

Falls in older people

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. Falls are also the leading cause of injury-related death and hospitalisation in these people. An older person is over three times more likely to be admitted to a nursing home after a fall than before, and over ten times more likely after a fall that caused an injury(1). 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. The economic cost of fall-related injuries is estimated at more than double that of injuries in car accidents (2). By 2051, the annual health bill for fall-related injuries in Australia is expected to be \$1.4 billion (3).

Risk factors for falls include:

- older age;
- a history of falls;
- poor balance;
- slow reaction time;
- muscle weakness;
- poor eyesight;
- reduced sensation in hands and feet;
- limitations in activities of daily living (e.g. feeding and dressing oneself);
- medical conditions (e.g. stroke and Parkinson's disease); and
- medication use (e.g. drugs that affect the brain, and multiple medications).

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

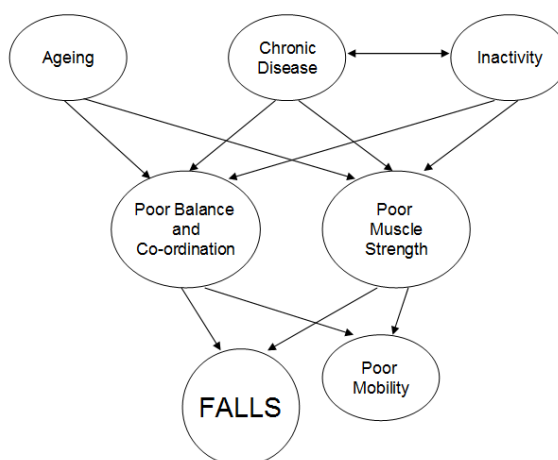


Figure 1 Factors that lead to falls

How can we prevent falls?

Developing strategies to prevent falls and fall-related injuries among older people is an important priority for public health that is recognised by federal and state health departments. Well-designed studies have shown that fall rates are significantly reduced in community groups by:

- exercising, especially programs that include balance training;
- improving vision (e.g. removing cataracts and restricting use of multifocal glasses);
- stopping medication that affects the brain (e.g. psychoactives) ;
- modifying the home (for high-fall-risk groups); and
- improving podiatry treatment, and foot and ankle exercises

How does exercise prevent falls?

High-quality studies show that exercise prevents falls in older people (4), by decreasing the key risk factors. For example, exercise can improve muscular strength, balance, balance confidence and walking speed, as well as psychological factors such as mental ability and mood. Exercise is recommended for all community members, as well as people with a high fall risk.

What is the best kind of exercise to prevent falls?

The best exercise programs to reduce fall rates should include balance training, be performed regularly, be of sufficient duration (at least 2 hours per week) and be ongoing (4). Good balance exercises involve controlled body movements while standing with the feet close together (or standing on one leg), with as little arm support as possible. The exercises should be safe, but should challenge balance and develop strength. Tai chi is an effective form of exercise for fall prevention in healthy older people (5). Group-based strength and balance classes can be monitored by professionals and are also a social occasion, but exercises can also be home based. Older and frail people might need individually tailored, home-based programs (6).

Related information and references

Exercise & Sports Science Australia www.essa.org.au
Australian and New Zealand Falls Prevention Society (ANZFPS)
www.anzfallsprevention.org
Prevention of Falls Network Europe www.profane.eu.org/

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2. Moller J. Changing resource demands related to fall injury in an ageing population. *NSW Public Health Bulletin* 2000; 13(1–2): 3–6.
3. Moller J. (2003). Projected costs of fall related injury to older persons due to demographic change in Australia. Canberra: Commonwealth Department of Health and Ageing.
4. Sherrington C, Whitney JC, Lord SR et al. Effective exercise for the prevention of falls: a systematic review and meta-analysis. *J Am Geriatr Soc* 2008; 56(12): 2234–43.
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6. Campbell AJ, Robertson MC, Gardner MM et al. Randomised controlled trial of a general practice programme of home based exercise to prevent falls in elderly women. *BMJ* 1997; 315(7115):1065–9.