

# The Importance of FALL PREVENTION

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## Risks

Now that the weather is getting colder, I wanted to touch on how to minimize the risk of slips and falls, and why this is so important. Here in Calgary, we love our chinooks but the steady thawing and refreezing tends to create very slippery situations on our sidewalks and walkways.

Falls are associated with increased morbidity, mortality, and nursing home placement. They threaten independence and can have long-lasting effects on quality of life, through either physical or psychological mechanisms. Unfortunately, a history of falls is predictive of further falls. For this reason, it is better to reduce the risk of falls than to treat the consequences and injuries that occur because of falling.

A series of studies have identified some risk factors for falls. The main modifiable risk factor identified was muscle weakness. Other risk factors are a history of falls, use of four or more prescription medications, use of an assistive device, arthritis, depression, age older than 80 years, and impairments in gait, balance, cognition, vision, and activities of daily living (Shobha, 2005)

Regarding prevention, there were two key recommendations: home hazard assessment and modification for patients with a history of falls, and exercise and physical therapy to prevent falls and injury from falls.

## Causes/ Prevention

A 2005 article (Shobha) highlighted prominent causes of falls in adults over 65yrs, as well as key clinical recommendations for preventing falls. The top causes were identified as 'accident and environment-related causes', and 'gait and balance disorders or weakness'.

# Exercise Interventions

A systemic review (Sherrington et al., 2019) looked at 108 randomized controlled trials with a total of 23407 patients an average of 76 yrs of age, evaluating the effect of exercise interventions on falls in people aged 60yrs or older. 81 trials compared exercise with a control intervention and found that exercise reduced the rate of falls by 23%. When looking at the effect different forms of exercise had on falls, balance and functional exercises were found to reduce fall rates by 24%. Multiple modes of exercise (combined balance, functional exercises, and resistance exercise) were found to reduce the rate of falls by 34%. Tai Chi may reduce fall rate by 19%.

# Specific Exercises to reduce risk of falls:

These should be done regularly to get the most benefits:

Double or single leg balance- helps improve balance



Sit to stand- builds leg muscle strength and improves body mechanics and balance:



Toe stand- strengthens calf and ankle muscles



# Tips to avoid slips and falls in wintertime (The University of Pittsburg Medical Centre (UPMC) :

1. Walk slowly and carefully. Wear boots or other slip-resistant footwear.
2. Use special care when getting in and out of vehicles. Use the vehicle for support if you need to do so.
3. Watch for slippery floors when you enter any building or home.
4. Try to avoid carrying items, or walking with your hands in your pockets; this can reduce your ability to catch yourself if you lose your balance. Instead, carry a backpack if you have one.
5. Watch out for black ice.
6. Tap your foot on potentially slick areas to see if the areas are slippery.
7. Walk as flat-footed as possible in very icy areas.
8. Avoid uneven surfaces if possible. Avoid steps or curbs with ice on them.
9. Report any untreated surfaces to Maintenance and Facilities. Help us keep you safe!
10. Remember: Ice and snow mean “take it slow!”

## References:

[Exercise for preventing falls in older people living in the community - Sherrington, C - 2019 |](#)

[Cochrane Library](#)

[Prevention of Falls in Older Patients | AAFP](#)

[10 Tips to Avoid Winter Slips, Trips, and Falls | UPMC](#)

[Preventing Falls in Older Persons | AAFP](#)

