

fitness

## Balance for safe living

Exercise can counter the loss of muscle tone and increased instability.

By Linda J. Buch

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*Don Guizzetti performs squats using a fit ball against the wall at Mad About Fitness in Denver. (the Post | Karl Gehring)*

Balance is a challenge to toddlers as they learn to take their first steps. The next time balance is tested is when the training wheels come off the bicycle. Once balance is learned, it becomes an innate part of our physical being and something we take for granted regardless of whether we are walking, running, riding, or climbing. And then, decades later and seemingly out of the blue, we are shocked by a fall, stumble, or wobble. Suddenly, we are blown back to an age where first steps were tenuous and scary.

Balance is about perception of body orientation that involves not only our eyes and inner ear but also the body's total sense of where it is in space (called proprioception). All this information feeds into the brain — nature's gyroscope — and keeps us securely on our feet. When one of these systems goes out of kilter — perhaps from an ear infection, medication, low blood pressure or a stroke — the sense of balance can be jeopardized and the chance of falling skyrockets.

Falling is a primary fear among older adults, with good reason. According to a 2006 report from the Centers for Disease Control and Prevention, one-third of people over 65 are either injured or die as the result of a fall. If the fall results in hip fracture, 50 percent cannot live independently again.

The primary reason for poor balance in the elderly is a lack of muscle tone and strength resulting from inactivity, says Dr. Reza Esfahani, medical director for Exemplar Colorado Lutheran Home.

"Poor eyesight is another, often overlooked, reason for poor balance," he says.

Another big culprit is medications people are on for blood pressure, pain or sleeping. "A lot of them can cause dizziness," Esfahani says.

People who have had strokes, have diabetes, or neuropathy in the lower extremities can also have balance problems, he says.

He recommends getting regular exercise. "Anything that is age appropriate helps," Esfahani says. "Our recommendation is to be in an organized fitness program, but you can even get exercise by being more active around the house and reducing your dependence on the remote control and other devices."

It is often the simple things that lead to a fall such as tripping on a step or uneven pavement, slipping while getting out of the shower, or losing footing under ice or snow. In a vicious Catch-22, it is the fear of falling that often causes the fall in the first place. This fear focuses the eyes downward instead of ahead, which causes a shuffling gait and bent-over posture, which throws the center of gravity forward, which sets up the potential for a fall.

Strengthening the muscles (particularly the core muscles of the abdominals, gluteus and lower back), testing balance skills, and improving posture and flexibility are all part of maintaining the physical ability to prevent falls from happening.

### ***Retrain your body***

Many recreation and fitness centers, private gyms, and retirement communities offer classes designed to improve balance, posture and muscle strength. Jane Hastings, owner of Mad About Fitness, teaches balance workshops at senior centers around town as well as at her own facility.

"Physical activity, muscle strength, flexibility and challenging the nervous system all contribute to improved balance," Hastings says.



Hastings uses a combination of easy, modified yoga poses. For tree pose, she has a student stand on one leg while holding on to a chair or putting a hand on a wall. At the intermediate level, a student would stand on one leg without assistance. A more advanced student would be able to stand on one leg while resting the foot of the other leg against the inner thigh of the support leg.

The trainer also uses equipment designed to challenge balance and core muscle strength such as stability balls, small trampoline, wobble boards, inflated cushions and BOSU balls.

A woman working out on a balance board can improve leg strength and overall balance. (the Post | Karl Gehring)

"It is important that people progress at their own speed and confidence level," Hastings says. "This is about maintaining a quality independent life." Rosie Mahoney, 72, a manufacturing representative, was always tripping and falling until she started working with Hastings. "I'm much stronger — not skinnier — but definitely have more energy and much better balance," Mahoney says. "After seven years of not being able to ski because of being out of shape and my tendency to fall, I was able to start skiing again last year." Working with weights and doing Pilates has strengthened her core muscles and improved her balancing skills. "I have not had a fall since starting this program," she says.

Improving strength — especially core strength — and balance has made his job easier for property inspector Don Guizzetti. "At least once a day I realize I am able to do something physically I could not do before," he says, "like stand on an 8-inch-wide steel beam 2 1/2 stories above the ground, turn in all directions and take pictures."

### ***Senior moves***

The Holly Creek Retirement Community in Centennial has on-site, instructor-led fitness classes six days a week, an important amenity available to residents. In addition to the Life Moves class, Holly Creek offers indoor water aerobics and tai chi on Saturdays. The facility also has a fitness room for those seniors who want to weight- or cardio-train on their own.

"We work on walking patterns, balance and coordination by using light weights, resistance tubes and small, soft exercise balls," says Holly Creek fitness coordinator Rhonda Wolffis, who teaches Life Moves.

"Core muscle strength, posture, breathing, and stretching are all part of the program." The class is designed to improve and facilitate everyday moves, like getting in and out of the car, grocery shopping, and getting up and down from a chair. Therefore, a chair and resistance equipment is all that is used. "We play great music and keep the atmosphere fun and upbeat," she says.

Shirley James and Gail Butts have both been taking the classes for about two years. "I have had bad balance for a number of years, especially since breaking my foot last January," James says. "Since taking this class, I now can catch myself and recover if I feel like I might fall."

Butts, who has nerve damage in her feet, has to hold on to something while doing the exercises, but says, "My posture, breathing, and muscle strength have definitely improved."

Kent Fretwell, a retired medical technician, began taking the classes a few months ago after being diagnosed with Parkinson's disease. "I was looking for something to slow down the Parkinson's," Fretwell says. "I noticed improved muscle strength, gait, and balance in only a few months of taking classes."

### ***One more option***

Tai chi is a Chinese martial art that involves balance, strength and flexibility. According to a recent study from the Journal of the American Geriatric Society, tai chi can help reduce the risk of falling among older people. A group of people who took the class once a week for four months had one-third fewer falls than those who did not, and the benefits had a positive residual effect for two months after the class ended, the study found. Qigong, another Chinese mind and body discipline, is also recommended.

### **Try this at home**

Simple balancing exercises that can be done in the home without equipment include:

- 1. Tightrope walk (or walking the plank).** Walk heel-to-toe along an imaginary line. Take 10-20 steps forward, then walk backward along the same line. Challenge your posture by putting a paper plate on your head.
- 2. Balanced stand.** Stand on one foot for 30 seconds, then switch feet. Try this while brushing your teeth or when standing in the grocery checkout line.
- 3. Sit and stand.** Get up from a chair and sit back down without using the armrests. Challenge your posture by putting a paper plate on your head.

### **Prevent falls**

1. Exercise regularly; exercise programs like tai chi that increase strength and improve balance are especially good.
2. Ask a doctor or pharmacist to review medicines, both prescription and over-the-counter, to reduce side-effects and interactions.
3. Get an eye exam at least once a year.
4. Improve lighting at home.
5. Reduce hazards at home that can lead to falls.

### **Make the home safer**

1. Remove clutter, pick up papers or clothes from the floor; move garbage bins under cabinets.
2. Keep the area well lit.
3. Be aware of surroundings, know where furniture is placed and any stairs or change of entry levels.
4. Clean up any spills.
5. Stabilize furniture.

6. Use non-slip mats in the bathtub and on shower floors.
7. Secure loose area rugs with double-faced tape, tacks, or slip-resistant backing.
8. Clear obstacles on the grounds or around your walking paths.

### **Resources**

AARP, 866-554-5376, [aarp.org](http://aarp.org)

Taoist Tai Chi Society, 1060 Bannock St., Denver, 303-623-5163

The Tai Chi Project, 303-744-7676, [taichidenver.com](http://taichidenver.com)

Colorado School of Traditional Chinese Medicine, 303-329-6355, [cstcm.edu](http://cstcm.edu)

### **Exercise tools**

Ball Dynamics, 800-752-2255, [balldynamics.com](http://balldynamics.com)

Perform Better!, 1-888-556-7464, [performbetter.com](http://performbetter.com)

### **Books**

"How to Prevent Falls," by Betty Perkins-Carpenter, (Senior Fitness Productions, 2006, \$16.95)

"Strong Women, Strong Bones," Miriam Nelson, (Perigee, 2006, \$14.95)

"Sunrise Tai Chi: Simplified Tai Chi for Health & Longevity," by Ronas, Silver, Nelson (YMAA Publication Center, 2007, \$16.95)

*AARP*

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