

EXTRA

# Age comes before a fall – but it

II EXPLAINER

The likelihood of falling grows, and the consequences worsen, as we age. What steps can we take to protect ourselves? **Jackson Graham** and **Kayla Olaya** explain.

On a warm night, Jeanette Walker, 79, turned off the TV and went to check whether her pot plants needed water. As she bent down to touch the soil, her body weight kept moving forward. Oh crumbs, she thought, I’m going to fall now. She crashed into an ornamental table, ricocheted into another. Crikey, I’m heading towards the TV, was her last thought before she hit the floor.

This was Walker’s 15th fall since turning 70. She got herself to the couch to hoist herself up, and noticed the lounge room littered with upturned pots, soil and glass from a chipped table. She felt bruises forming on her head and elbow. Still, if she had fallen the other way she could have gone through a window. “It’s always, I could have, I could have,” she tells us a few weeks after the incident.

There have been times when Walker hasn’t been so lucky. One fall led to her being hospitalised with a delayed concussion, another left her with broken toes. The tumbles have happened in her backyard, when walking her dogs or while carrying shopping bags on the way out of a supermarket. There’s little warning. “I never have a dizzy turn. I never think I’m going to keel over here. It’s always just walking along and tripping into a stick or something.”

The likelihood of falling grows, and consequences worsen, as we age. Every year in Australia, one in three people older than 65 has a fall. But it’s when you get to 80 or older that the risks increase by 50 per cent compared with those aged 65 to 69. Falls land about 238,000 people of all ages in hospitals each year, for an average of five days; some 6378 people died from injuries related to a fall in 2021-22. “It’s been under the radar and not as sexy as trauma,” says Dr Ronald Leong, deputy head of aged care at Melbourne’s Alfred Health. “But it’s a much bigger problem than [road] trauma-related accidents.”

So how do we fall? When can falls lead to decline and even death for older people? What are the ways to prevent them?

How do we manage to stay upright in the first place?

Ever since humans began walking on two legs, about 6 million years ago, the risk of falling has been a fact of every step we take. “It’s inherently unstable,” says Stephen Lord, an expert at Neuroscience Research Australia (NeuRA). “As we walk, every step is described as a controlled fall. And so we have to continually put in effort just to maintain our balance as we take a step. So we throw the leg forward, we regain balance. We throw the other leg forward, we regain balance.”

Standing still takes balance. Buckingham Palace guards appear to stand like statues, yet Lord has observed them make slight involuntary movements over their ankles – a process called postural sway. The body does this to keep

its centre of mass, a point around our waistlines, over our feet.

So, what is balance? “It’s really just how well we can control the position and movement of our centre of mass,” says Lord. “And that’s while we do our everyday activities, like just stand, step, walk, turn – you’re walking around with this moving column and it has to be quite tight.”

Balance is partly to do with strength, too. Having strong muscles, particularly in the legs, helps us support and control the body to keep it upright.

Why do people fall?

Jeanette Walker has undergone an MRI and blood tests to try to determine why she has fallen so often, but the tests have offered no clues. “I don’t get up out of a chair and think, ‘Oh, I’m dizzy, I’m going to fall over.’ I’m fine in that respect. And there’s not tingling in my feet or anything to warn me,” she says. “I suppose I’d call it – not clumsy, because it’s not clumsy – it’s just a fact of getting older, which gives me the irrits, but never mind, you can’t help that.”

Common falls are trips and slips. In 2022-23, 41,472 people wound up in hospital because they tripped, 21,846 slipped and 11,076 stumbled. Blame wet surfaces, uneven paving, pets, poor lighting, unsupportive footwear, cords, hoses and crumpled rugs. Another 15,845 people fell down stairs.

But internal changes matter too. Balance, much like fitness, appears to peak in our 20s and worsen from our mid-40s. Lord says the crucial systems for falls “are neuromuscular and sensory”.

Eyesight is one, which is like a radar that scans for obstacles and helps us observe distances. (Typically, when scientists ask people to close their eyes, their postural sway increases by about 30 per cent.) The inner ear plays a part too – tiny hairs in each ear canal that detect movements in fluid, telling the brain about the body’s position. Proprioception, information sent from joints and muscles, is another input that helps our brain sense where our body is in space (one test for this is to close your eyes and try to touch your nose). Information also comes through feeling our own weight, and the surfaces we’re walking on, through our feet.

All this information travels through our body and brain via our central nervous system, which also changes as we age. One measure is our reaction time: how fast we can process information and correct our balance. “If reaction time and response is slow . . . people are also just less able to react in time if they lose balance,” says Lord.

One of the most common times people fall is when they get up at night to go to the toilet. Lack of lighting is often blamed, but Alfred Health geriatrician Ronald Leong says lower blood pressure influ-



enced by dehydration can be a factor, too. Medications that can cause drowsiness – antidepressants, anti-anxiety agents and sleeping tablets – can double the risks of falls, says Lord. Depression is also a risk factor as it can decrease central nervous system functioning.

Fear of falling has been shown to triple the risk of falling, says Kim Delbaere, a senior falls researcher at NeuRA. “We’ve seen people walking so hesitantly because of the concerns, but ironically that kind of behaviour can make them more unstable. You can try this as well: if you walk at your normal pace, you’re actually more stable than when walking slow.” The fear of falling can lead people to avoid activities, and therefore exercise muscles involved in balance less.

Says Leong: “It becomes a vicious circle.”

Are falls a slippery slope to death?

Fall, stumble or misstep, Stephen Lord has come to the conclusion that losing our feet comes with an

awkwardness. “It’s an indication of weakness, of failure. There’s no dignity in it. So, if you fall over in a public place and you’re down on the footpath, people try to spring up as fast as possible,” he says. “As people get older and more likely to get injured, it becomes a serious, important thing.”

Not only does our balance decrease over the years but our risk of breaks and fractures becomes greater as our bones weaken. A fall can be a part of a trajectory into aged care, but this is not always the case. Figures are difficult to come by, but Lord studied people over 70 presenting at a Sydney hospital after a fall and followed their progress for a month after discharge. He found 9.5 per cent became first-time residents of long-term care facilities.

At the Alfred, Leong says patients might stay in hospital for about a month after a fall. During their time in rehab, it becomes clear whether they will regain the mobility they had before the fall.

“As you become frailer, at one point it may not be reversible

completely, in which case you might reach a critical threshold where you’re no longer safe at home,” says Leong.

Patients’ personal circumstances are also part of the picture: whether they still have a partner, or a carer who can drop in more than once a day. “If they can’t be supported, there’s still an element of, well, we maybe will risk it because they want to go, but sometimes people say, ‘Look, this is too risky.’” If a decision can’t be made while they’re in hospital, some will go into transition care, which provides more time for them to regain independence.

The most common serious injuries from falls are to the head and neck, closely followed by hip fractures, which account for a quarter of hospital stays, and shoulder injuries (just over a fifth). Much more common are grazes, bruises and wrist injuries.

A quarter of adults aged 69 or older who fracture their hip die within a year. But often it’s not so much that the fall leads to death as that it can be a harbinger someone