick, Trauma New Brunswick, Healthy Seniors pilot project and Canadian Institutes of Health Research.

This manual, originally developed by the University of New Brunswick (UNB) as part of the *Zoomer in Balance* program, has been adapted by Ottawa Public Health (OPH) to meet the specific needs of our community. The adapted *Strong and Steady* exercise program is designed for trained leaders, rather than volunteers.

OPH collaborated with the African, Caribbean & Black Wellness & Resource Centre (ACB) in certifying these leads. This partnership is critical in overcoming language barriers and enhancing access to fall prevention exercises for equity-deserving communities.

This manual was adapted from the University of New Brunswick to Ottawa Public Health by Bruktawit Tariku (Adapter). Contributions include editing by Beverley Croft, Jenna Bennett, and Kerry Chouinard; Graphic Design by Guylaine Chartier; and Photography by Darren Brown. A special thanks goes to Anita Findlay who is the person in the exercise photos in this manual.

Most images and diagrams were used with permission from UNB. Images from OPH will be credited throughout this manual. Cover page and image(s) was created and provided by OPH. Any mention or visual depiction of Aging Well in Ottawa belong to OPH.

OPH has adapted this manual to better serve our community, with a focus on delivering effective, culturally responsive fall prevention programming. We are committed to continuing this vital work in collaboration with our partners to support the health and well-being of all community members.

We are incredibly grateful for your commitment to leading this important program. Your dedication makes it possible to offer fall prevention exercise classes across Ottawa and in various community centres. Thank you for making a difference!

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Introduction

Zoomers Story

The *Zoomers in Balance* program was created to reduce the number of factors that can increase the risk of falling for older adults in the Greater Saint John area located in New Brunswick, Canada. Falls cause many problems for older adults and can impact their ability to remain independent. In 2009, a survey was completed with seniors living in the community to find out what they knew about falls and the associated risks. Focus groups were held with senior groups and those residing in senior apartments. This information was used to develop *Zoomers in Balance* which has been adapted for the *Ottawa Strong and Steady* exercise program with an aim to reduce falls within the older adult population of Ottawa.

Many important points were raised by older adults at that time:

- Older adults do not see themselves at risk of falling.
- Many older adults do not know what increases their risk of falling and how to prevent it.
- Many reported not being comfortable going to the gym for a variety of reasons, like transportation, financial barriers, and feeling discomfort following instructions from young instructors/leaders.
- Most older adults wanted to be more physically active as a strategy to reduce their risk of falls and become more fit.
- The program needs to attract older adults aged 50+.

Research

From March to May 2019, a 12-week randomized controlled trial of *Zoomer in Balance* has shown that Zoomers participants had significant improvement on the chair stand test, arm curl test, and 6-min walk test. Positives were also found for participants stress levels and their perceived health. The *Zoomer in Balance* program has been shown to improve the physical function of adults aged 50 years and above. There was no difference found in program benefits between the in-person or online format. It is recommended that the content should be offered for three hours per week throughout the year and should challenge balance, as suggested by current guidelines (Sherrington et al., 2017). This can be achieved by supplementing in-person classes with home exercises, pre-recorded videos, or online sessions.

The *Strong and Steady* Story

Previously, the *Strong and Steady* program, formerly known as *Better Strength, Better Balance (BSBB)*, was a fall prevention beginner-level exercise initiative. It ran from 2014 to 2020 but was paused due to COVID-19. The program was managed by Ottawa Public Health (OPH) in collaboration with Recreation, Cultural, and Facility Services (RCFS). *BSBB* was offered at RCFS locations and taught by certified older adult fitness instructors in English and French.

This project aims to increase the strength and balance of older adults (65+) from equity-denied groups to prevent falls and allow them to participate in social activities. This project is carried out in collaboration with community partners to facilitate accessible locations for group exercise classes.

Strong and Steady is an evidence-informed fall prevention program led by certified instructors or in-house trained leads. It is constantly changing to meet the needs of older adults 65 and up. It strives to be based on scientific evidence to reduce the risk of falls.

Lead Resource Manual Contact

Ottawa Public Health (OPH)

Email: healthsante@ottawa.ca | brook.tariku@ottawa.ca

Website: [OPH – Aging Well in Ottawa](#)

African, Caribbean and Black Wellness & Resource Centre (ACB)

Phone: 613-801-7426

Email: communicationsacb@gmail.com

Website: [Home - ACB Wellness & Resource Centre](#)

Steps for Certification to Become a *Strong and Steady* Leader

- Review the *Strong and Steady* material prior to practical training.
- Attending the 16-hour in-person *Strong and Steady* leadership course training with 100% attendance.
- Experience in leading or volunteering in group exercise classes.
- Complete First aid and CPR Level A certification annually
- Provide proof of a current and valid Vulnerable Sector Check (VSC).
- Teach or co-teach a minimum of 10 weeks every two years.

Annual Requirements to Maintain Certification

- Renew certification by attending in-person refresher training.
- CPR Level A or higher (recertification required annually).*
- Continuing Education Credits (CECs).**
- One year post certification Standards of Practice Assessment Review*** or as required.

****You will be required to teach or co-teach at least one 10-week Strong and Steady session every year. By following this and the four requirements mentioned above, all the costs related to your certification will be covered.***

*****Continuing Education Credits (CECs):***

- 4 hours of CECs (pre-approved by OPH and ACB) related to older adults' health and fitness are required to keep you up to date with current exercise information and to maintain your leadership knowledge/skills yearly. These hours can be in the form of, but not exclusive to, education sessions, and/or viewing a pre-approved online video presentation.
- The *Strong and Steady* classes follow a remarkably similar format each week; therefore, continuing education for the leader is important as it helps to keep participants in your class engaged and ensures the leader uses current and credible information.

******Standards of Practice Assessment Review***

- To ensure high quality leadership, you will have to complete a one-year review following your first certification. This will be completed by an ACB

approved evaluator on-site, by a face-to-face evaluation, by video chat, or through a submitted recording.

- Appointments are booked through the ACB office a minimum of two weeks prior to the review.
- Each lead will also receive a renewal notice from ACB each year, outlining all the requirements for recertification.

Strong and Steady Lead Resource

The *Strong and Steady Leads* will use OPH's weekly key message to provide education each week. We also encourage you to visit our Aging Well in Ottawa webpage: [Aging Well - Ottawa Public Health](#)

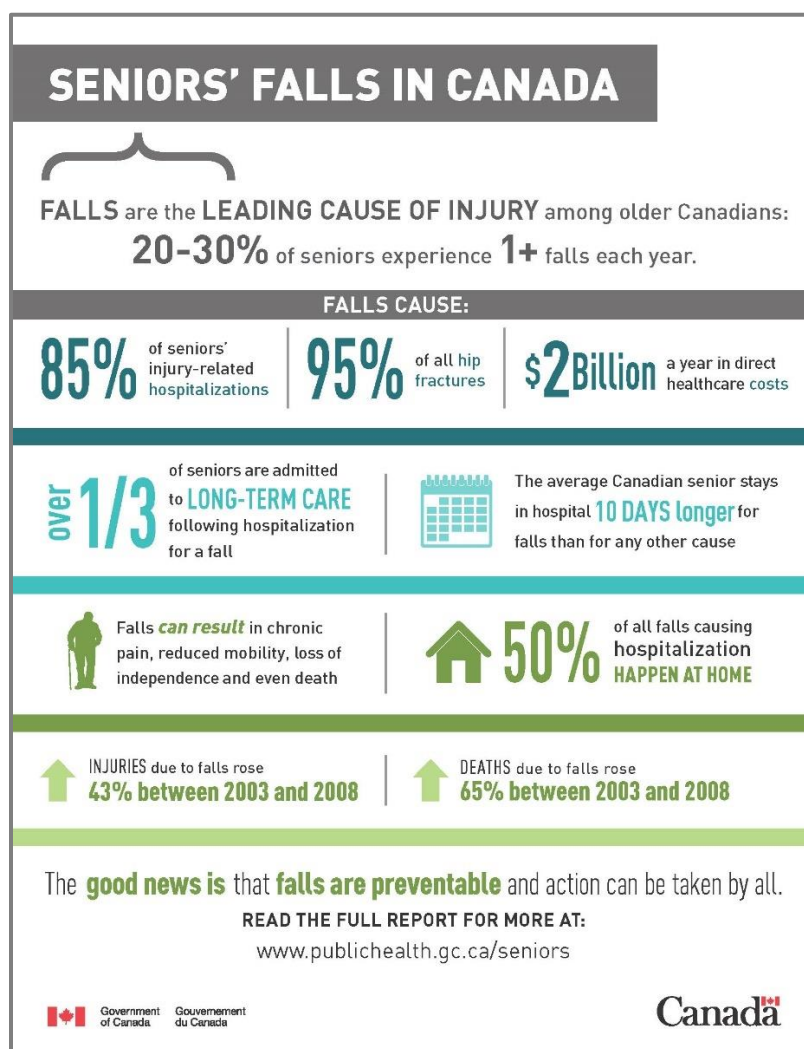
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Chapter 1: Getting Started with *Strong and Steady*

Rationale

Falls are a major issue for older adults in Canada and remain the leading cause of injury-related hospitalizations among older adults. Falls are “an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.”⁽¹⁾ Every year, 20 – 30% of older adults experience a fall.⁽²⁾ As our population ages, the number of falls will continue to increase.



Source of Health Canada's Seniors' Falls in Canada Infographic:

<https://www.canada.ca/en/public-health/services/publications/healthy-living/seniors-falls-canada-second-report/seniors-falls-canada-infographic.html>

The Public Health Agency of Canada (2014) found that the top three activities associated with fall-related injuries for people aged 65+ includes:⁽²⁾

- Walking up or down stairs/steps
- Walking on snow or ice
- Walking on any other surface

The most common types of fall-related injuries are:

- A sprain or strain
- Scrapes, bruises, or blisters
- A broken or fractured bone

How do we reduce falls in older adults?

To reduce falls, we need to know why they happen. It can be exceedingly difficult to pinpoint one reason for why a fall occurs. Most falls are the result of multiple factors which affect the ability of an older adult to maintain or regain their balance.⁽²⁾

Research shows that there are many risk factors that separate older adults from other age groups. These risk factors can be organized into four categories:^(3, 4)

- **Biological:** Relating to our bodies and the aging process
- **Behavioural:** When our own actions, emotions, and choices place us at increased risk of falling
- **Social:** Older adults that live in a more challenging socio-economic situation are at higher risk of falling. This is often due to financial challenges, which cause barriers to eating well, purchasing comfortable and safe clothing, owning assistive devices, or having safe and accessible housing and health care
- **Environmental:** These risk factors are associated with the physical environment where someone lives and spends their time

Research on Fall Prevention Programs

To reduce the risk of falling for older adults, we must continuously translate new findings in research to fall prevention programs. To have the MOST reduction in risk of falling, classes should be offered three times per week (60 minutes each session), offered on an on-going basis, and focused mainly on balance and flexibility.^(5, 6, 7, 8, 9)

Strong and Steady Fall Prevention Program

Strong and Steady is offered twice a week in person for 10 weeks, with a virtual option. Participants will also receive a supplementary exercise poster to help them exercise independently at home 2-3 times a week, aligning with the Canadian 24-Hour Movement Guidelines for Adults aged 65 and older.

Functional Mobility

The goal of *Strong and Steady* is to reduce falls from occurring, while supporting or improving the health of participants. A popular word or phrase you may hear in the health care world is “function” or “level of function.” Function means being able to perform activities of daily living. Functional mobility means you have the mobility you need to complete daily tasks.⁽¹⁰⁾ For our *Strong and Steady* participants who live independently, this means being able to do all the activities of daily living in the run of a day: getting in and out of bed, making meals, running errands, working, attending social activities, etc.

When someone loses their ability to perform activities of daily living, their independence is affected. This is a noticeably big concern for older adults,⁽¹¹⁾ and most will do whatever they can to protect their independence. The *Strong and Steady* program wants to help preserve or improve their functional mobility to prevent falls and support their health.

People who are more functional have less hospital admissions, are hospitalized for shorter periods of time, develop less chronic conditions, and are less likely to be admitted to a nursing home.⁽⁷⁾

New Participants

These are following criteria to participate in the *Strong and Steady* program:

- One must be aged 65 or older.
- One must be able to participate in a 10-week program.
- One must be able to understand and sign written information.
- One must be able to participate in a basic safety screening or be cleared by their health care provider if necessary.

When teaching your class, you may have questions from current *Strong and Steady* participants about getting their friends or family involved in the program. If you have a potential participant for the program, **THEY NEED TO REGISTER** via Google Doc or online **BEFORE** attending your *Strong and Steady* class. If they have not registered, this means they did not get screened or sign the waiver. They can, however, watch the class.

Safety Screening (Get Active Questionnaire)

Screening determines if a person can safely do the exercise program. Health status is an especially important consideration when starting any program that involves physical activity. We want to ensure that participants can complete the program safely. If their health is not stable, they are at risk for injuries and may not experience the same benefits of the program.

All participants will complete a Get Active Questionnaire (Appendix) to determine if they need approval from a health care provider to participate in the program. When answering “yes” to the Get Active Questionnaire, participants are sent the Get Active Questionnaire reference document for instructions. Participants must complete this form before signing up for a 10-week session.

Note: We encourage people with chronic conditions and limited mobility to participate but in a safe way.

It is also important that you receive the participants’ names and contact information in the event a class needs to be cancelled or if the location of the class is changed.

Please note that this information is confidential and cannot be shared with other participants.

Waiver and Informed Consent Agreement

Before any new participants can join a *Strong and Steady* class, a waiver and an informed consent and an agreement must be signed. Please see these documents in the Appendix.

What Happens Next?

Once the potential *Strong and Steady* participants have been screened and have signed the waiver and consent form, they are able to attend class. This is where the fun begins!

As part of the education component of the program, we invite you to review information from the [Ottawa Public Health’s Aging Well website](#) and share it with your participants.

Attendance

Attendance will be self-reported by participants. An attendance questionnaire will be sent to participants at the end of each 10-week session. If you would like to keep your own attendance, you may do so. The *Strong and Steady* leads may ask within the first few weeks of classes who is attending to see if there is space for waitlist participants.

Satisfaction Surveys

At the end of each 10-week session, we will be sending anonymous satisfaction surveys to participants. We will share the feedback with you from these surveys.

The feedback is gathered from leads so that the program can be continually improved and sustainable for years to come.^(12, 13)

We will use questions such as:

- Was the leader knowledgeable about the *Strong and Steady* exercises?
- Did you experience a fall within the last 10 weeks?
- Did you find the level of exertion of the class challenging but within your ability?
- Have you enjoyed the social aspects of the class?
- Would you take part in *Strong and Steady* again?
- Do you feel more confident to exercise on a regular basis?
- Is there anything else you would like to add about the session?

Chapter 2: Basic Physiology

Human Physiology

It is important to understand how our bodies work and to educate *Strong and Steady* participants about how to prevent falls. Our bodies are working 24 hours per day to enable us to move and do our daily activities. As we age, these systems need to continue working but it can become more difficult as health problems affect how our bodies work.

Our bodies are like snowflakes, no two are the same. We are all different shapes and sizes. How our bodies work is shaped by our lifestyle and our genetics. We cannot change our genes, but we can positively impact our lifestyle by the choices we make about how we use our bodies and what we put in them.

Our body is complex, so it helps if we look at the individual body systems to understand it. Body systems are collections of organs, muscles, bones, tendons, and connective tissue that work together to allow the body to function and perform activities such as moving and breathing. We are going to focus on the body systems affected by the activity components of *Strong and Steady*.

All bodily systems are working 24 hours per day, 7 days a week, and 52 weeks per year. As you can imagine, it is in our best interest to keep them in the best condition we can by developing healthy habits such as eating well, getting proper sleep, and preventing falls.

Each of the systems plays a unique role in the tasks our body performs on a regular basis to stay alive. For example, the digestive system processes the food we eat to create energy for our muscles to function. As such, each system is deeply reliant on one another to successfully achieve their goal. We may not be able to change our genetics, but we can make a positive change to our lifestyle to improve how our bodies work. This is one of the main goals for *Strong and Steady*!

The systems that support our bodies and their ability to exercise and move are the:

- Respiratory System
- Cardiovascular System
- Digestive System

What Makes our Bodies Move?

These systems in our bodies work together to make our bodies move:

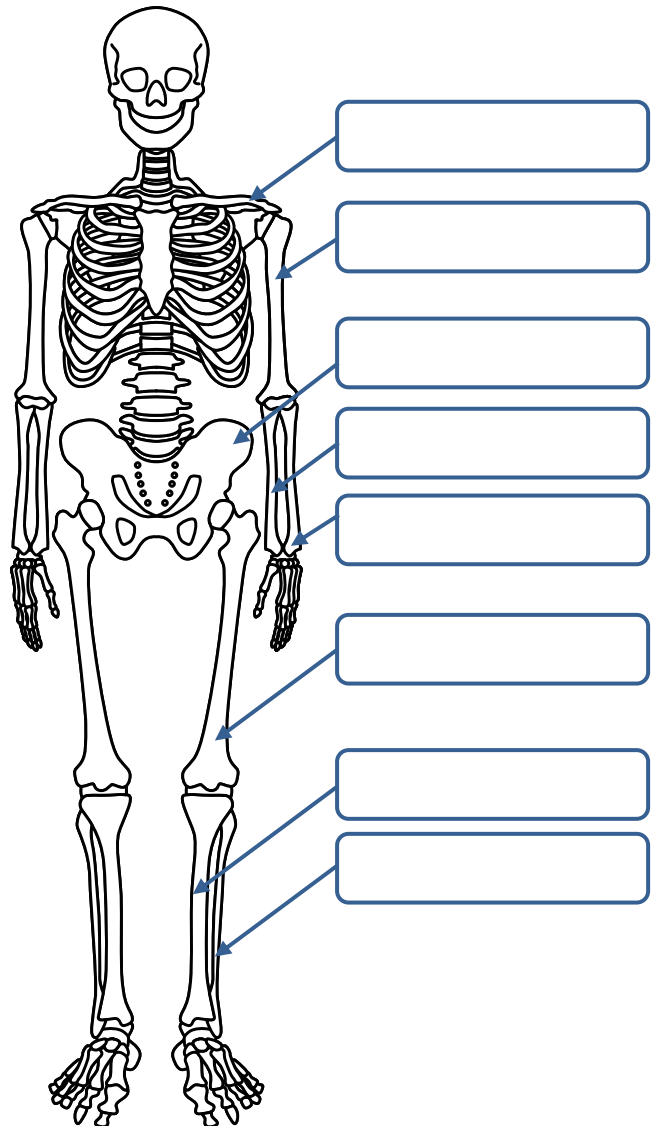
- Skeletal System
- Muscular System

The Skeletal System

Our skeletal system consists of bones that help us stand upright and move. It is extremely important to keep them active and healthy.

As we age, our bones become more brittle. If we do not have a healthy diet this further weakens our bones, causing them to break more easily. Physical activity can help keep our bones strong and working properly.^(14, 7)

The bones of our body work as a support system to allow us to move and keep us upright. This is especially true of our spinal column. The spinal column acts as a supportive trunk that enables our arms and legs to move from. This is why reinforcing good posture is an essential part of the *Strong and Steady* program.



Word bank:

Clavicle, Pelvis, Humerus, Tibia, Femur, Ulna, Fibula, Radius

***STRONG AND STEADY ACTIVITY:**

1. Let's have a closer look at the human skeleton to see how this works. It is important to be familiar with the layout of your body as this will help you to understand why certain exercises are done the way they are.
2. Take a few minutes to adjust your position in sitting to make sure you have the proper curves. Now get up from your chair while maintaining your proper curves. Now try to get up from a chair without the proper curves. Can you notice a difference?

**Script courtesy of Connie Jasinskis AQX Aqua Fitness Leadership Training*
www.fortheloveoffit.com

Your Good Posture

Let's think about what "good posture" means by working through these steps together:

1. Start with your best set position.
2. Hands on hips, with level alignment. Tip your "bowl" front to back, side to side, and find what is neutral for you.
3. Lift your chest, sternum up. Show increased space between your hip bones and ribs (fingers on tip of hip bones; thumbs on ribs).
4. Engage your abdominals. Show "pulling hip bones together" with your two hands and a tightening action (fist hands) over the abdominal wall. Emphasize breathing!
5. Roll your shoulders back and down. Leave them down in a scapular set position, low on the torso. Maintain this throughout all exercises.
6. Ensure ears are over shoulders, and shoulders over hips. Put your index finger over your own mouth, making the "shh" sound, then pull your head back from your fingers (this retracts the cervical spine by 10%).

Frequently reinforce proper alignment throughout the class. Be tall and strong in all positions. This posture may look different on all participants, that is why it is YOUR good posture!

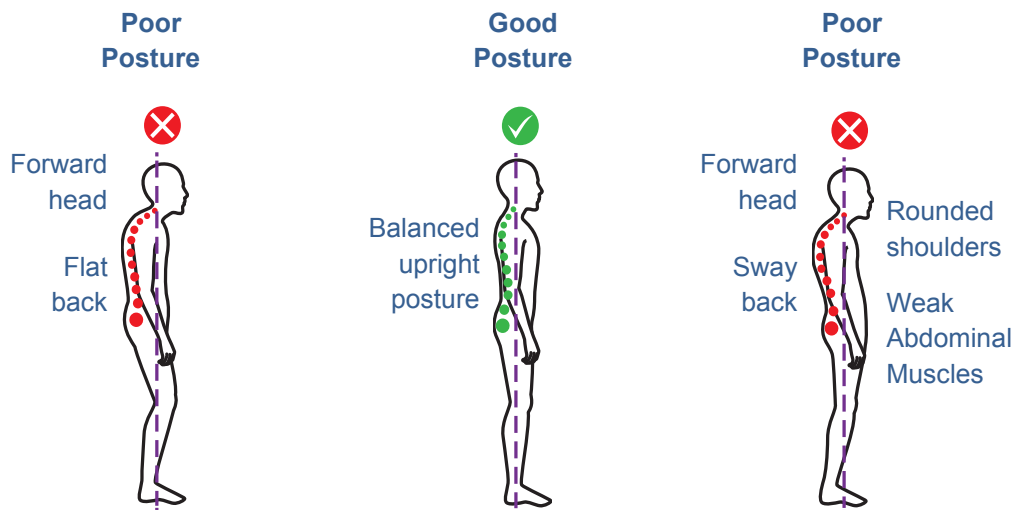
MOTION IS LOTION:

Kelly Starrett, Doctor of Physiotherapy, coined the phrase, "Motion is lotion," which means the practice of proper mechanics of movement can help prevent and even resolve injury.

***STRONG AND STEADY ACTIVITY:**

Take a nice deep breath while you are sitting up straight with your good posture. Now, try it with poor posture, such as your head and shoulders slumped forward. Can you feel the difference?

**Script courtesy of Connie Jasinskas AQX Aqua Fitness Leadership Training www.fortheloveoffit.com*



Joints

In order for our bodies to move, two or more bones need to work together. All the bones in our body are connected to each other by a joint. Any person of any age can damage their joints if they exercise incorrectly.

A joint is the connection between two bones. The exercises and movements in our *Strong and Steady* program involve freely moveable joints. Joints contain fluid called synovial fluid. This fluid keeps the joint lubricated, so it moves easily and smoothly.

Ligaments are strong tissues that connect bones together and help hold the joint together. Ligaments are not very elastic, so they provide support to the bones and the joints. When they are damaged or stretched too far, they take a very long time to heal, and surgery may be required to repair them. When ligaments are damaged, joints are less stable and may move in directions they should not.

The Muscular System

Muscles make up about half of our body weight and cause our body to move. All muscles stretch and contract, but they perform quite different actions. As we age, our muscles move more slowly which can make it more difficult to move quickly to prevent a trip or a fall.

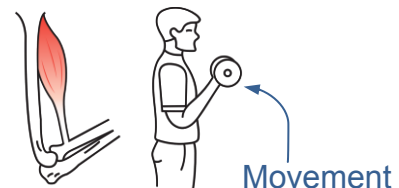
Exercise can increase the size of our muscles. No matter our age, it delays the normal muscle loss associated with aging.^(15, 7)

Muscles attach to our bones and when they contract, they move the bone. The attachment of the muscle to the bone is very strong.

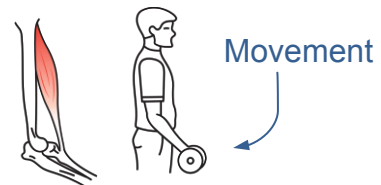
Muscles affect the alignment of the body. Muscles can limit the range of motion, which can change how a person moves.

There are three types of muscle contractions. It is important that you can distinguish each type. With each type, remind participants to continue breathing and not hold their breath.

1. **Muscle shortening (concentric)** occurs when a muscle is required to lift a load. This causes the muscle to begin shortening. An example of this type of contraction is bending the elbow to lift a weight during a bicep curl.



2. **Muscle lengthening (eccentric)** occurs when a muscle opposes a stronger force. This causes the muscle to lengthen as it contracts. One example is lowering a barbell in a biceps curl. The biceps muscle contracts to lift the barbell up; however, it is also contracting as you lower the weight. It is important to control the speed of the weight on the way down. If you do not, you will drop the weight too fast!

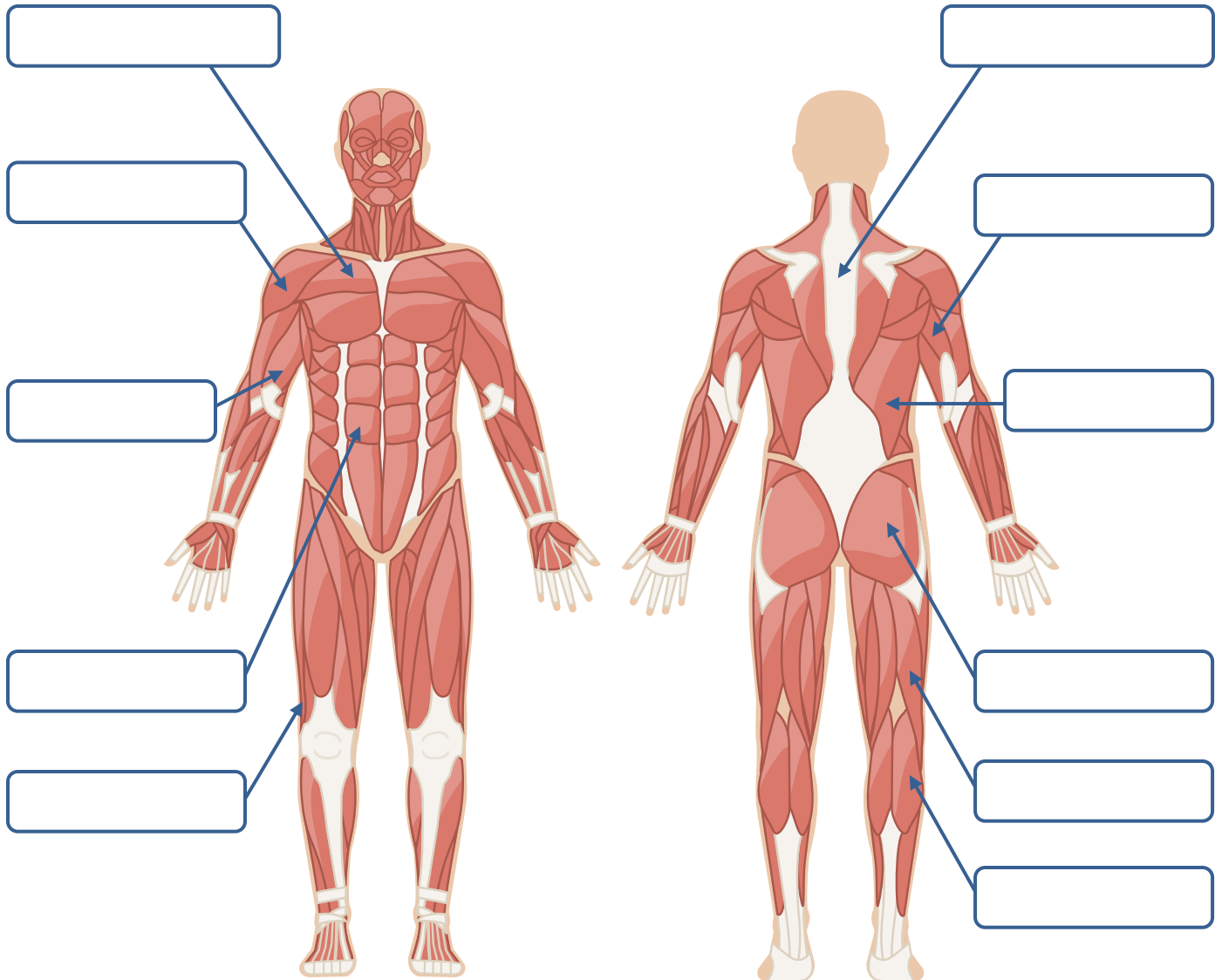


3. **Muscles actively held at a fixed length (isometric)** occur when the muscle is activated, but it is not lengthening or shortening. Some examples would be carrying an object in front of you, a wall squat, or squeezing a ball between your legs. The muscle is contracting to hold an object in the one spot.



STRONG AND STEADY ACTIVITY:

As a group, let's go through some muscles and their movement so we can feel what it's like when it contracts.



Word bank:

Deltoid, Trapezius, Quadriceps, Gastrocnemius, Pectoralis, Abdominals, Latissimus Dorsi, Triceps, Gluteus Maximus, Biceps, Hamstrings

Image of human muscle system: GettyImages (OPH)

Muscular Strength

It is important to keep our muscles strong as we use our muscles in everyday activities, such as getting up from a seat, lifting a bag of groceries, or lifting a grandchild. Since our body has so many muscles, it takes many activities to strengthen them. On a more basic level, we need muscle strength to maintain our balance and posture.

Muscular Endurance

Muscle endurance is the ability to contract a muscle repeatedly. Can you imagine the problems we would have if we were only able to contract our muscles once and then rest? Muscle endurance is important for the basic movements that we do without thinking. For example: standing, walking, and reaching. We would not be able to complete most of our daily activities such as getting dressed, doing housework or working without having muscle endurance. We work muscle endurance throughout our *Strong and Steady* classes.

Chapter 3: Safety

Scope of Practice

Scope of practice goes hand in hand with liability. For example, when a plumber receives training, they can advise, and complete activities related to plumbing. However, if someone asked a plumber to build an entire building including the electrical work, they would be beyond their scope of practice.

It is important to remember that, although our participants may ask you many questions about their health or other exercises they should complete, as *Strong and Steady* leads you are ONLY able to comment on what you have learned within the program.

You may think that the person should, for example, try a new vitamin you are taking as it makes you feel good. However, this is beyond your scope of practice. A health care provider or pharmacist would be the right person to recommend the participant speak with if they have questions about vitamins.

As well, if you go to a local gym and do certain exercises with weights, it is beyond your scope of practice to teach your *Strong and Steady* class these exercises with the weights, as weights are not part of the *Strong and Steady* training program.

Only comment on things you have learned in this training to your *Strong and Steady* class.

General and Personal Safety

We have developed plans for leaders to use if a participant in the class develops some type of medical emergency or difficulty.

We need to think of safety as soon as we walk in the facility where we hold our class. Do a scan of your area and make sure of the following:⁽⁴⁾

- It is safe to get in and out of the facility, know where emergency exits are, and have a plan in case of an emergency.
- The lights are working.
- The space is free of obstacles and the floor is clean and not slippery.
- There is a phone close by, whether it is your cell phone or a facility phone.
- You know the location of the washrooms.
- There is adequate space for participants to put their personal belongings that will not affect the class.

- You know where there is access to drinking water.
- You make sure the room is large enough to accommodate your class and the activities you have planned. If it is not, please contact the *Strong and Steady* personnel.
- Check for a first aid kit and AED.
- Note the correct street address in case you need to call 9-1-1.

***STRONG AND STEADY ACTIVITY:**

In small groups, complete a quick scan of this facility and see if it is appropriate for the class. What changes could you make (if anyway)?

**Script courtesy of Connie Jasinskas AQX Aqua Fitness Leadership Training www.fortheloveoffit.com*

Personal Safety

Make sure you are prepared for the class. Ensure you have emergency contacts, can locate the first aid kit and AED*, water, and anything you may need to keep yourself safe. Your name and emergency contact will also be on the emergency contacts list.

****First aid kit and AED: If this is not available at your location, let the ACB personnel know.***

If you are not feeling well or are unable to attend your class, it can be cancelled. Alternatively, we can attempt to get another leader to fill in. If you have any questions or concerns, please call the ACB staff.

The Importance of Observation

The most important strategy to keep your *Strong and Steady* classes safe is to constantly observe your participants.

This becomes easier over time as you will get to know who is in your class and you will be able to pick out quickly if someone appears to be having difficulty.

One strategy is to be able to always see their faces by:

- Walking in the opposite direction when walking in a circle
- Minimize the exercises where class participants face a wall

Watch out for these signs:

- A participant abruptly slows down or stops exercising.
- A participant abruptly leaves the room and they do not tell you why.
- A participant starts having difficulty following the movements.
- A participant grasps a part of their body – chest, neck, leg, etc.

If you notice someone is having difficulty, look for/ask about:

- Signs of chest pain
- Light-headedness
- Confusion
- Pallor – becoming very pale or very red in the face
- Nausea
- Sharp leg pain
- Shortness of breath
- The inability to speak

If you are the only instructor in the class, it is okay to have the rest of the class walk around the room or complete some other basic activity while you assess a situation.

You want to ensure the other participants do not stop moving. You can ask a participant who attends regularly to stand in for you for a couple of minutes as you check on the situation and encourage participants to keep walking and moving.

Breathing Difficulties

Many difficulties are a result of breathing issues. Most often participants are so focused on what they are doing, they do not realize they are holding their breath. This occurs more often during the strength training component of the class.

When people hold in their breath, eventually when they breathe out, they do so with a lot of force. When this happens, it can compress the blood vessels in the chest and reduce blood flow to the heart. This raises blood pressure, which can cause them to become lightheaded and dizzy as well. If you notice someone is holding their breath, encourage them to relax their breathing until they feel better.

If it appears someone cannot catch their breath, ask them to reduce the intensity at which they are exercising, but encourage them not to stop exercising completely as blood will pool in their arms and legs. This will cause dizziness. It is best to minimize arm movements first, and then reduce the intensity of the leg movements. Once they

catch their breath, they should complete the remainder of the class at a reduced level. If they continue to not feel well, tell them to cool down and stop the class.

Chest Pain, Sudden Confusion, or Difficulty Talking

These may indicate that the participant is having a serious medical issue. Use your knowledge from CPR to determine if 9-1-1 should be called.

Falls

Although the goal of *Strong and Steady* is to reduce the factors that can increase the risk of falling, this does not prevent them from occurring in class. If a fall occurs, go to the person, and encourage them to stay in that position so you can check on them. Encourage relaxed breathing. Ask them if they are experiencing any pain and where the pain is located. Ask them to try moving the area of the body that hurts. If it hurts or is impossible to move, call 9-1-1.

If they can move the injured area, encourage them to try to relax. Be sure a chair is nearby, and when this person is ready, see if they can lift themselves up to sit on the chair. If they cannot, call 9-1-1.

If they can sit up in the chair, have them relax and recover in a seated position. It is recommended that the person continues to stay seated for the remainder of the class and ensure this person gets home safely. If they are alone and you feel they require assistance, offer to call their listed emergency contact. Lastly, recommend that they go to see their family health care provider.

After you have tended to the participant, look around and see if there was a reason for the fall, like:

- Was the floor slippery or too shiny?
- Was there water on the floor, or did they trip on something that could be removed?
- Was the person wearing appropriate clothing and shoes?
- Did someone run into them?

Were they exercising too vigorously, and should they have reduced the intensity? Try to figure out a possible cause and then try to prevent it from happening again.⁽⁴⁾

STRONG AND STEADY IMPORTANT STEP:

If there is an emergency in your class, please always contact the ACB staff and make them aware of the situation. They can follow up with the participant to make sure they have received the help they need. They will also assist you with completing an incident report to report the situation and create a plan to prevent problems in the future.

Someone leaves class abruptly

This can occur for many reasons – nausea, choking, bowel and bladder needs, fear. Our participants can use the washroom any time during the class, but it is important to tell them at the beginning of class to let you know when and why they are leaving, so you are aware.

If someone leaves class quickly and does not let you know why, ask another leader or participant to go and check on them. If you need to leave the class for a short moment, have participants march in place or walk until you return.

Temperature

The temperature of the room can be a huge challenge for some participants, particularly if it is too hot. If the room is warmer than usual and you are unable to lower the temperature by the thermostat or by opening a window, reduce the intensity of your class and encourage drinking more water.

Water

Always encourage participants to drink water throughout the class.

Other situations

At any time, a participant may be prescribed a new medication from their health care provider, or viruses and illnesses may affect them. If at any time you feel a participant is not safe when they are in the class, please tell them your concerns and recommend they sit down or stop participating. Please try and be discreet so others do not overhear the conversation. The participant may decide to continue and that is their decision.

If you notice someone who comes on a regular basis and suddenly appears to be struggling in the class, please inform the ACB staff. They can re-screen and/or discuss the situation with the participant. There may be other programs or assistance that the participant can acquire before resuming the class.

At times, there may be a participant who can no longer manage the class safely. This is an unfortunate circumstance, but it can happen. The ACB staff will handle this type of situation.

If anything happens in your class (e.g., a fall or other medical emergency), do not speak about it outside of class. Please do not share specific information about who attends the class.

Activity Adaptation

Many participants in your class will have different chronic conditions. They are responsible for taking care of their body in a *Strong and Steady* class. The *Strong and Steady* lead will complete a safety screening with participants to ensure they can safely participate in the *Strong and Steady* program. It is up to the participants to share with you any health information they want you to be aware of.

If possible, modify the exercises to adjust the class to their needs.^(15, 16) Provide options to perform the exercises differently and ensure that participants are safe and having fun. Check with ACB for suggestions if you are unsure.

Balance Intensity Scale

How hard did you have to work to keep your balance during this session?

1	No effort at all No sway; no assistance
2	A little effort Minimal sway
3	Some effort Assistance or moderate sway
4	A lot of effort Assistance and steps to recover
5	Maximal effort Unable to keep position

One way to measure intensity is using Balance intensity Scale (BIS). It is a subjective scale from 1 – 5, where the *Strong and Steady* participants report how they feel while exercising. Please see the chart below for BIS ratings.

Balance Intensity Scale adapted from:

<https://www.monash.edu/medicine/balance-intensity-scale>

Chronic Conditions

These are some of the chronic conditions you may encounter and could be a barrier for some older adults. **NOTE:** This list is not exhaustive:

Arthritis

Arthritis makes moving joints painful. One of the most common forms is osteoarthritis. It is caused by the breakdown of cartilage that lines the joints.⁽¹⁶⁾ Hips, hands, and knees are common joints that are affected. Inflammatory arthritis (e.g., rheumatoid arthritis) is an autoimmune disease that attacks the joints, for some unknown reason, causing them to be red, swollen, and painful.

Someone with arthritis should stay active and keep their joints moving.⁽¹⁶⁾ However, they must always respect their pain and encourage them to stop exercising if it becomes too painful. Strengthening exercises can be extremely helpful for them unless they are in an acute flare-up.

Chronic Pain

Exercise can help with chronic pain, sleep, boosting energy levels, weight management, and building strength. Participants should start slowly and gradually increase their intensity.

Heart Disease

Many Canadians have heart disease of one form or another. It is basically caused by blockages in our arteries that make it difficult for blood to flow through. Exercise can greatly assist someone with heart disease.^(14, 16) If a participant is returning to classes after health problems related to heart disease, notify ACB staff and make sure they have medical clearance to participate without restriction.

High Blood Pressure

Blood pressure is a very common term talked about in the doctor's office. Blood pressure is the pressure of the blood against the walls of your arteries, so we do not want it to get too high.

Many participants have high blood pressure. It increases when our arteries narrow from stress, poor diet, and lack of exercise. This is called hypertension and puts excess strain on the heart and blood vessels. Exercise can help lower blood pressure.^(14, 16) Participants should know this and get information from their health care provider as to what they should and should not do.

Many *Strong and Steady* participants will ask you questions about blood pressure. It is important to refer them to speak to their health care provider as they are the experts and are knowledgeable about their individual case.

***STRONG AND STEADY QUESTION:**

What do you think happens to your blood pressure when you exercise?

Answer: Since we are moving our body during exercise, the heart must pump quicker and harder to allow our muscles to keep working. It is normal during exercise for the systolic blood pressure (top number) to rise. It is very important to keep moving after exercise. If your muscles stop moving suddenly, blood will pool in the legs which can reduce blood flow to your brain and may cause you to be dizzy or feel faint.

**Script courtesy of Connie Jasinskas AQX Aqua Fitness Leadership Training www.fortheloveoffit.com*

Postural Hypotension and Falls

Postural hypotension is a sudden decrease in blood pressure and can be a frequent cause of falls. It often occurs when we move from a sitting or lying position to standing quickly. Our blood pools in our legs due to gravity and we can feel lightheaded and dizzy which may result in a fall. The key to reducing the risk of postural hypotension is to move slowly from sitting or lying to standing and continue to move slowly until the blood pressure has a chance to recover.

Joint Replacement

Often people who have arthritis have their joints replaced; hip and knee replacements are very common. Once properly healed, exercise with joint replacements is encouraged. Participants should work at their own pace.

Diabetes

Exercise can benefit those with Type 1 (insulin-dependent) or Type 2 (insulin resistant) diabetes. Those with diabetes need to plan their exercise to ensure they do not have difficulties with their blood sugar levels.⁽¹⁶⁾

Osteoporosis

Osteoporosis occurs when we lose too much bone mass; many older women have osteoporosis. When this occurs, their bones may break more easily. Weight-bearing exercise can help stop bone loss, so it's important to exercise regularly.⁽¹⁶⁾

Hearing Loss

Hearing loss is common in the aging population. Practice effective communication skills and maintain eye contact. Rather than using complex sentences, use simpler ones. Also, minimize background noise (you may need to turn off the music).

Cataracts

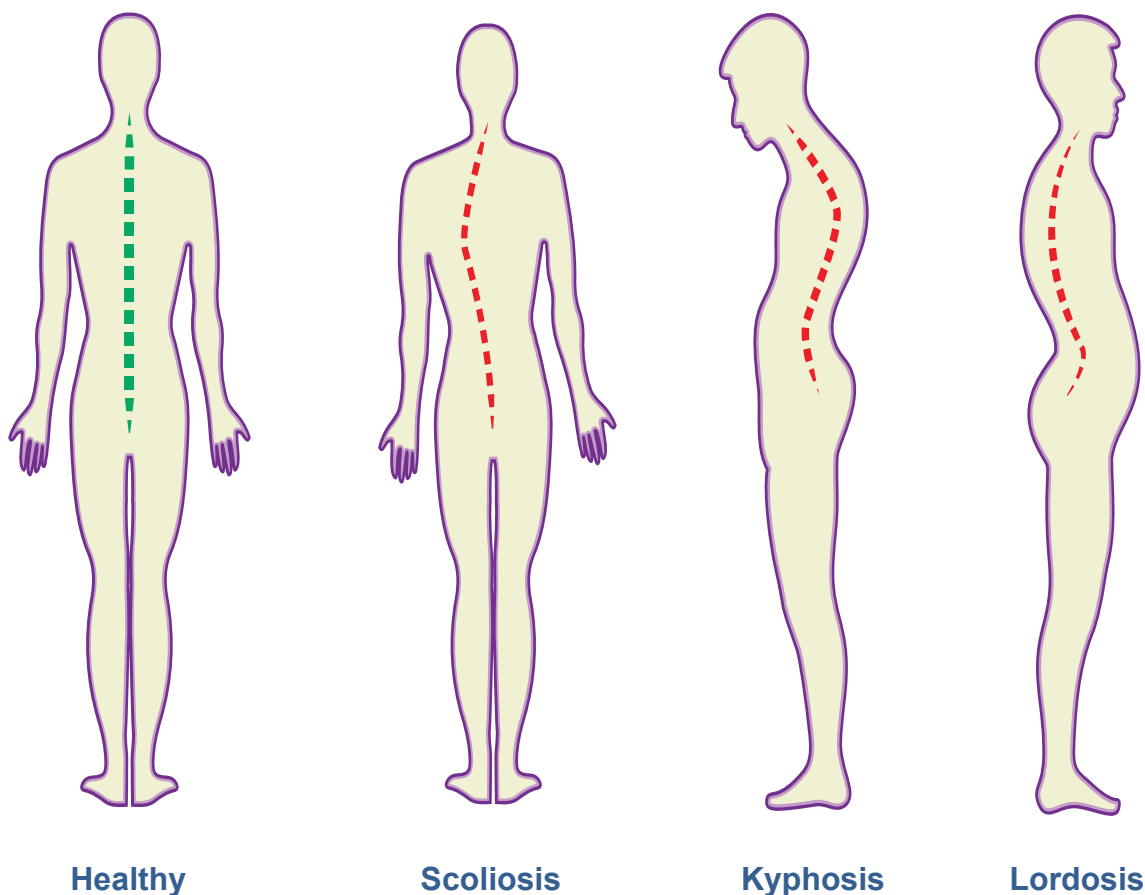
Cataracts scatter light as it passes through the lens, preventing a sharp image from reaching the retina and leading to blurry vision. Eventually, blindness can result. If someone has cataracts in your class, you may have to keep them near you and possibly closer to the wall or their chair during exercises.

Vertigo (Sensation of Spinning)

Vertigo is intense and brief and gives a false sense that you are spinning or moving. It can happen due to a rapid change in head movement, medication, an ear infection, or inner ear balance. Those participants should be close to a wall or their chair and avoid sudden movements and/or repetitive sit-to-stand exercises.

Conditions of the Back

Many participants have back issues and, when it reaches a certain level of severity, we have specific names for it as shown below in the picture. It is important for you to know what the conditions are. If you notice that someone has a back condition, you may have to change some of the exercises. Reach out to ACB for more specifics if there is a real concern.



Chapter 4: Leadership and Communication Skills

Liability

All physical activity has an associated risk that participants must acknowledge. Before becoming a participant, each person must sign a consent form and waiver, indicating that they are aware of the possible risks and the form will provide written consent before starting *Strong and Steady* classes.

Participants will also complete a safety screening before starting the program. This is to ensure they have a safe physical activity experience with us. This will be completed with the *Strong and Steady* staff.

We, as *Strong and Steady* leads, need to do our very best to make sure the space we use for our classes is safe, and that we use the guidelines outlined in this manual when offering our classes.

All Strong and Steady leaders who complete the training and other requirements receive liability insurance coverage from ACB.

Strategies for a Successful Start

There are many strategies to ensure that participants receive the benefits of attending a *Strong and Steady* class.

The following tips are effective in capturing the attention and respect of adult learners:

1. Arrive early to prepare
 - Be prepared with your equipment ready (e.g., have music ready to go).
 - Have cue cards ready if you need them.
2. Smile and introduce yourself
 - Briefly explain what the class is about and expectations for a successful class.
 - Remind participants to concentrate on technique and put their mind into the workout.

3. Speak slowly, clearly, and project your voice
 - Teach posture before the start of the class, reinforce throughout!
 - Remind them to drink water as often as they need.
4. Observe, evaluate, and correct if needed
 - Do not assume all participants know what they should be doing. Cue them clearly and correctly, and model proper technique.
 - If someone is doing an exercise incorrectly, correct the whole class. If that does not work, discreetly give them feedback on how to correct the exercise.
5. Display energy and enthusiasm – have fun!
 - If you make a mistake, it is okay! Take a breath and start again. This is a great moment to laugh.
 - If you are unsure about an exercise, avoid it. Contact ACB for further assistance.

Developing your Teaching Techniques

Teaching Formations

As you become more familiar with your participants and leading classes, you will learn what type of formations work for both you and the class. You will also need to examine the space/facility where you will be instructing your program to determine which formation will work. These are the two most common formations used by *Strong and Steady* leaders:

Lines: Participants are staggered, facing the front of the room, leader facing all of them.

Circle: Participants are in a circle or half circle. Leader is part of the circle.

Building your Skill

Cueing

Cueing is defined as using visual or verbal techniques, such as hand signals or minimal words, to inform participants of upcoming movements or that a change is about to happen. This is to ensure safety, timing, motivation, and structure. Cues should cater to the various verbal and visual learning needs of the participants.

Cueing is used for:

- Counting down to a change (warning that an upcoming change is about to happen)
- Naming a movement
- Breathing reminders
- Tempo options
- Intensity options
- To help make smooth transitions from one movement to another

Tips on cueing:

- Forecast your movement change by counting down
- Think ahead
- Use both verbal and visual cues

Coaching

Coaching focuses on an individual's needs and accomplishments, close observation, and impartial and non-judgmental feedback on performance. A coach supports a learner in achieving a specific personal goal and provides training and guidance. Good coaching techniques can enhance your class and engage the body in a purposeful way.

Coaching will:

- Focus the mind on the movement execution. This includes posture, breathing, and good techniques
- Empower the learner to execute the movement well and with purpose
- Help build energy and intensity of each movement by offering good techniques
- Allow the leader to ask people to tune in with how they are feeling, as well as reinforce and correct posture for the execution of all movements

Tips for coaching:

- Ask participants to think about what they are doing, concentrate on the execution, and give their best effort towards the movements.
- Give tips that can establish/reinforce ways to modify intensity, speed, and range of motion options.
- Use visualization analogies: do “ta-da” during a pectoral stretch, squeeze that pencil between your shoulder blades, etc.

- Offer participants feedback on their posture before and while performing the movements.
- Use more encouraging words and less don'ts, no's or negatives. Try to provide specific feedback in language that reinforces correct movement patterns. This includes "your knees stayed in proper alignment with your ankle that time" or "keep your elbow closer to your side". Phrases like "good job" and "well done" do not provide specific feedback to reinforce correct movement patterns.
- Coaching will feel like multi-tasking! While it may feel challenging at first, it is also fun to build these skills. Be willing to laugh at yourself as you make mistakes along the way. Enjoy the journey!

Learning Styles

To become an effective leader and communicator, it is important to address how people learn.

People learn in three ways:

1. **Auditory (SAY IT): Learning Through Hearing**
Auditory learning is a learning style in which a person learns through listening.
2. **Visual (SHOW IT): Learning Through Seeing**
Visual learners learn best through seeing the information being taught.
3. **Kinesthetic (DO IT): Learning Through Doing**
Kinesthetic learners prefer movement and hands-on activities.

Most people are going to have one dominant learning preference; however, they often use all learning styles to a certain degree. The most effective way to have a good match of teaching and learning styles is to use all three styles in your class.

Remember the basics as you are teaching – simple, clear instructions. Your teaching skills and techniques will develop over time!

Chapter 5: *Strong and Steady* Class Design and Development

Class Structure, Design and Development

Strong and Steady classes follow a specific format each week that includes these components:

Component	Length
Warmup and Dynamic Flexibility	10 minutes
Strength training	10 – 15 minutes
Balance	25 – 35 minutes
Stretching and Flexibility	10 – 15 minutes
Total time	60 minutes

Typically, the class will follow the format listed above, but there are times when some segments overlap. For example, a leader may choose to alternate between strength and balance exercises if that is preferred. We are offering a range of times for each component so you can determine which will fit best based on how your participants are feeling that day. It could be a day that the group is feeling tired and wants to do less resistance training, or the group does not understand the exercise you want to perform — that is okay! If the exercise is not working, it is okay to move on to another. We want you to have flexibility. As long as the total time spent on each segment is within the suggested ranges, it is up to the leader to choose how they like going through their class.

See Appendix for a sample class outline.

***STRONG AND STEADY ACTIVITY:**

In addition to the exercise, the purpose of the program is to reduce the risk of falls and promote health. This is also accomplished by a brief education component.

You can refer participants to the following websites: [OPH – Aging Well](#) and [New Brunswick – Finding Balance](#)

**Script courtesy of Connie Jasinskas AQX Aqua Fitness Leadership Training www.fortheloveoffit.com*

FITT Principle

The FITT principle outlines the four essential ingredients in the development of each component of physical fitness:

<u>F</u>requency	Number of workouts per week
<u>I</u>ntensity	Level of exertion during a workout
<u>T</u>ime	Length of activity (also known as duration)
<u>T</u>ype	Type of exercise

Example of the FITT principle based on the 24-hour Canadian Movement Guidelines:

Activity	Variables			
	<u>F</u> requency	<u>I</u> ntensity	<u>T</u> ime	<u>T</u> ype
Aerobic Fitness (benefit: reduced risk of cardiovascular diseases)	No specific frequency	Moderate to vigorous intensity (MVPA)	150 minutes per week	• Walking • Gardening
Muscular Strength	2+ times per week, with rest days in between sessions	High resistance (sets to maximum capability)	No specific time	Body weight
Balance / Flexibility (benefit: reduced risk of falls)	No specific frequency	Challenging your balance	3 hours per week	Dynamic and static
Active Daily Living (i.e. less time sitting)	Daily	Low to moderate intensity	30 – 60 minutes	• Walking • Gardening • Bowling

Strong and Steady Class Format

Important notes:

- Classes include weekly key messages for leads to pass on to participants and a take-home exercise poster to be used by participants for additional independent exercise at home, 1-3 times a week.
- For easy reference, pictures and short descriptions of resistance training, balance, and stretching exercises are provided.
- Strive to meet the range of motion needs and abilities within your group. Give options continually to accommodate participants with movement restrictions and those who need extra challenges.
- **SAFETY FIRST ALWAYS!** Overload (doing more work over time) is important to increase endurance and strength of supporting structures. However, be careful! Avoid the danger of falls by observing carefully and choosing the appropriate level of difficulty for each person.

Warm-Up and Dynamic Flexibility

- What is the purpose of the warm-up?
- Activating large muscle groups – this will generate warmth.
- Lubricating joints by moving them through full comfortable range (no pain).
- Prepare and focus the mind for the work ahead.

During the warm-up, it is also a good time to welcome participants to the class and to review important information:

- Their good posture and technique.
- Remind them to drink water as they exercise.
- How to modify exercises if they feel tired or are in pain.
- The importance of gradually slowing down, not stopping abruptly.
- Have fun!

The movement you use should be simple. You want to execute these moves using light cardiovascular activity such as walking around the room, marching on the spot, or varied directional toe taps.

As the warm-up progresses, gradually increase the intensity by using a bigger range of motion. Encourage participants to keep their feet moving when drinking water.

- Warm-up can be easily done by walking around the room (change direction halfway through) and include arm actions.
- Arm actions can mirror legs, be symmetrical, unilateral (one sided), bilateral or just swinging gently by your side.
- Warm-up includes systematic movement of upper and lower extremities with good alignment and stable core.
- Include movements in all directions (front, side, back) to lubricate joints.
- Start from the bottom up including ankles, knees, hips, shoulders, elbows, fingers, and lastly the neck.
- Start with small movements and slowly increase the range after a few minutes.
- Do gentle neck movements near the end of the warm-up (turning head side to side) as these muscles tend to be tight; it will give them time to warm up.

Coordination

Coordination is the ability to execute smooth, accurate, controlled movements. Coordination should be included in your warm-up. When giving directions for exercises, emphasize the proper form and intended execution to target participants' coordination.

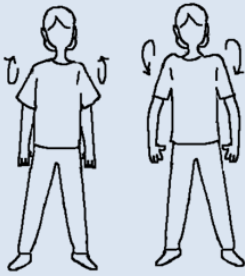
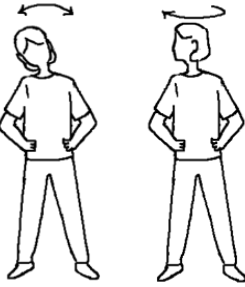
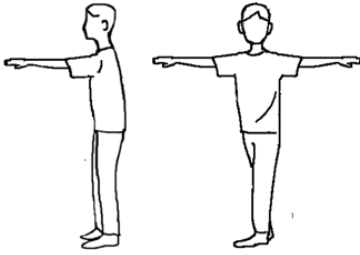
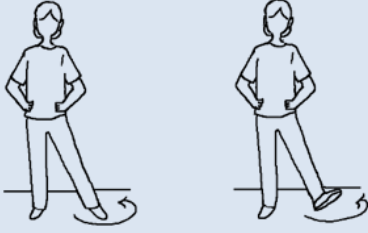
Frequently reinforce alignment and posture throughout the warm-up by using verbal cues:

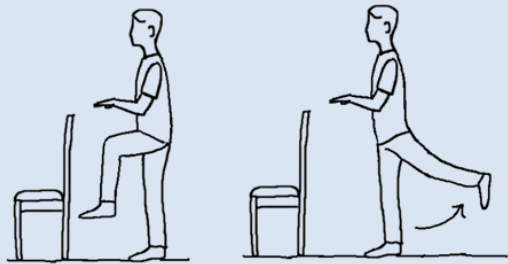
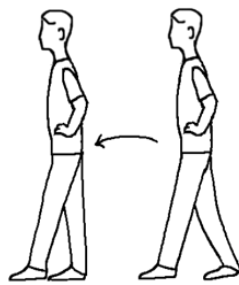
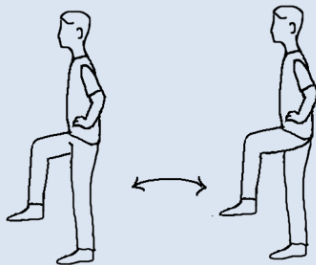
- “Be long and strong.”
- “Walk tall, head erect, ears over shoulders.”
- “Eyes focus straight ahead; focus on a target in front of you.”
- “Abdominal muscles engaged, chest slightly lifted, shoulder blades back and down.”

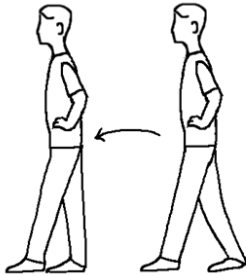
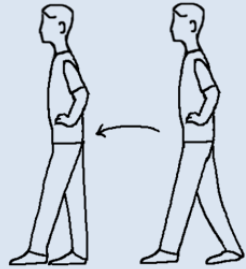
Warm-up

Standing with arm down by your side, feet hip width apart and looking forward. Take a few deep breaths in this position. Make sure participants maintain a good posture.

Walking around the room or walking on the spot can serve as a warm-up. Side steps and arm swings can also be used as a warm-up as well.

Exercise	Description	Example
Shoulder rolls	Bringing the shoulder up to the ears and back down in circular motions. Keeping the head facing forwards and arms down by your side. Cues: Make sure participants are bringing their shoulder blades together when bringing the shoulder back down.	
Neck rotations	Slowly looking in all directions and bending the neck side to side.	
Overhead reaches	Bringing the arm over top and to the opposite side to stretch / warm-up the side. Alternate arms after a few seconds.	
Spinal rotations	With the arm in front, slowly rotating the spine while following one arm. Alternate between the right and left sides.	
Ankle circle	Imagine drawing something with the toes while completing circular and up / down motions with the ankle.	

Exercise	Description	Example
Ankle Rockers	With the use of support (chair or wall) participant goes on their toes lifting their heel from the ground, after they go back on their heels lifting the toes from the ground. Both feet complete the movement at the same time. Complete exercise for several repetitions at their own pace. Encourage them to get as much movement as possible in the ankles.	
Leg swings	Bring the knee up and extend the leg back with one leg at a time. Complete a few repetitions on one side and switch.	
Walking on the spot	Good posture even with movement, slowly increasing the heart rate.	
High knee and raised arms	Walking in place and bringing the knee up in front. The opposite arm of the raised knee can also rise up for added challenge.	

Exercise	Description	Example
Waking on the spot / jogging	Going at a faster pace while remaining in the same place.	
Normal walking the spot	Slow down again, make sure good posture is maintained.	

Muscle Strength Activities

By strengthening our muscles, we are improving our body's ability to move, lift things, and do day-to-day activities.^(17, 18, 19) We train our muscles, including the core, to build strength and endurance.

Muscles work in pairs. For example, the biceps and triceps (muscles of the upper arm) work the elbow joints. When we talk about strengthening exercises, we count the number of times we contract the muscle; these are repetitions!

In *Strong and Steady*, we recommend 1-2 sets of 8 to 15 repetitions per exercise.^(6, 15, 11)

Strong and flexible muscles will also maintain posture. Ensure participants use their good posture while doing all muscle-strengthening activities.

Good technique and focus are required for proper movement execution. These techniques include:

- Posture check! Long and strong.
- A good base of support (feet hip-width apart or more).
- Good alignment.
- Focus the mind on the work being done.
- Promote good, pain-free range of motion.

Here are some tips for resistance training:

- Different participants will have different strength levels. Some will be able to do just a few repetitions and others a lot more. Proper form is required regardless of the number of repetitions executed.
- It might be necessary for some to take a break within a set of repetitions and re-start when they feel ready.
- Stay safe. Have a chair close by or be close to a wall for support if you are completing the exercise standing.

Tools for Strengthening Exercises

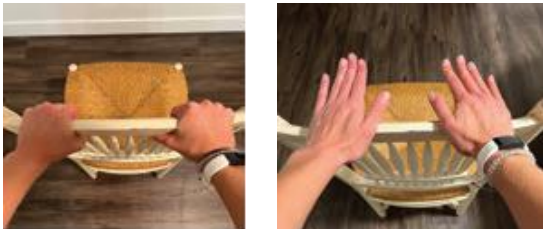
For *Strong and Steady*, we use our own body weight and/or chairs to perform strengthening exercises. (i.e., squats or wall push-ups).

Only incorporate equipment such as bands and balls into your *Strong and Steady* session if you have been trained on how to do so. The strength training exercises will span over the next few pages. You do not need to include all the exercises in every class. Only choose enough exercises to fill 10 – 15 minutes allotted for strength training, with a focus primarily on lower body exercises.

****Make sure to reinforce posture at the beginning of each new exercise****

Please Note:

- If you are not comfortable doing any of these exercises, contact ACB and they will provide alternate exercises.
- If you do not have access to a wall at your class location, contact ACB and they will provide alternate exercises.

Hand placement options		
Level 1	Level 2	Level 3
Palm on chair 	Fingertips on chair 	Hand hovering over chair 

Photos in this section were taken by Darren Brown, OPH Photo/Videographer.

Exercise 1: Standing Row with Shoulder Retraction	
Muscle Group(s) Targeted	Back (Latissimus Dorsi, Rhomboids)
Level 1	Seated row with shoulder retraction.
Level 2	Standing row with shoulder retraction. Visual example:
Level 3	Bent over row with shoulder retraction, with one arm holding onto a stable chair.
With Equipment	Use a band anchored on the arches of both feet, shoulder width apart, heel on the floor, toes to the sky.

Exercise 2: Push Up on the Wall	
Muscle Group(s) Targeted	Chest (Pectorals)
Level 1	Push up on the wall standing on the balls of the feet, with hands at chest level and elbows bent.
Level 2	Push up on the wall standing on the balls of the feet, with hands at chest level and standing an arms-length away from wall. Visual example:
Level 3	Push up on the wall standing on the balls of the feet, with hands at chest level and standing an arms-length away from wall plus a step (or two) back.
With Equipment	Use a band around back.

Exercise 3: Lateral Raises	
Muscle Group(s) Targeted	Shoulders (Deltoids)
Level 1	Seated or standing, lateral raises with bent elbows (90 degrees).
Level 2	Seated or standing, lateral raises with straight arms. Visual example seated: Visual example standing:
Level 3	Overhead Press.
With Equipment	Using a band anchored on foot or sitting on band.

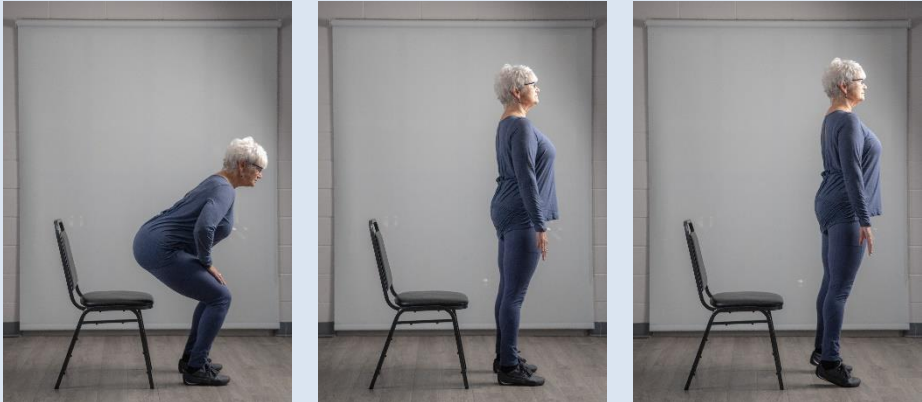
Exercise 4: Standing Hip Extension	
Muscle Group(s) Targeted	Buttocks and back of thighs (Glutes and Hamstrings)
Level 1	Standing hip extension with toe on ground.
Level 2	Standing hip extension with toe off ground. Visual example:
Level 3	Standing hip extension, with toe off ground and contractions held for 3 seconds.
With Equipment	Use a band anchored on the stable foot.

Exercise 5: Seated or Standing Hip Abduction

Muscle Group(s) Targeted	Outer thighs (Abductors)
Level 1	Seated with legs together, pressing feet gently on the floor, slide feet out. Increase range of motion as comfortable.
Level 2	Standing, with one stable foot, drag one foot on floor to a point and tap the foot to the floor. Increase range of motion as comfortable. Visual example: 
Level 3	Standing, with one stable foot, hip abduction with moving foot not touching floor. Increase range of motion as comfortable.

Exercise 6: Seated Hip Adduction

Muscle Group(s) Targeted	Inner thighs (Adductors)
Level 1	Seated legs open, pressing feet gently on the floor, slide feet together. Increase range of motion as comfortable.
Level 2	Seated, put two fists between thighs right above knees and squeeze for 3 – 5 seconds. You can also just squeeze your thighs together (6 reps maximum, take long breaks between). Visual example: 
Level 3	Seated, put two fists between thighs right above knees and squeeze for 15 seconds. You can also just squeeze your thighs together (3 reps maximum, take long breaks between).
With Equipment	Instead of fists, a towel, ball, pillow, or foam roller can be used to squeeze between legs.

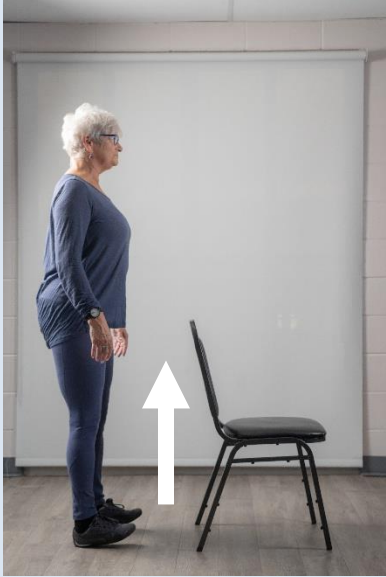
Exercise 7: Sit to Stand with Heel Raise	
Muscle Group(s) Targeted	Thighs (Quadriceps)
Level 1	Sit to stand, full squat or half-squat.
Level 2	Sit to stand, full squat or half-squat with heel raise. Visual example: 
Level 3	Sit to stand, full squat or half- squat, with heel raise and star movement when standing (both arms raised straight up and out).

Exercise 8: Heel Raises	
Muscle Group(s) Targeted	Calves (Gastrocnemius)
Level 1	Seated heel raises.
Level 2	Standing heel raises. Visual example:  
Level 3	2 OPTIONS: 1. Standing heel raises held for 3 seconds; OR 2. Standing heel raises on one foot.

Exercise 9: Wall Sit Hold (Back against wall, feet hip distance apart, feet a couple steps away from the wall)	
Muscle Group(s) Targeted	Thighs (Quadriceps)
Level 1	Half-squat wall sit, hold for 15-30 seconds.
Level 2	Full squat wall sit (knees at 90 degrees), hold for 15-30 seconds.
Level 3	Full squat wall sit (knees at 90 degrees), hold for 30-45 seconds. Progress the time as your group gets comfortable.

Exercise 10: Lunge
(Start standing with feet side-by-side, take a step forward into the lunge)

Muscle Group(s) Targeted	Thighs, Hamstrings, Glutes, Calves (Gastrocnemius)
Level 1	Lunge with one hand on chair or wall.
Level 2	Lunge with hands on hips. Visual example: 
Level 3	2 OPTIONS: 1. Lunge with a greater depth as comfortable; OR 2. Repeat lunge set twice on one side before switching.

Exercise 11: Toe Raises	
Muscle Group(s) Targeted	Front of the calves (Tibialis anterior)
Level 1	Seated toe raises.
Level 2	Standing toe raises. Visual example:  
Level 3	2 OPTIONS: 1. Standing toe raises held for 3 seconds; OR 2. Standing toe raises on one foot.

Exercise 12: Modified Bird-Dog (extending opposite arm and leg)

Muscle Group(s) Targeted	Back, Buttocks, Core (Erector Spinae, Rectus abdominus, Glutes)
Level 1	Standing bird-dog with one arm holding onto a stable chair, and the other arm held straight out in front at shoulder height, movement held for 3 seconds.
Level 2	Standing bird-dog with one arm holding onto a stable chair, and the other arm held straight out and raised above shoulder height, movement held for 3 seconds. Visual example: 
Level 3	Standing bird-dog with one arm holding onto a stable chair, and the other arm held straight out and raised above shoulder height, movement held for 5 – 10 seconds.

Exercise 13: Wall Plank	
Muscle Group(s) Targeted	Core (Abdominals)
Level 1	Wall plank standing arms-length away from wall.
Level 2	Wall plank with forearms on the wall. Visual example: 
Level 3	Wall plank with forearms on the wall, standing on one leg.
With Equipment	Oblique side bend, standing on band, holding with the outside arm.

Balance

What is the purpose of balance?

- Helps to keep you upright
- Improves stability and helps prevent falls
- Key to all functional movement

Balance is important to work on to prevent falls.^(18, 19) Balance helps keep you upright, improve stability, prevent falls, and it is key to all functional movements. Balance is easily affected by many things in our lives (fatigue, stress, illness, distractions).⁽³⁾

Balance is our ability to maintain our bodies in an upright position (the ability to maintain a center of mass over a base of support).

Legs are our base of support. When we widen our base of support, our balance is better. When we put our feet closer together, balance becomes more unstable. Our balance is better when we are standing still; this is known as static balance. Performing balancing exercises while moving is known as dynamic balance.⁽⁸⁾

Our balance is also affected by our senses. The information from our eyes, ears, and body sends signals to our brain through our central nervous system. As we age, the signals are not sent as quickly, and this can greatly affect our balance and can be a major cause of falls.

Safety first always!!!

Overload is important to progressively increase the endurance and strength of our muscles in balanced positions. However, be careful! Avoid falls by observing carefully and choosing the appropriate level of difficulty for every individual.

Single-Leg Stance Precautions:

- Always keep the supporting knee well aligned and slightly bent (unlocked).
- Use support options as needed (chair/wall/railing). Maintain a tall, stable alignment throughout. *Reinforce posture.
- Monitor the comfort of the supporting lower extremity and low back during prolonged single-leg activities.
- Start the repetition for 15 seconds and work your way up to a maximum of one minute.
- Start with a small number of repetitions. The number of repetitions on one leg before changing sides will vary depending on the fitness levels, age, balance abilities, and health of participants.

- Work towards longer sets of repetitions with time and practice. No more than one minute. The health of the supporting joints will also influence the length of the work for individuals.
- Allow participants to change sides when they have reached comfortable fatigue (proper form maintained).

Note: Core work is also done during ALL standing exercises and dynamic balance exercises also work on coordination.

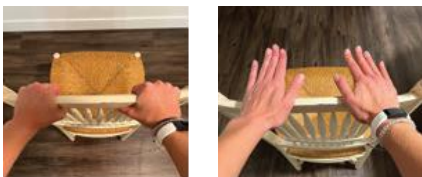
Components of Balance

Here are a few definitions to help you better understand the four components of balance:^(8, 1)

- **Anticipatory control:** Refers to the ability to move the center of mass position in advance of a voluntary movement (such as a step) which otherwise could move the center of mass beyond the base of support.
- **Dynamic stability:** Refers to the ongoing maintenance of the center of mass position when the base of support is changing (such as during walking and transitioning from sitting to standing).
- **Functional stability limits:** Refers to the ability to move the center of mass as far as possible in any direction within the base of support (typically stationary) and represents the practice of controlling the center of mass.
- **Reactive control:** Refers to the ability to recover stability after the center of mass moves beyond the base of support.

Please note: Depending on the abilities of your *Strong and Steady* class participants, not all of these balance activities within the types of balance training (anticipatory control, dynamic stability, functional stability limits, and reactive control) need to be included in a 12-week session. Categories can be split up into multiple 10-week sessions.

When a participant is using a chair for support, use this progression to further challenge the balance:

Hand placement options		
Level 1	Level 2	Level 3
Palm on chair 	Fingertips on chair 	Hand hovering over chair 

Photos in this section were taken by Darren Brown, OPH Photo/Videographer.

Type of Balance Training: Anticipatory Control	
Exercise 1: Clockwork toe taps (Leader tells participants a time and they tap at that spot)	
Level 1	Clockwork toe taps, with moving foot fully touching floor.
Level 2	Clockwork toe taps, with moving foot lightly touching floor. Visual example:  

Type of Balance Training: Anticipatory Control



Level 3

Clockwork toe taps, with moving foot lightly touching floor.

NOTES

Participants follow the hand placement options, can also vary range of motion.

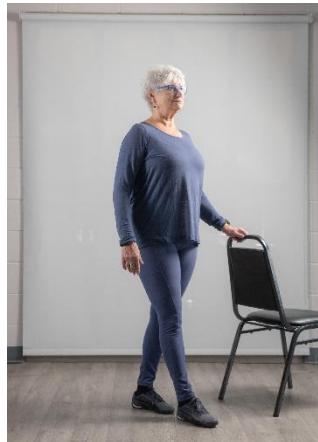
Type of Balance Training: Anticipatory Control

Exercise 2: Standing tandem

Level 1

Standing tandem holding a chair with a full grip.

Visual example:



Level 2

Standing tandem holding a chair with fingertips.

Visual example:



Type of Balance Training: Anticipatory Control

Level 3

Standing tandem hand hovering over chair.

Visual example:



NOTES:

Foot Placement Progression (used in all levels):

- Wide semi-tandem stance
- Semi-tandem stance
- Full tandem stance

Type of Balance Training: Dynamic Stability	
Exercise 1: Dynamic one-leg stance	
Level 1	One leg stance, with the moving leg swung front to back.
Level 2	One leg stance, with the moving leg swung in a semi-circle. Visual example: 
Level 3	One leg stance, with the moving leg swung left to right.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Dynamic Stability	
Exercise 2: High knees with eyes open	
Level 1	High knees with eyes open, not raising arms above head.
Level 2	High knees with eyes open, raising opposite arm above head. Visual example:  
Level 3	High knees with eyes open, raising same arm above head.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Dynamic Stability

Exercise 3a: Tandem (heel-toe) walking with eyes open, forward

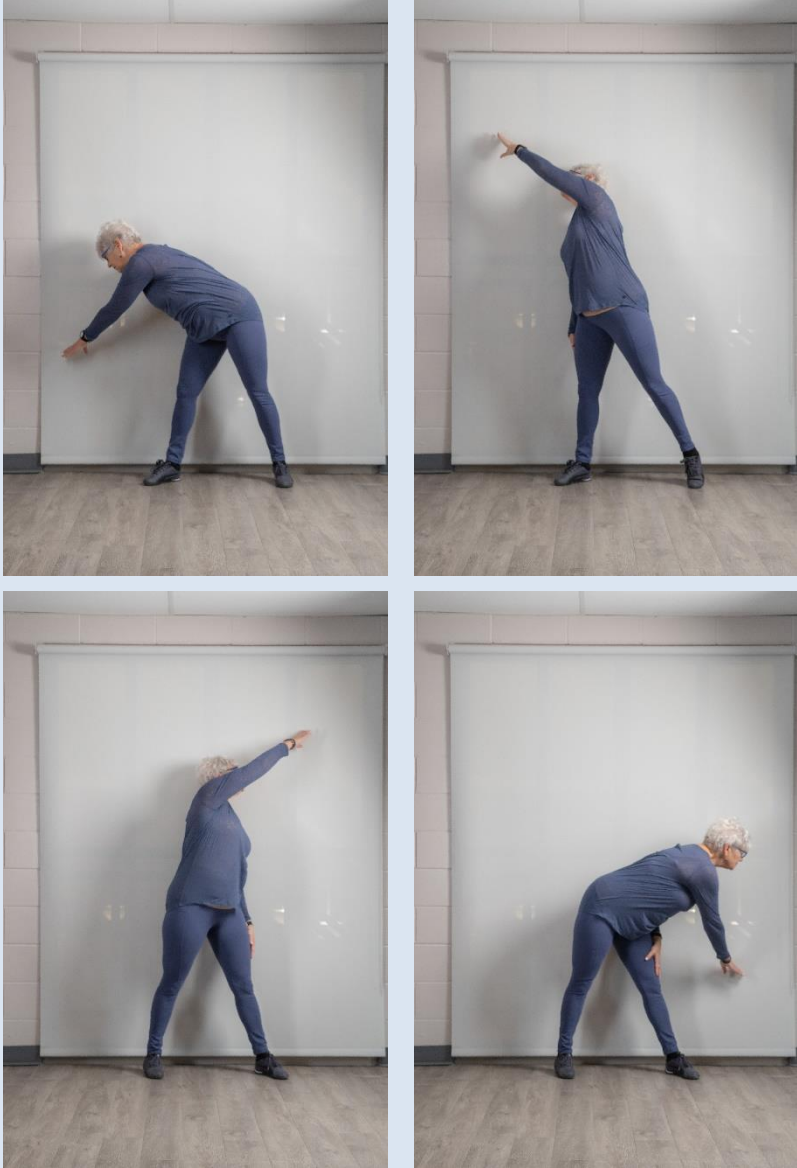
Level 1	Forward tandem walking with eyes open, and arms straight out to sides.
Level 2	Forward tandem walking with eyes open, and arms crossed on chest. Visual example: 
Level 3	Forward tandem walking with eyes open, and arms held straight above head.
NOTES	Foot Placement Progression (used in all levels): • Wide semi-tandem stance • Semi-tandem stance • Full tandem stance

Exercise 3b: Tandem (heel-toe) walking with eyes open, backward

Level 1	Backward tandem walking with eyes open, and arms straight out to sides.
Level 2	Backward tandem walking with eyes open, and arms crossed on chest.
Level 3	Backward tandem walking with eyes open, and arms held straight above head.
NOTES	Participants follow foot placement progression.

Type of Balance Training: Functional Stability Limits

Exercise 1: Wall Spot Tap (Tap a spot with one arm at a time, leader cues spot where they reach)

Level 1	Tap a spot with a small range of motion.
Level 2	Tap a spot with a medium range of motion. Visual example: 
Level 3	Tap a spot with as large of a range of motion as comfortable.

Type of Balance Training: Functional Stability Limits

Exercise 2a: Shifting weight as far as comfortable, holding on to a chair, shifting left to right with feet shoulder width apart

Level 1	Shifting weight as far as comfortable, with feet shoulder width apart and feet flat on ground throughout movement.
Level 2	Shifting weight as far as comfortable, with feet shoulder width apart and alternate heel raises. Visual example:
Level 3	Shifting weight as far as comfortable, with feet shoulder width apart and alternate lifting feet.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Functional Stability Limits

Exercise 2b: Shifting weight as far as comfortable, holding on to a chair, shifting front to back, with feet in a semi tandem stance

Level 1	Shifting weight as far as comfortable, with feet in a semi tandem stance, with feet flat on ground throughout movement.
Level 2	Shifting weight as far as comfortable, with feet in a semi tandem stance, with a heel raise leaning forward and a toe raise leaning backwards. Visual example:
Level 3	Shifting weight as far as comfortable, with feet shoulder width apart and alternate lifting feet.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Functional Stability Limits

Exercise 3: Single leg extension, holding on to a stable chair

Level 1	Single leg extension, lean forward, with both arms holding chair.
Level 2	Single leg extension, with opposite arm held and reaching straight out horizontally at shoulder height or above head. Visual example: 
Level 3	Single leg extension, lean forward with one hand-held on the hip. Visual example: 
NOTES	Participants follow the hand placement options.

Type of Balance Training: Functional Stability Limits

Exercise 4: Bend over and touch toes

Level 1	Bend over and touch toes (or as low as possible), with feet shoulder width apart. Visual example:
Level 2	Bend over and touch toes (or as low as possible), with feet as close together as possible.
Level 3	Place a chair approximately 1 to 3 feet (30 to 90 cm) in front of the participant. With feet shoulder width apart, touch the seat or turn chair around and touch the back rest (for folks with back issues) of the chair with one hand.
NOTES	If support is required, place the chair beside the participant and have them face a wall (same distance away) and have them touch the wall at the height they are comfortable with instead of touching the chair.

Type of Balance Training: Reactive Control

Exercise 1: Leader's Instructions

Level 1	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: 1. Step forward. 2. Stop in place for three seconds.
Level 2	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: 1. Step forward with a lunge. 2. Lean left OR lean right. Visual example:
Level 3	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: • Step backward as far as comfortable. • Change direction 180 degrees.

Type of Balance Training: Reactive Control

Exercise 2: Group Nudge

Level 1	In groups of three, participants become one of the following roles: 1. The person who stands – this person stands strong, feet shoulder width apart, with their hands crossed on their chest. NOTE: This is the only person that can vary based on the individual's level of balance. 2. The person who nudges – walks around the Stander gently nudging at shoulder level around the body. 3. The person who spots – stands beside the person standing strong, ensuring no one falls.
Level 2	Similar to Level 1, except the person who stands strong is holding a partial lunge position. Visual example: 
Level 3	Similar to Level 1, except the person who stands strong is standing with feet as narrow as comfortable.
NOTES	If a group of three is not possible, the third person can be replaced by a stable chair or wall.

Stretching (Flexibility)

What is the purpose of stretching?⁽²⁰⁾

- Gain flexibility (range of motion).
- Decreases muscle stiffness and increases range of motion.
- Improves posture.
- Reduces muscular tension and enhances muscular relaxation.
- May reduce risk of injury.
- In addition to targeting the four components of balance, flexibility exercises may help prevent falls.

Stretching Guidelines

- It is important to remind participants that stretching should be comfortable and never hurt – it is like a reward for your hard work during class.
- Remind participants to move slowly and gently (do not bounce).
- Never lock your joints.
- Stretches should be held for a short period of time (30 seconds, usually the length of three breaths).
- Encourage participants to breathe deeply and keep their head above their heart.

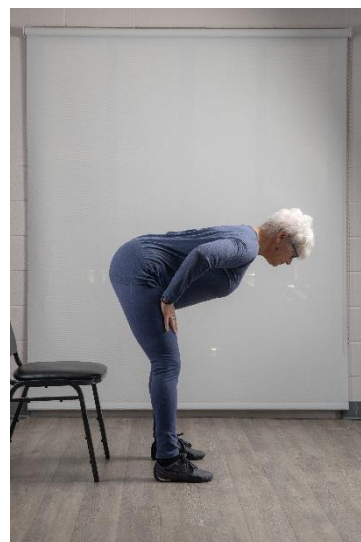
Note: Start from the bottom and work your way up

Photos in this section were taken by Darren Brown, OPH Photo/Videographer.

Calves:



Hamstrings:



Hip flexors:



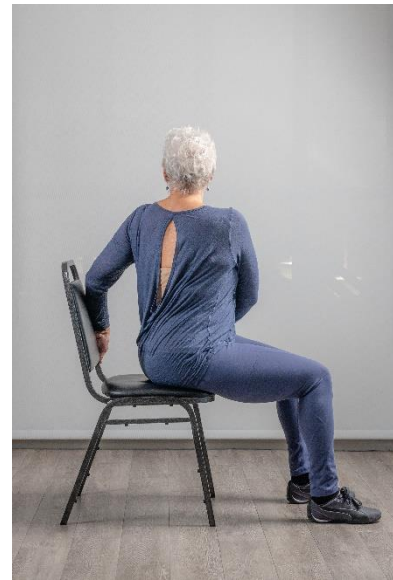
Adductors:



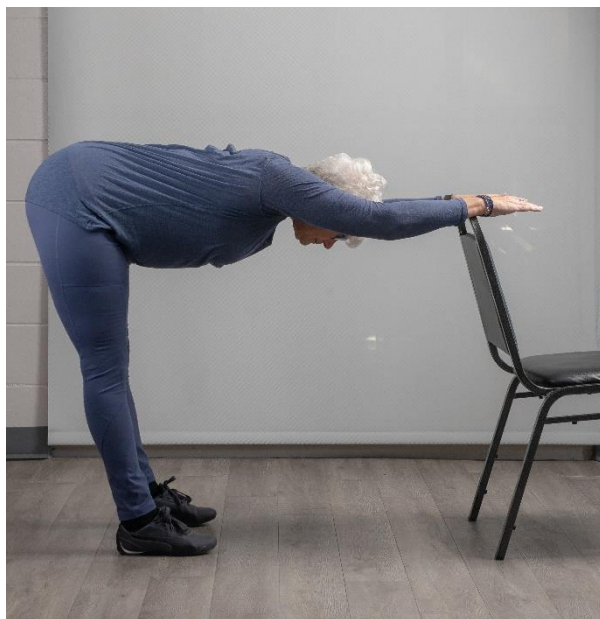
Glutes:



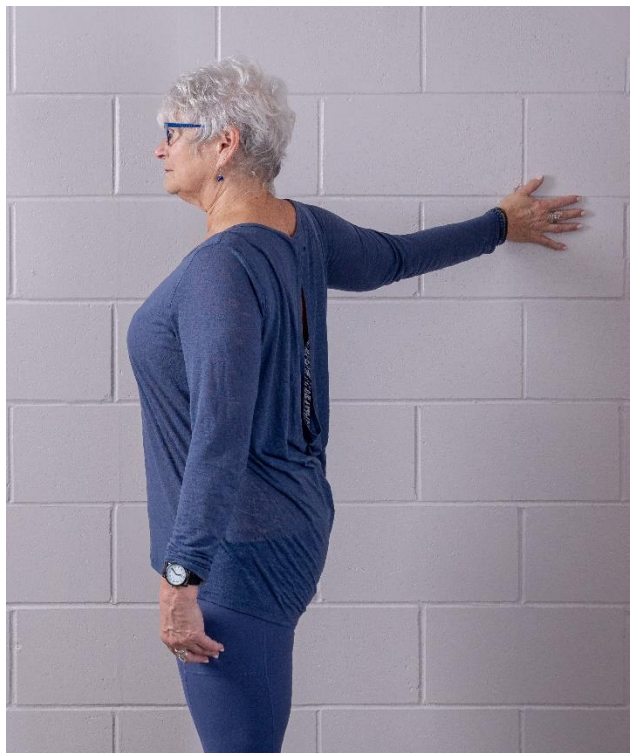
Thoracic mobility:



Lat and Pec stretch:



Lat and Pec stretch (continued):



Triceps/Rear Deltoid stretch:



Cervical Range of Motion (ROM):



Music in Your *Strong and Steady* Classes

Music can be an integral part of the exercise experience. Both research and practical experience have shown that music can help people to relax and it can be a motivational aid!

Music:

- Can motivate participants
- Adds variety to the class
- Decreases boredom and creates a fun and enjoyable atmosphere
- Influences moods

Music Guidelines for Your Class

Varying the type of music played can enhance the mood of your class! Try to choose different styles of music to reach different tastes. The lyrics are also important to consider when choosing music. There are many participants who would be offended if you were to bring music containing offensive language. This is not appropriate for a *Strong and Steady* class.

Keep the music volume low enough for you and the participants to hear. Adjust the volume each time you begin a class according to the feedback from your participants. Check in with them throughout the class and make changes as required.

Chapter 6:

Online or Hybrid Delivery

Teaching Online or Hybrid

Teaching virtual classes can be fun for the instructor. It takes a slightly different approach than in-person classes, and it is important to be prepared.

Participants

Most people will have limited space to work out in, so teaching online will take a slightly different approach than teaching in-person classes.

Be prepared in the first class to work out some technical issues with new participants. Let them know about the log-in link (it will be sent prior to the class).

Participant Safety Guidelines	
Sign on 10 minutes before the class. Please ensure you attend the full class. No late sign-in will be accepted.	You are responsible for your movements during this class. If painful, don't do it. Remember to listen to your body and take a rest when you need it.
Have a dedicated workout space. This includes ample room to move around. Ensure any area rugs are removed and your space is free of clutter. Watch for pets!	
Wear appropriate footwear. Preferably sneakers.	Set up your device on an elevated surface. Avoid setting it up on the floor. Avoid using a cell phone; this can lead to neck injuries
Muted during class. While the class is occurring, we will mute participants to cut down on distracting background noise. If you have a question or comment, take yourself off mute.	Ensure you have a water bottle and a phone close to you. Hydrate as required. Have a phone nearby in case you need to reach someone during class.
Take care of your equipment. You will receive instructions on how to care for your band.	A sturdy chair will be needed for class. No wheels.

Set-Up is Everything

When the live-streaming workout begins, it is recommended to log in fifteen minutes ahead of when class “officially” starts. Take this time to work out any possible technical issues.

- Introduce yourself five minutes before the class starts, explain the style of workout you are leading, and give a quick overview of the format you will be teaching.
- Start on time!
- Test your set-up before going live to ensure you are ready when you host your first class.
- You can use a smartphone, tablet, laptop or computer. If using a smartphone or tablet, horizontal placement of your device is better for the classes.
- Turn on “do not disturb” on your phone or any other devices you are using so that calls and texts do not come through.
- Set up your device at eye level, so you can see your entire body during all your movements.
- For reference, a great shooting distance from the camera to your body is from about 8 to 12 feet (2.5 to 3 meters).

If you need to you can post your “workout notes” out of view of the participants (flipchart paper works great) so that it is clearly visible for you.

All of this will ease your delivery of the class and allow more time for you to focus on coaching and cueing.

Lighting

- A lot of natural light is ideal.
- Avoid teaching in front of a window (you can close drapes or blinds if that is not possible).
- Set yourself up with a window in front of you or to your side.

Dress Accordingly

- Make sure your outfit does not interfere with your environment.
- As a rule: Solid colors work better on camera instead of busy patterns.

Sound Matters

- Using music is optional. If using, play it on the low side as participants need to hear you well. It can be a distraction for some.
- If possible, try to limit any other background noises and distractions, like a washing machine running or a TV in another room. If you live with other people, see if they can keep their noise levels down.
- You may not be able to get the same feedback as you would in person, but it's still important to talk frequently and clearly to your audience.
- Your cues and your verbal encouragement should be addressed to the whole class when teaching a live-streaming workout.

Coach with Precision

Proactively offer modifications, progressions, and form cues for each exercise.

You may not be able to see all participants online, but it is still crucial they are working out safely. You can ask them for a thumbs up or to un-mute their microphone to ask a question.

You will want to do the entire workout along with your class, showing every repetition and giving options. Practising at home a few times before your first class can help you feel ready.

Connection is Super Important

- Use participant names when it is appropriate. It makes people feel good and connects them to the experience. You can check in during the class by asking questions to make it feel like an in-person class.
- For an online class, you do not have your hands to guide the participant. However, virtually guided exercise encourages participants to take full responsibility for their practice. You are there to encourage and guide them.

Responsibilities of the Leader(s): Legal Disclaimer

Because the leader(s) may not see all participants while joining online, participants should be made aware of this. They should be reminded at the start of every class to listen to their body and work at their own pace. The legal disclaimer will be signed and viewed online by all participants.

Legal Disclaimer, Limit of Liability, and Disclaimer of Warranty

This disclaimer is for anyone participating in online or hybrid *Strong and Steady* fall prevention classes.

No International Use

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Appendix A: Approved Exercises by ACB and OPH

Strength:

Row with Shoulder Retraction – Back (*Latissimus Dorsi, Rhomboids*)

- Seated Row with shoulder retraction
- Standing Row with shoulder retraction
- Bent over row with shoulder retraction, with one arm holding onto a stable chair

Push Up on the Wall – Chest (*Pectorals*)

- Standing on the balls of the feet, with hands at chest level and elbows bent
- Standing on the balls of the feet, with hands at chest level and standing an arms-length away from the wall
- Standing on the balls of the feet, with hands at chest level and standing an arms-length away from the wall PLUS a step (or two) back

Lateral Raises – Shoulders (*Deltoids*)

- Seated or standing with elbows bent 90 degrees
- Seated or standing, lateral raises with straight arms
- Overhead press

Standing Hip Extension – Buttocks and backs of thighs (*Glutes and Hamstrings*)

- Standing with toe on the ground
- Standing with toe off the ground
- Standing with toe off the ground and contractions held for 3 seconds

Seated or Standing Hip Abduction – Outer thighs (*Abductors*)

- Seated with legs together, slide feet out (*increase ROM as comfortable*)
- Standing, with one stable foot, drag one foot on floor to a point and tap the foot to the floor (*increase ROM as comfortable*)
- Standing, with one stable foot, hip abduction with moving foot not touching the floor (*increase ROM as comfortable*)

Seated Hip Adduction – Inner thighs (*Adductors*)

- Seated legs open, slide feet together (*increase ROM as comfortable*)
- Seated, put two fists between thighs right above knees and squeeze 3-5 seconds. Can also just squeeze thighs together (*6 reps maximum*).
- Seated, put two fists between thighs right above knees and squeeze for 15 seconds. Can also just squeeze thighs together (*3 reps maximum*).

Sit to Stand with Heel Raise – Thigh (*Quadriceps*)

- Sit to stand, full squat or half-squat
- Sit to stand, full squat or half-squat with heel raise
- Sit to stand, full squat or half-squat, with heel raise and star movement when standing

Heel Raises – Calves (*Gastrocnemius*)

- Seated heel raises
- Standing heel raises
- Standing heel raises held for 3 seconds OR standing heel raises on one foot

Wall Sit – Thigh (*Quadriceps*)

- Half-squat wall sit, hold for 15-30 secs
- Full squat wall sit (knees at 90 degrees), hold for 15-30 secs
- Full squat wall sit (knees at 90 degrees), hold for 30-45 secs

Lunge – Thighs, Hamstrings, Glutes, Calves (*Gastrocnemius*)

- Lunge with one hand on the chair or wall
- Lunge with hands on hips

- **2 options:**
 - (1) Lunge with greater depth as comfortable **OR**
 - (2) Repeat lunge set twice on one side before switching

Toe Raises – Front of the calf (*Tibialis anterior*)

- Seated toe raises
- Standing toe raises
- Standing toe raises held for 3 seconds OR standing toe raises on one foot

Modified Bird-Dog - Back, Buttocks, Core (*Erector Spinae, Rectus abdominus, Glutes*)

- Arm held straight out in front at shoulder height, hold for 3 seconds
- Arm held straight out in front and raised above shoulder height, hold for 3 seconds
- Arm held straight out in front and raised above shoulder height, hold for 5-10 seconds

Wall Plank – Core (*Abdominals*)

- Standing arms length away from wall
- Standing with forearms on wall
- Standing on one leg with forearms on wall

Balance:

Anticipatory Control

Clockwork Toe Taps

- Clockwork taps with moving foot fully tapping floor
- Moving foot lightly tapping floor
- Moving foot not touching floor

Standing Tandem

- Holding a chair with a full grip
- Holding a chair with fingertips
- Hand hovering over chair
(Note Foot Progressions: *Wide, Semi-tandem, Full tandem*)

Dynamic Stability

Dynamic One-Leg Stance

- Leg swings front to back
- Leg swings in a semi-circle
- Leg swings left to right (in front/behind)

High Knees with Eyes Open

- High knees, not raising arms above head
- High knees, raising opposite arm above head
- High knees, raising same arm above head

Tandem Walking (heel-toe) With Eyes Open – Forward

- Arms straight out to sides
- Arms crossed on chest
- Arms held straight above head
(*Note Foot Progressions: Wide, Semi-tandem, Full tandem*)

Tandem Walking (heel-toe) With Eyes Open – Backward

- Arms straight out to sides
- Arms crossed on chest
- Arms held straight above head
(*Note Foot Progressions: Wide, Semi-tandem, Full tandem*)

Functional Stability Limits

Wall Spot Tap: Tap a Spot with One Arm at a Time (Leader cues where they reach)

- Small ROM
- Medium ROM
- As large ROM as is comfortable

Shifting Weight as Far as Comfortable, Holding a Chair, Shift Left to Right with Feet Shoulder-Width Apart

- Feet flat on ground throughout movement
- Alternate heel raises
- Alternate lifting feet

Shifting Weight as Far as Comfortable, Holding a Chair, Shift Front to Back with Feet in Semi-Tandem Stance

- Feet flat on ground throughout movement
- Heel raise leaning forward and a toe raise leaning backward
- Alternate lifting feet

Single Leg Extension (holding on to a stable chair)

- Lean forward with both arms holding the chair
- Opposite arm holding, reaching straight out horizontally at shoulder height or above head
- Lean forward with one hand on hip

Bend Over and Touch Toes

- Touch toes (or as low as possible) with feet shoulder width apart
- Feet as close together as possible
- Touch seat of chair (1-3 feet in front of participant)

Reactive Control

Verbal Cues / Stand Still

- Step forward
- Step forward with a lunge
- Step backward as far as comfortable

Verbal Cues / Walk Around

- Stop in place for 3 seconds
- **OPTIONS:** Lean left **OR** lean right
- Change direction 180 degrees

Nudging (groups of 3)

- Stand shoulder width apart
- Stand in partial lunge
- Stand with feet as narrow as possible

Strong and Steady Sample Class

Below is one example of a sample *Strong and Steady* class. Some exercises will depend on the abilities of your participants. If you have any questions or need clarifications on exercises, please contact ACB.

1. Warm-up and dynamic flexibility: 10 minutes
2. Strength training: 10–15 minutes
 - a. This will consist of one upper body, three lower body, as well as one core exercise.
3. Balance training: 35 minutes
 - a. This will consist of 1 – 2 exercises per each type of balance (anticipatory control, dynamic stability, functional stability limits, and reactive control). Repeat exercises to fill the 35 minutes of time.
 - b. Important note: Balance activities in functional stability limits and reactive control could be challenging, depending on the abilities of your *Strong and Steady* class participants. If this is the case, pick more exercises from anticipatory control and dynamic stability.
4. Stretching (flexibility): 10–15 minutes
 - a. Start from bottom and work your way up.
 - b. Review pictures for stretching guidelines and modifications.
 - c. You will be taught different sample classes as part of CEC offered by ACB.

Reduce number of exercises if necessary.

Here is an example of the Strength Training and Balance Training portions of the class:

Strength Exercise 1: Standing Row with Shoulder Retraction	
Muscle Group(s) Targeted	Back (Latissimus Dorsi, Rhomboids)
Level 1	Seated row with shoulder retraction.
Level 2	Standing row with shoulder retraction.
Level 3	Bent over row with shoulder retraction, with one arm holding onto a stable chair.
With Equipment	Use a band anchored on the arches of both feet, shoulder width apart, heel on the floor, toes to the sky.

Strength Exercise 2: Push Up on the Wall	
Muscle Group(s) Targeted	Chest (Pectorals)
Level 1	Push up on the wall standing on the balls of the feet, with hands at chest level and elbows bent.
Level 2	Push up on the wall standing on the balls of the feet, with hands at chest level and standing an arms-length away from wall.
Level 3	Push up on the wall standing on the balls of the feet, with hands at chest level and standing an arms-length away from wall plus a step (or two) back.
With Equipment	Use a band around back.

Strength Exercise 3: Standing Hip Extension	
Muscle Group(s) Targeted	Buttocks and backs of thighs (Glutes and Hamstrings)
Level 1	Standing hip extension with toe on ground.
Level 2	Standing hip extension, with toe off ground.
Level 3	Standing hip extension, with toe off ground and contractions held for 3 seconds.
With Equipment	Use a band anchored on the stable foot.

Strength Exercise 4: Toe Raises	
Muscle Group(s) Targeted	Anterior leg (Tibialis Anterior)
Level 1	Seated toe raises.
Level 2	Standing toe raises.
Level 3	Standing toe raises held for 3 seconds OR standing toe raises on one foot.

Strength Exercise 5: Heel Raises	
Muscle Group(s) Targeted	Calves (Gastrocnemius)
Level 1	Seated heel raises.
Level 2	Standing heel raises.
Level 3	Standing heel raises held for 3 seconds OR standing heel raises on one foot.

Strength Exercise 6: Wall Plank	
Muscle Group(s) Targeted	Core (Abdominals)
Level 1	Wall plank standing arms-length away from wall.
Level 2	Wall plank with forearms on the wall.
Level 3	Wall plank with forearms on the wall, standing on one leg.
With Equipment	Oblique side bend, standing on band, holding with the outside arm.

Type of Balance Training: Anticipatory Control	
Exercise 1: Clockwork toe taps (Leader tells participants a time and they tap at that spot)	
Level 1	Clockwork toe taps, with moving foot fully touching floor.
Level 2	Clockwork toe taps, with moving foot lightly touching floor.
Level 3	Clockwork toe taps, with moving foot lightly touching floor.
NOTES	Participants follow the hand placement options, can also vary range of motion.

Type of Balance Training: Anticipatory Control	
Exercise 2: Standing Tandem	
Level 1	Standing tandem holding a chair with a full grip.
Level 2	Standing tandem holding a chair with fingertips.
Level 3	Standing tandem hand hovering over chair.
NOTES	Foot Placement Progression (used in all levels): • Wide semi-tandem stance • Semi-tandem stance • Full tandem stance

Type of Balance Training: Dynamic Stability	
Exercise 1: Dynamic one-leg stance	
Level 1	One leg stance, with the moving leg swung front to back.
Level 2	One leg stance, with the moving leg swung in a semi-circle.
Level 3	One leg stance, with the moving leg swung left to right.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Dynamic Stability	
Exercise 2: High knees with eyes open	
Level 1	High knees with eyes open, not raising arms above head.
Level 2	High knees with eyes open, raising opposite arm above head.
Level 3	High knees with eyes open, raising same arm above head.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Functional Stability Limits	
Exercise 1: Wall Spot Tap (Tap a spot with one arm at a time, leader cues spot where they reach)	
Level 1	Tap a spot with a small range of motion.
Level 2	Tap a spot with a medium range of motion.
Level 3	Tap a spot with as large of a range of motion as comfortable.

Type of Balance Training: Functional Stability Limits	
Exercise 2: Shifting weight as far as comfortable, holding on to a chair, shifting left to right with feet shoulder width apart	
Level 1	Shifting weight as far as comfortable, with feet shoulder width apart and feet flat on ground throughout movement.
Level 2	Shifting weight as far as comfortable, with feet shoulder width apart and alternate heel raises.
Level 3	Shifting weight as far as comfortable, with feet shoulder width apart and alternate lifting feet.
NOTES	Participants follow the hand placement options.

Type of Balance Training: Reactive Control	
Exercise 1: Leader's Instructions	
Level 1	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: • Step forward.
Level 2	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: • Step forward with a lunge.
Level 3	At the instruction of the leader, participants stand still and when the instructor says a verbal cue the participants: • Step backward as far as comfortable.

Type of Balance Training: Reactive Control	
Exercise 2: Group Nudge	
Level 1	In groups of three, participants become one of the following roles: 1. The person who stands – this person stands strong, feet shoulder width apart, with their hands crossed on their chest. NOTE: This is the only person that can vary based on the individual's level of balance. 2. The person who nudges – walks around the Stander gently nudging at shoulder level around the body. 3. The person who spots – stands beside the person standing strong, ensuring no one falls.
Level 2	Similar to Level 1, except the person who stands strong is holding a partial lunge position.
Level 3	Similar to Level 1, except the person who stands strong is standing with feet as narrow as comfortable.
NOTES	If a group of three is not possible, the third person can be replaced by a stable chair or wall.

Appendix B: Get Active Questionnaire (from CSEP)

Questionnaire can be found online in either a [fillable PDF](https://csep.ca/wp-content/uploads/2021/05/GETACTIVEQUESTIONNAIRE_ENG.pdf) or a print version PDF:
https://csep.ca/wp-content/uploads/2021/05/GETACTIVEQUESTIONNAIRE_ENG.pdf

Appendix C: Participant Consent, Release, Waiver and Assumption of Risk

I, [] (*Print Name*); hereby acknowledge and agree to the following in consideration of being permitted to participate in this **STRONG AND STEADY exercise program** organized, operated, and sanctioned by to African, Caribbean & Black Wellness & Resource Centre (ACB) with the support of the Ottawa Public Health Department of the City of Ottawa, hereinafter collectively referred to as the “The Releasees”:

1. I do hereby release the Releasees, its members, officers, directors, employees, independent contractors and agents from all liability, and do hereby waive as against the Organizers, its members, officers, directors, employees, independent contractors and agents all resources, claim causes of action of any kind whatsoever, in respect to all personal injuries or property losses which I may suffer arising out of or connected with, my preparation for, or participation in, the aforesaid **STRONG AND STEADY exercise program**.
2. I do hereby acknowledge that the ACB has taken the following steps and more to ensure participant safety:
 - a) All **STRONG AND STEADY** leaders have been trained and certified on safe leading practices and are required to maintain their certification year to year.
 - b) All leaders are required to hold a yearly CPR certification.
 - c) All exercises have been chosen and designed to mitigate risk of injury to participants.
3. Despite the ACB adopting measures to help ensure participant safety I acknowledge the **STRONG AND STEADY exercise program** presents risk of personal injury, death or property loss like other similar exercise activities. I freely and voluntarily assume all the aforesaid risks and hazards to participate at my own risk and acknowledge that I may cease participation at any time.

4. I further acknowledge that if I do not pass the Get Active Questionnaire (GAQ) pre-screening tool, ACB will inform me that I will be required to seek medical advice before participating in the *Strong and Steady* program.
5. I further acknowledge that if I have any questions or issues with an instructor, I am encouraged to contact ACB at phone: 613-801-7426.

By signing below, I consent to participate in the voluntary **STRONG AND STEADY exercise program** and I confirm I have carefully read and acknowledge and agree to all the above terms.

Participant's Signature: [_____]

Witnessed by: [_____]

Signed at [_____] , on [_____]
 (location) (date: dd/mm/yyyy)

Appendix D: *Strong and Steady* Open Book Test

This open book test is to be completed after the *Strong and Steady* practical training. Questions are separated by the chapters. The type of question/how to answer is indicated as either **true or false**, **open-ended questions**, or **fill in the blanks**. Please mark your answer in the lines provided.

Chapter 1 Questions

True or False:

1. The *Strong and Steady* program was created to reduce the risk of falling for older adults.
2. The *Strong and Steady* program was created for people 40+ years old that are very active.

Open Ended Questions:

3. How often does one have to renew their CPR certification in order to maintain a valid certification as a *Strong and Steady* leader?
4. How often should class attendance be taken?
5. If a participant is not signed up for the class and shows up with a friend, can they participate anyways? Please explain.
6. What does each participant need to do before going to class?

Chapter 2 Questions

True or False:

1. It is important to reinforce good posture throughout the class.
2. A joint is the connection between two bones.
3. Older adults can delay muscle loss associated with aging if they exercise.

Fill in the Blanks:

4. What are the three types of muscle contractions used in our *Strong and Steady* classes?

Chapter 3 Questions

True or False:

1. If you notice a participant abruptly slow down or stop exercising, it is best to tell them to sit down and rest so you can continue teaching the class without distraction.
2. Always contact the *Strong and Steady* staff about emergencies in your *Strong and Steady* classes.

Fill in the Blanks:

3. The most important strategy to keep your *Strong and Steady* classes safe is to constantly [] your participants.
4. It is beyond your [] to teach exercises using hand weights in your class as it is not part of the *Strong and Steady* training at this time.

Chapter 4 Questions

Fill in the Blank:

1. [] is defined as using visual and verbal techniques to inform participants that a change is about to happen.
2. [] focuses on an individual's needs and accomplishments, close observation, and non-judgmental feedback on performance.

True or False:

3. "Good job" is an excellent coaching tip to use while teaching a class.
4. As a new leader, your teaching style will develop over time.
5. Each participant must sign a consent form and waiver before becoming a participant.

Chapter 5 Questions

True or False:

1. The warm-up is done to lubricate the joints by moving them through a full comfortable range (no pain). Joints get lubricated when they are moved.
2. To be effective, resistance training should be done as fast as possible.
3. Balance work is an important segment of class to work on to prevent falls.

4. It is important to remind participants that stretching should be comfortable and never hurt.

Fill in the Blanks:

5. [] work is done during ALL standing exercises.
6. The maximum time for single leg stance precautions is [] seconds.

Chapter 6 Questions

True or False:

1. You should test your set-up before your first online *Strong and Steady* class.
2. Solid coloured clothing works better than busy patterns on camera.
3. You may not be able to see all participants online.

Fill in the Blanks:

4. Participants should be reminded [] to at the start of every class.
5. For an online class, you do not have [] to guide the participant.

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