

Preventing Injuries from Falls

Fact Sheet #29



Falls are the leading cause of unintentional injury hospitalisations & one of the three leading causes of injury deaths. While there is a large body of academic literature about falls & falls related injury prevention in older people, currently there is little information available to injury prevention practitioners related to preventing injuries from falls for children, young people & adults up to 65 years. The purpose of this factsheet is to summarise in an accessible form, information related to falls prevention. It is not an academic review of the literature, although the evidence presented here is based on available literature.



Every year on average

Injuries from falls kill 230 New Zealanders

16,000 people with falls injuries are hospitalised

Many people who suffer injuries from falls who are treated in Emergency Departments, may not require hospitalisation, but have been seriously injured (e.g., fractured arms, wrists, ankles)



Who falls?

The two age groups with the highest rates of falls-related hospitalisations are

- Children nearly 5,000 children (age 0 – 14) per year
- Older adults over 7,000 older adults (65 – 85+) per year

Approximately one third of people aged 65 and older living in the community, and one half of people 80 years & older will fall in any one year. Falls are even more common in older people living in residential care.

The risk of falls-related hospitalisation for all other people is considerably less than for children & older adults.

- Younger adults (15 – 29) 2000 per year
- Adults (30 – 65) 3,500 per year



Common places where falls occur

- In the home
- Sports & recreational facilities including playgrounds
- Workplace
- Residential facilities for older adults (hospitals & rest homes)



What do falls cost New Zealanders?

Falls can result in loss of confidence and a fear of falling again. This may result in inactivity which creates a range of problems from social isolation & depression to health issues including heart disease, & obesity.

Falls can create financial & social stress for families, due to loss of income & increased or alternative care costs.

Falls can result in permanent life-changing disability and/or loss of independence.

Over the past two years the ACC financial cost of falls (across all ages, regions & environments) has averaged \$358 million per year. This includes entitlement & medical fees claims, as well as ongoing claims throughout the two years. It does not include hospital costs.





Because NZ's population is ageing, the burden of falls in older adults is therefore likely to increase. The risks for falls among older adults are well-documented and usually result from a combination of factors. These include: history of a previous fall or fracture, impaired vision, taking psychotropic medication, cognitive impairment, aged over 80, arthritis, loss of bone density & lack of fitness & balance are often involved. Social factors i.e., loneliness, depression, fear of falling, as well as social isolation may also be implicated.

For all age groups, inactive lifestyles contribute to loss of confidence, balance & strength, & poor neuromuscular coordination as well as health problems such as obesity.

Alcohol has been identified internationally as a significant contributor to injuries. In a survey in NZ, alcohol was involved in 23% of fall-related hospitalisations for young people 15-29 years.



Evidence for Prevention

There is strong evidence that falls can be successfully reduced in older people. Both multiple & single factor fall prevention programmes aimed at modifying the risk factors for falls in the 65+ group have been evaluated in over 100 randomised controlled trials & in many systematic reviews. However, no single fall prevention trial has had sufficient power to test conclusively whether fall injuries can also be reduced in older adults, and there is little evidence in the literature on prevention strategies for other age groups. Experts around the world agree that more investment in robust evaluation & research is needed.



WHAT WORKS TO REDUCE FALLS

Strategies that have been identified and rigorously reviewed in the literature as achieving a reduction in falls injuries (severity and/or incidence of falls injuries).

Older adults

- Home based strength and balance retraining (Otago Exercise Programme) (Gillespie, Robertson)
- Community based group exercise for people with impaired physical function (Barnett)
- Tai Chi group exercise (Gillespie)
- Home safety assessment & modification programme delivered by an experienced occupational therapist, targeted at those with a previous fall (Gillespie) or people with severe visual impairment (Campbell)
- Withdrawal of psychotropic medication (Gillespie)
- Cardiac pacing in those with carotid sinus syndrome (Gillespie)
- Expedited cataract removal (Kannus)
- Multifactorial programmes individually targeting the community living older person and the home environment (Gillespie)
- Community based multifaceted programme to encourage behavioural change (Clemson)
- Multifactorial fall prevention programmes in long term care facilities, and in hospital wards (Kannus)



Young children

- Window guards (Pressley)

Playgrounds (compliance with standards)

- Heights, impact absorbing surfaces, maintenance over time (Chalmers)

Building regulations

- Compliance with deck and balcony barriers (Istre)





WHAT WORKS TO REDUCE RISKS ASSOCIATED WITH FALLS

For all age-groups it is important to maintain bone health to minimise fall-related injury. Other strategies that have been identified and reviewed in the literature as contributing to a reduction in risks associated with fall injuries include:

Older adults

- Population based programmes: coordinated community wide multi-strategy initiatives reduce the rate of hospitalisations due to fall injuries (McClure)
- Otago Exercise Programme reduces moderate to severe fall injuries in community living older people (Robertson)
- Hip protectors for long term care residents (Parker)
- Vitamin D and calcium supplementation (Kannus)
- Prevention and treatment of osteoporosis (Kannus)



Children

- Home visit schemes have been shown to reduce a range of child injuries, but not specifically to reduce falls injuries (King)
- Safety equipment use and loan schemes including stair guards & barriers (Watson)
- Avoidance of equipment connected with high rates of falls e.g., trampolines & baby walkers (Chalmers)
- Belts on shopping trolleys (Lawrenz)



Sports falls

- Integrated injury prevention programmes that include informed coaching & encourage fitness and safe play as well as the use of sport-appropriate safety gear, when fitted and worn correctly, including dental guards, helmets, wrist and knee pads (Mackay)



STRATEGIES WORTHY OF CONSIDERATION

Interventions based on experience and common sense, may contribute to reductions in risks associated with falls injuries. However, the evidence is inconclusive as few have been adequately funded, rigorously evaluated and/or published in peer-reviewed journals.

Across the age groups

- Passive interventions in the home such as slip-resistant surfaces in baths & showers (Spencer)
- Campaigns to prevent injuries at home may lead to some environmental & behavioural change but there is little evidence that this in turn leads to reductions of falls injuries (Towner)
- Parent education aimed to encourage safer practices, including never leaving babies alone on furniture, closer supervision of children, choosing safer baby products & furniture, making the home more "childsafe"
- Warning labels and community education alone (Smith)



NATIONAL FALLS STRATEGY

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In August 2005, the Minister for ACC released 'Preventing Injury from Falls: The National Strategy 2005-2015' which primarily addresses preventing falls where they most happen – at home, during sports and recreation activities, in social settings at schools, and early childhood education centres, and in facilities for older adults, including rest homes and hospitals. The Strategy focuses on unintentional injury caused by a fall. Injury that results from an intentional act (such as someone who falls after being pushed) is outside its scope. It also does not address preventing workplace slips, trips and falls as these are a national priority area in the Workplace Health and Safety Strategy for New Zealand to 2015. The Falls Strategy is an expression of the Government's commitment to working with others to improve New Zealand's performance in preventing injury from falls. www.fallsstrategy.govt.nz



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