

FOREVER ACTIVE

PERSONALIZED FITNESS AND WELLNESS FOR MEN 50+

Editors Note- Starting in July, Forever Active's newsletter will be published quarterly (July, October, January and April), rather than monthly.

Fall Prevention - Agility, Balance and Coordination Training at 50+ (Part 1)

Introduction

The fear of falling for the adult aged 50+ is a major concern. With the loss of muscle mass, strength, and endurance, and the deterioration of neurologic control of movements resulting in slower reflexes, the fear of falling is warranted. Cardiovascular and muscle strength training helps to significantly reduce the risk of falling. However, specific agility, balance and coordination training can reduce the risk of falling even further. Unfortunately, this form of exercise training is often ignored, frequently with dire consequences.

Physiological factors that affect your Agility, Balance and Coordination for the 50+ Adult

1. Decrease in muscular and joint (proprioceptive) sensory input and processing -In the normal aging process, there is muscle atrophy (.5-1% per year after the age of 25), cerebral cortex atrophy and demyelization of the peripheral nerve fibres, leading to decreased neurologic input & less efficient processing of body position and movement.
2. Decreased muscle mass & strength -affects postural support & movement.
3. Decreased cardiovascular capacity - causing earlier onset of fatigue.
4. Decreased bone density (osteoporosis) - which can cause stooped posture and altered control of the centre of gravity during movement.
5. Poor peripheral blood flow - that can cause decreased sensation to the extremities.
6. Orthostatic Hypo Tension -Low blood pressure can lead to dizziness and loss of balance especially from sudden changes in posture.
7. Development of chronic disability/illness - osteoarthritis and diabetes accelerate the aging process.
8. Medications - diuretics or hypertension medication can cause hypotension in the client.

Key point -there are physiological, anatomical and metabolic factors that compromise agility, balance and coordination as we age. A functional exercise program will help slow the disabling effects that age may have on the older adult to perform activities effectively and safely.



Did You Know

Key Definitions

Agility – is the ability to change direction quickly

Balance-is the ability to maintain a specific body position in either a stationary or dynamic situation

Coordination- is the ability to use all body parts together to produce smooth and fluid motion.

Each of these is an important component in the 50+ adults ability to move safely, to perform the activities of daily living effectively and to enjoy recreational activities. Clients of all ages can benefit from implementing agility, balance and coordination training into their regular exercise routine, but this is especially true for the older adult.

Benefits of Agility, Balance and Coordination Training

1. Help improve efficiency of movement.
2. Improve overall body awareness during movement
3. Decrease risk of injury
4. Enhance the benefits of any rehabilitation program
5. Improve posture
6. Improve ability to perform recreational and competitive activities
7. Improve ability to perform activities of daily living and therefore improve quality of life.
8. Makes exercise more functional.

Prerequisites for Agility, Balance and Coordination Training

Editors Note – the purpose of agility, balance and coordination training exercises is to improve your ability to maintain and control balance while the body is moving. Since these exercises challenge your ability to maintain balance, there is a increased risk of falling while performing them. As a result, it is important to start agility, balance and coordination exercises slowly, introducing one or two new exercises initially and then more as you show adaption and improvement.

Initially, you may feel awkward performing some of these exercises but with repetition your performance and confidence will improve.

If your agility, balance and coordination is already weak, you should not perform agility, balance and coordination exercises alone.

1. Before an older adult begins to implement balance training into their exercise routine they must be involved in a strength training program for at least 2 to 3 months. This is to ensure that there is significant muscular strength to handle the additional stress that is imposed on the body during these exercises. Agility, balance and coordination training is used as a supplementation and not an alternative to strength training.
2. All exercise must be performed in a safe area with little auditory stimulus and visual movement. Initially, it is important that you focus only on the exercise being performed. As progress occurs, additional sights and sounds (multisensory stimulation) can be introduced to increase the difficulty of the exercise.
3. Progress slowly. Perform all the exercises to the last point of success rather than the first point of failure. Fatigue compromises the ability of the muscles to function properly, leaving you vulnerable to a loss of agility, balance coordination which increases the risk of falling.
4. All exercise must have a specific goal in mind. What is the purpose of the exercise: centre of gravity and balance training, multisensory training, postural training or gait enhancement ?
5. If, while performing an exercise, you begin to suffer dizziness, vertigo, abnormal loss of movement control or balance problems, stop the exercise immediately. If the symptoms persist, you should consult your medical doctor.

Agility, Balance and Coordination Exercise Progressions

Before implementing agility, balance and coordination exercises you should be involved in strength, cardiovascular and flexibility training for at least 2 to 3 months. As your agility, balance and coordination improves with basic muscle resistance exercises and you have demonstrated the ability to maintain control of your movement during these exercises, you may progress to more challenging exercises;

General Exercise Progressions

Slow & Static to Faster & Dynamic – Begin with static postures and exercises. When movement and speed is added to any exercise, it increases the intensity of the activity.

Stable to unstable- Initially all exercises must be performed successfully on a stable surface before moving to a smaller (narrower stance or one leg vs two legs) or unstable surface such as a Bosu or tilt board.

Pre-fatigued to fatigued stabilizer muscles- Initially exercises should be performed when you are rested and the stabilizing core muscles are not fatigued. Agility, balance and coordination exercises are higher risk activities and fatigued stabilizer muscles will increase the risk of injury or falling. Once you are experienced and well conditioned, fatigue can be introduced as a program variable. This is important since you will become fatigued while performing recreational activities or activities of daily living so exercise training while fatigued helps train the neurologic and muscular system to perform well under these conditions.

Safety First

1. Never hold your breath during any exercise.
2. During the exercise you can/will feel fatigued and a small amount of muscle discomfort is expected but you should never feel pain, and should stop the particular exercise immediately if you do feel pain.
3. You should never perform an exercise beyond your normal range of motion for a particular joint. Your normal joint range of motion may differ from the textbooks because of arthritis and lack of flexibility, so extra caution is needed.

July's newsletter has a full list of fall prevention (agility, balance and coordination), muscle resistance, cardiovascular and flexibility exercises.