



*'Falls don't have to be an inevitable part of ageing'*

# GETTING THE BALANCE right

STAYING SAFELY UPRIGHT SEEMS LIKE SOMETHING WE DO WITHOUT THINKING, BUT AS WE AGE WE NEED TO PAY EXTRA ATTENTION TO MAINTAINING OUR BALANCE

**W**hen Debbie was 53, a trip to the clothesline landed her in hospital with a broken ankle. She'd stepped on uneven ground and fallen, leading to surgery, weeks on crutches and months of rehabilitation. Like many women, Debbie thought balance problems only happened to frail seniors. However, the Australian Longitudinal Study on Women's Health has shown that between 20 and 30 percent of women aged 50-64 fall each year. Relatively little is known about falls in this group, but the good news is that plenty can be done to improve balance and reduce falls risk, and it's never too early (or too late) to start.

### ***In good balance***

In standing, the body is unstable – with a small base relative to its height – so remaining steady as we move around is challenging. We do this successfully thanks to our vision, vestibular system (inner ear) and somatosensory system (sensation feedback from joints and muscles) – which provide information about our bodies and the environment.

Our brains orchestrate these systems and prompt our muscles to respond, so we can stand on one leg to put stockings on or stay steady on a bus.

As we get older, however, there is progressive loss of these sensory and motor functions, says Dr Daina Sturnieks, a senior researcher and laboratory manager at the Falls, Balance and Injury Research Centre at NeuRA. Things like vision and the ability to switch muscles on

quickly – along with cognitive function – start to decline, impacting our ability to maintain balance and thereby increasing the risk of falls.

Dr Sturnieks explains that everyone ages at a different rate, and these changes might be faster or slower depending on whether you stay healthy and continue to challenge your balance as you get older.

**THE AUSTRALIAN LONGITUDINAL STUDY ON WOMEN'S HEALTH HAS SHOWN THAT BETWEEN 20 AND 30 PERCENT OF WOMEN AGED 50-64 FALL EACH YEAR**



### ***Keep it steady***

The good news is that we can do things to reduce our risk, Dr Sturnieks says. "Falls don't have to be an inevitable part of ageing," Trish Wisbey-Roth, a specialist sports and Olympic physiotherapist, agrees, noting that in countries where people remain active as they age, they don't experience the same problems with loss of strength, balance and co-ordination. When she lived in Switzerland, for example, she saw women in their eighties cross-country skiing and hiking. "Exercise is definitely the best pill for fall »

## THE FALLOUT

A fall can have devastating consequences. Hip fractures are the leading cause of injury to older people and they have a high mortality rate. While many falls aren't this bad, an injury can prevent you from doing your usual activities. "If someone's isolating themselves from their physical and social activities, then their quality of life is not so good," Dr Sturnieks says. "The lack of stimulation and involvement in life will basically speed up that ageing process, which has a spiralling effect." Compounding the problem, at around the same time, women might learn that they have osteopenia, which is early osteoporosis, explains Trish. This can lead to fear of having a fracture. "Once you get that cycle of lack of confidence you start adjusting your lifestyle so you're not put at risk. Women might drive places rather than walk, use the lift instead of using the stairs," Trish says. "At a time when they should be using those muscles they're actually decreasing the challenges that they expose themselves to."



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## FACT

**HIP FRACTURES ARE THE LEADING CAUSE OF INJURY TO OLDER PEOPLE AND HAVE A HIGH MORTALITY RATE**

prevention," Dr Sturnieks says. To be effective, exercises need to challenge your balance and be done consistently. Making exercise fun and embedding it into your daily routine can help you establish good habits. Try standing on one leg while brushing your teeth or doing five sit-to-stands during television ads. Trish adds that it takes eight weeks to form a habit, and 12 to build strength. "If you're going to change your balance you've got to work on this for at least a few months."



## Keeping an eye on things

Vision is also crucial - it helps us to navigate our environment and control our posture, with many studies showing that reduced vision is a significant risk factor for falls.

A 2008 study, for example, found that severe visual impairment in one eye and mild or moderate impairment in the other doubled the risk. Having glaucoma increased the risk more than fourfold.

Sophie Koh, the national professional services advisor at Optometry Australia, says many vision issues - such as glaucoma, macular degeneration and cataracts - can be prevented or managed by visiting the optometrist regularly for a comprehensive eye exam.

"Vision is not just about 'sharpness,'" she says. "It's also about how much area you can see with your side-vision, how much good central vision you have, and the quality of vision in low light conditions versus bright sunlight."

Glasses may also pose a problem, with some studies showing that bifocal and multifocal lenses may lead to a higher incidence of falls, Sophie says. "I would often switch a patient who has impaired balance or is experiencing falls into a single-vision lens instead."

Another important consideration with falls risk is medications, because some - including antipsychotics and sleeping pills - interfere with balance and increase the risk of falls, Dr Sturnieks says. She advises having them reviewed by your doctor at least annually. Reviewing your home for hazards is another effective strategy. Several government departments offer downloadable home safety checklists, such as Western Australia's Stay on Your Feet programme ([stayonyourfeet.com.au](http://stayonyourfeet.com.au)).

If you have balance problems and foot pain, visiting a podiatrist is recommended. They can provide exercises and advice about the best footwear. Looking after your bone health is also important, and Dr Sturnieks recommends making sure you get enough vitamin D. Your doctor can help with bone density and vitamin D testing.

Most importantly, don't wait until you've had a fall or broken bone to do something, Trish says. "When you find you have to sit down to put your stockings on, when you have to use your arms to get in and out of a chair - that's the time to ring a physio or talk to your GP and say I would like someone to help me with my balance and my strength."

Dr Sturnieks agrees. "If you can get on to maintaining good balance, good strength [and] good physical function in middle age, then you're going to do a whole lot better as you start to get into the old age group," she says. "It's never too early to start."



## TRY IT YOURSELF

Trish suggests these exercises for hip strength and balance.

- » **Stand on one leg.** If you can't lift your whole foot, start by lifting the heel. Build up to five or six repetitions of 30 seconds on each leg, with a minute's rest in between.
- » **Walk up and down stairs sideways.** Start off using the railing if you have trouble balancing and work towards doing it without. This strengthens muscles and is less stressful on the tendons than going straight up and down. If you don't have stairs, step over a large book or a small box.
- » **Stand in front of stairs and tap the toe of one foot onto the first step.** Then try tapping the second step. Repeat with the other leg.
- » **Stand on one leg** on a step, book or box. Get your balance, then swing your other leg back and forward. Progress to doing this exercise standing on a folded cushion instead.
- » **Once you've built confidence,** try walking on grass instead of footpaths, or venture onto bush tracks.

*'If you can get on to maintaining good balance, you're going to do a lot better'*



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