

# FALLS PREVENTION AND EXERCISE

PUBLIC

## MAINTAINING BALANCE AND PREVENTING FALLS FOR HEALTHY AGEING

Poor balance and falls are serious problems associated with ageing. 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 can result in permanent disability, restriction of activity, loss of confidence, and fear of falling, all of which reduce quality of life and independence.

Many factors can affect balance and increase the risk of fall, including: older age; a previous fall; poor balance; slow reaction time; muscle weakness; poor eyesight; reduced sensation from the limbs; cognitive problems; mobility limitations; 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 improved — and it's never too late to start.

## HOW CAN FALLS BE PREVENTED?

There is good evidence [1, 3] showing that fall rates are significantly reduced in community populations by:

- exercising, especially programs that include challenging balance training;
- treating eye conditions and considering restriction of multifocal glasses use;
- medication review in consultation with a medical doctor;
- identifying and eliminating home hazards (especially for those with high-fall-risk); and
- podiatry treatments (especially for those with foot pain and high-fall-risk).

## WHAT KIND OF EXERCISE IS BEST TO PREVENT FALLS?

Exercise can improve muscular strength, balance, balance confidence, and walking speed, as well as psychological factors such as mental ability and mood. Exercise programs should include balance training, be of sufficient duration (3+ hours per week), and be ongoing [1, 4].

The exercises should be safe while progressively challenging developing functional balance and 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. Frail populations may need a more personalised approach [5].

- » *exercise most days*
- » *see an exercise professional to prescribe and progress exercises*
- » *ensure exercise is balance challenging (moving body, progressively reduce support)*
- » *functional exercises are best*



## STARTING AND CONTINUING EXERCISE TO REDUCE FALL RISK

Exercise is recommended for all community members. Finding a program that suits the individual is important. To maintain involvement, it is best to choose a program that is accessible, convenient, low cost, frequent and on-going, addresses individual needs, and is fun [6].



### RESOURCES & FURTHER INFORMATION

Exercise is Medicine Australia [www.exerciseismedicine.org.au](http://www.exerciseismedicine.org.au)  
Exercise Right [www.exerciseright.com.au](http://www.exerciseright.com.au)  
Find a Physiotherapist [www.choose.physio](http://www.choose.physio)

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Find an Accredited Exercise Physiologist [www.essa.org.au](http://www.essa.org.au)  
Australian and New Zealand Falls Prevention Society  
[www.anzfallsprevention.org](http://www.anzfallsprevention.org)

### REFERENCES

1. Sherrington C, Fairhall NJ, Wallbank GK, Tiedemann A, Michaleff ZA, Howard K, et al. Exercise for preventing falls in older people living in the community. *Cochrane Database Syst Rev.* 2019 Jan 31;1:CD012424.
2. Cameron ID, Dyer SM, Panagoda CE, Murray GR, Hill KD, Cumming RG, et al. Interventions for preventing falls in older people in care facilities and hospitals. *Cochrane Database Syst Rev.* 2018 Sep 7;9:CD005465.
3. Gillespie LD, Robertson MC, Gillespie WJ, Sherrington C, Gates S, Clemson LM, et al. Interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev.* 2012 Sep 12(9):CD007146.
4. Sherrington C, Michaleff ZA, Fairhall N, Paul SS, Tiedemann A, Whitney J, et al. Exercise to prevent falls in older adults: an updated systematic review and meta-analysis. *Br J Sports Med.* 2017 Dec;51(24):1750-8.
5. Hopewell S, Adedire O, Copsey BJ, Boniface GJ, Sherrington C, Clemson L, et al. Multifactorial and multiple component interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev.* 2018 Jul 23;7:CD012221.
6. Bunn F, Dickinson A, McInnes E, Horton K. A systematic review of older people's perceptions of facilitators and barriers to participation in falls-prevention interventions. *Ageing and Society.* 2008;28(4):449-72.