

FALLS PREVENTION AND EXERCISE

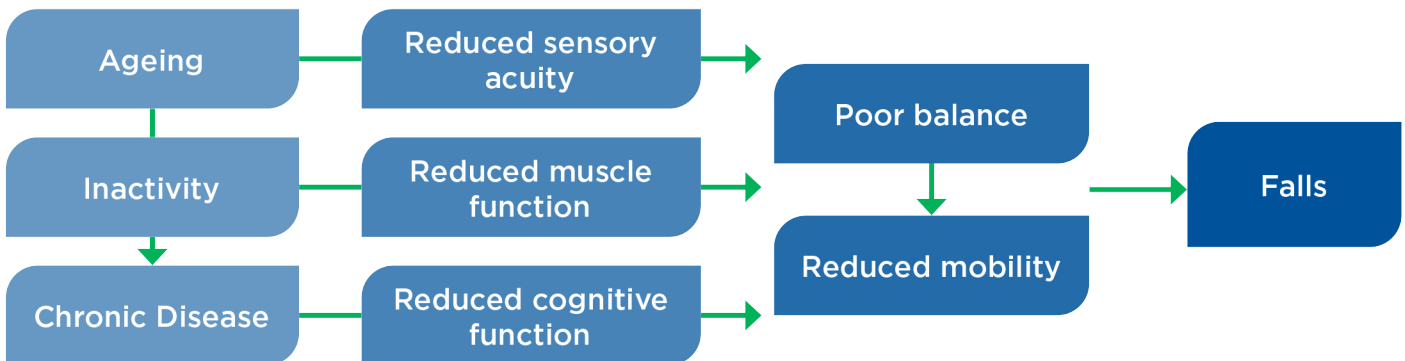
At least one-third of community-living Australians aged 65 years and over fall every year, with even higher rates for people in aged-care facilities and hospitals [1, 2]. Falls in older adults lead to 1.2 million days of hospital care and cost at least \$1 billion each year in Australia [3]. Following a fall, an older person is three times more likely to be admitted to a nursing home, yet ten times more likely after a fall that caused an injury [4]. Falls can result in permanent disability, restriction of activity, loss of confidence, and fear of falling, all of which reduce quality of life and independence.

Risk factors for falls are numerous and include:

- older age;
- a history of falls;
- poor balance;
- slow reaction time;
- muscle weakness;
- poor eyesight;
- reduced sensation in lower limbs;
- cognitive impairment;
- limitations in activities of daily living (e.g. mobility, dressing);
- medical conditions (e.g. stroke and Parkinson's disease); and
- medication use (e.g. centrally acting medications, and multiple medications).

Many factors interact to increase the likelihood of falls in older people, including intrinsic (Figure 1) and environmental. Almost three-quarters of people report slips, trips and loss of balance as the cause of their fall — that is, balance-related factors that are amenable to change.

FIGURE 1. The interacting intrinsic risk factors for falls in older people.

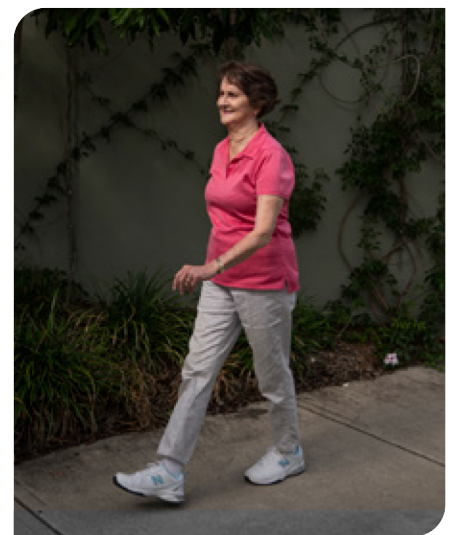


HOW CAN FALLS BE PREVENTED?

Developing strategies to prevent falls and fall-related injuries among older people is an important priority that is recognised by federal and state health departments. Randomised trials [1, 2, 4] have shown that fall rates are significantly reduced in community groups by:

- exercising, especially programs that include challenging balance training;
- improving vision (e.g. removing cataracts and restricting use of multifocal glasses);
- withdrawing from medications that affect the brain (e.g. psychoactive drugs);
- modifying the home (for high-fall-risk groups); and
- podiatric treatment, including foot and ankle exercises, for those with foot pain and high fall risk.

Therefore, referrals to a Physiotherapist or an Accredited Exercise Physiologist (AEPs) for exercise, Optometrist for eye check, Podiatrist for foot assessment, and Occupational Therapist (OT) for a home safety visit or medication review may be warranted.



HOW DOES EXERCISE PREVENT FALLS?

There is now good evidence that exercise can prevent falls in older people [1], by decreasing a number of key risk factors. For example, exercise can improve balance and walking speed, and muscular strength as well as psychological factors such as mental ability and mood.

WHAT KIND OF EXERCISE IS BEST TO PREVENT FALLS?

To prevent falls, exercise should include balance training, be of sufficient duration (3+ hours per week), and be ongoing [4, 5]. Effective balance training exercises involve controlled body movements while standing and minimising the base of support (feet close together or standing on one leg), and with as little arm support as possible. It is recommended that the exercises are prescribed by a qualified health professional in order to be safe while progressively challenging balance and developing functional strength. Some examples include heel-to-toe walking, sideways leg raises, sit-to-stand transitions, heel and toe raises, and alternate knee lifts. Tai chi is also effective for fall prevention in healthy older people [1]. Group-based strength and balance classes can be monitored by professionals and offer socialisation, but exercises can also be home-based. The benefits of exercise in frailer people are less certain and should be delivered by providers with particular expertise such as Physiotherapists and AEPs. Multifaceted interventions led by a health care team may be necessary for fall prevention in this group [6].

STARTING AND CONTINUING EXERCISE TO REDUCE FALL RISK

Exercise is recommended for all community members. Fall risk assessments conducted by qualified health professionals (e.g. Physiotherapists, AEPs, OTs) can help to identify individual risk factors and tailor interventions while ensuring safety and adequate challenge. Finding a program that suits the individual is important. Improved adherence comes with programs that are accessible, convenient, low cost, frequent and on-going, address individual needs, and are sociable and fun [7].



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RESOURCES & FURTHER INFORMATION

If you have any concerns about the safety of your patient in commencing an exercise program, please consider referral to a Sport and Exercise Physician. Find a Sport and Exercise Physician www.acsep.org.au/

Exercise is Medicine Australia www.exerciseismedicine.org.au

Exercise Right www.exerciseright.com.au

Find a Physiotherapist www.choose.physio

Find an Accredited Exercise Physiologist www.essa.org.au

Australian and New Zealand Falls Prevention Society
www.anzfallsprevention.org

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