

Staying Active Pays Off!

Those who are physically active tend to live longer, healthier lives. Research shows that even moderate physical activity — such as 30 minutes a day of brisk walking — significantly contributes to longevity. A physically active person with such risk factors as high blood pressure, diabetes or even a smoking habit can get real benefits from regular physical activity as part of daily life.

As many dieters have found, exercise can help you stay on a diet and lose weight. What's more, regular exercise can help lower blood pressure, control blood sugar, improve cholesterol levels and build stronger, denser bones.

The First Step

Before you begin an exercise program, take a fitness test, or substantially increase your level of activity, make sure to answer the following questions. This physical activity readiness questionnaire (PAR-Q) will help determine your suitability for beginning an exercise routine or program.

- Has your doctor ever said that you have a heart condition or that you should participate in physical activity only as recommended by a doctor?
- Do you feel pain in your chest during physical activity?
- In the past month, have you had chest pain when you were not doing physical activity?
- Do you lose your balance because of dizziness? Do you ever lose consciousness?
- Do you have a bone or joint problem that could be made worse by a change in your physical activity?
- Is your doctor currently prescribing drugs for your blood pressure or a heart condition?

- Do you know of any reason you should not participate in physical activity?

If you answered yes to one or more questions, if you are over 40 years of age and have been inactive, or if you are concerned about your health, consult a physician before taking a fitness test or substantially increasing your physical activity. If you answered no to each question, then it's likely that you can safely begin fitness testing and training.

Importance of Balance

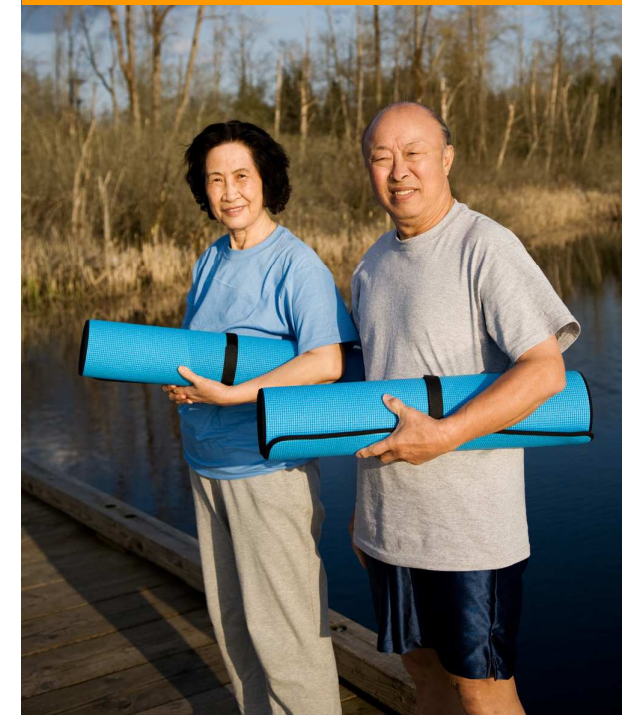
Balance is key to activities of daily living (ADLs), performance, fall prevention and independence. Balance can be affected by muscular strength and endurance, as well as inner ear function and eye sight. It can be maintained and even improved as we age through practicing balance specific training exercises. Research has shown that using specific tools in a safe environment can be particularly effective in improving your balance and enhancing your postural stability (Westlake et al., 2007). Research has also shown that this type of training helps to reduce back, knee and ankle injuries.

Balance and Aging

With age balance tends to decline due to lower muscular strength and flexibility, as well as numerous other causes including inner ear problems. According to the National Institute of Health (NIH), 9 percent of adults age 65 and older report having difficulty with balance. This along with a decline in lower body strength and stability leads to an alarming 300,000 admissions to the hospital for fall-related injuries in older adults (NIH, 2007). The good news is that balance can be improved with simple exercises that can be done in therapy settings, health clubs or even at home.

Selecting and Effectively Using

Balance Training Tools for Older Adults



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About Balance Tools

Balance tools come in all shapes and sizes. They can be as simple as your own two feet or a pillow, or may be made of foam, wood, rubber, springs, etc. The purpose of these tools along with balance training exercises is to rehabilitate, strengthen muscles, condition the body, as well as improve stability and postural alignment and help to prevent falls. Men and women of all ages and activity levels can benefit from balance training. Start simply and progress slowly, gradually increasing the difficulty of the exercises. You may start with exercises such as balancing on one foot and then progress to using simple foam filled balance pads to challenge the body on an unstable surface.

Balance Tool Selection

Balance Pillow – This foam filled pad allows you to sit or stand (with one foot or two) on a spongy, unstable surface to improve posture and stability. This is a great tool for someone starting a balance training program.

Balance Disc – This tool is a simple round rubber disc inflated with air to create an unstable surface. Balance discs can be used while seated or standing to improve balance and coordination or to add intensity to body strengthening exercises.

Blue Half-Ball – This unique device is a stability ball cut in half with a flat, hard bottom. You can stand, sit or kneel on the air-filled ball portion of the tool or on the hard plastic side with the round surface down to create a rocking balance exercise. Blue half-balls are great for balance, core stability, and proprioception training.

Foam Roller – This tool comes in a variety of shapes and sizes. Selection depends upon type of exercise. These foam filled balance, posture and core training tools can be round, half-round, short (1 foot) or long (3 foot). To use this tool you may kneel, stand, lay or sit on the device

(specific to the exercise that you are going to complete).

Balance Board – The flat top to this tool allows you to stand and practice your balance skill while elevated on a spherical base. The range of motion that the device allows can be adjusted for changes in difficulty.

Stability Ball – This inflatable ball comes in different sizes and can be used as a balance and/or strength-training aid. For more information, see the brochure on [Selectively and Effectively Using a Stability Ball](#).

Safety and Considerations

Balance training tools should only be used on a flat, stable, non-slip surface. Be sure to consult with your physician prior to starting a balance training program. Always practice balance training near a stable structure, such as a wall, bar or counter, to give you some assistance if you slip or begin to fall; or practice under the supervision of a qualified professional.

Implementing a Balance-Training Program

As with starting any new training program, it is important to use a gradual progression. To start off with low intensity/difficulty exercises and progress to more challenging exercises. When performing balance exercises it is helpful to establish a stable (non-moving) focal point. This will keep your attention and allow you to focus your eyesight for better stability.

Getting Started: At first you may start with simple balance training exercises, such as standing on one foot for a few seconds, and then gradually increasing your time for more difficulty. General guidelines for balance training include starting with a relatively stable foundation or position before moving to a less stable foundation or position, and starting with static or stationary position (holding a position) before adding any movement (e.g., walking or

stepping) or resistance (e.g., adding a hand weight). From there you may add movement to your balance pose such as lifting arms up overhead while still keeping your balance on one foot. When you need to be challenged beyond this exercise, implement a balance tool of your choice. For example, one might start by sitting on a blue half-ball with two feet on the ground, then moving to one footed contact while seated before standing on the ball (because you have three points of contact in a seated position – seat and the soles of both feet); then move to standing on a blue half-ball with both feet while using a stationary aid like a wall, railing, or chair for balance assistance; then to standing on a blue half-ball without assistance, to stepping onto and off of the blue half-ball with assistance, then without.

To get set up with a personalized program, one that is appropriate for your current fitness level and balance abilities and/or limitations, consult your physical therapist or fitness professional.

To reduce risk of injury from falls, community-dwelling older adults with substantial risk of falls (e.g., with frequent falls or mobility problems) should perform exercises that maintain or improve balance (Nelson et al., 2007). Balance training should be performed daily for improvement in overall stability. Perform balance training before you do resistance training, so your muscles are not fatigued, to ensure that it does not get forgotten in your daily regimen.

A Complete Physical Activity Program

A well rounded program of physical activity includes aerobic exercise and strength training exercise, but not necessarily in the same session. This blend helps to maintain or improve cardiorespiratory and muscular fitness and overall health and function. Regular physical activity will provide more health benefits than sporadic, high-intensity workouts, so choose exercises you are likely to enjoy and that you can incorporate into your schedule.

ACSM's physical activity recommendations for healthy adults, updated in 2007, recommend at least 30 minutes of moderate-intensity physical activity (working hard enough to break a sweat, but still able to carry on a conversation) five days per week, or 20 minutes of more vigorous activity three days per week. Combinations of moderate- and vigorous-intensity activity can be performed to meet this recommendation. Typical aerobic exercises include walking and running, stair climbing, cycling on a stationary or moving bike, rowing, cross-country skiing, and swimming.

In addition, strength training should be performed a minimum of two days each week, with 8-12 repetitions of 8-10 different exercises that target all major muscle groups. This type of training can be accomplished using body weight, resistance bands, free weights, medicine balls or weight machines.

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Prior to beginning any exercise program, including the activities depicted in this brochure, individuals should seek medical evaluation and clearance to engage in activity. Not all exercise programs are suitable for everyone and some programs may in fact result in injury. Activities should be carried out at a pace that is comfortable for the user. Users should discontinue participation in any exercise activity that causes pain or discomfort. In such event, medical consultation should be immediately obtained.

American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription, 7th ed., Baltimore, MD: Lippincott Williams & Wilkins, 2006.

Haskell, W.L., I-M Lee, R.R. Pate, et al. Physical activity and public health: Updated recommendation for adults from the American College of Sports Medicine and the American Heart Association. *Med. Sci. Sports Exerc.* 39: 1423-1434, 2007.

Nelson, M.E., W.J. Rjeski, S.N. Blair, P.W. Duncan, et al. Physical activity and public health in older adults: Recommendation from the American College of Sports Medicine and the American Heart Association. *Med. Sci. Sports Exerc.* 39: 1435-1445, 2007.

Rose, Debra J. (2003). *Fall Proof!* Champaign, IL: Human Kinetics.

Westlake, K P. and E. G. Culham. Sensory-Specific Balance Training in Older Adults: Effect on Proprioceptive Reintegration and Cognitive Demands. *Physical Therapy* 87 (10): 1274-83, 2007.