

Exercise programs could help to prevent fall injuries in older people

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Exercise programmes designed to prevent falls in older adults also appear to prevent injuries caused by falls, suggests a paper published today in *BMJ*.

Fall-related injuries are very common among older people and are a major cause of long-term pain and [functional impairment](#). They also increase the risk of discharge to a nursing home and have a high economic cost.

Well-designed exercise programmes can prevent [falls](#) in [older adults](#) living at home. However, evidence to date that these programmes can prevent injuries caused by falls is poor.

Researchers from France therefore looked to see whether [fall-prevention](#) exercise programmes are associated with a significantly lower risk of [fractures](#) and other injuries due to falls. The main aim of the paper was to review the current evidence about the effect of exercise interventions on different outcomes of injurious falls.

Data were taken from the Cochrane Library, Pubmed, EMBASE and CINAHL through June 2013. The review included 17 trials with a total of 2195 participants in the [exercise group](#) and 2110 in the control groups. The mean age was 76 years and 77% were women.

Tai Chi was the exercise in two of the trials but the rest consisted of gait, balance and functional training (exercise which involves training for

activities performed in daily life). Most trials also included strength / resistance training exercises.

The review revealed substantial variations in the definition and classification of injurious falls and most trials did not provide a reference for their definition. Injurious falls usually included very diverse consequences ranging from relatively minor injuries such as bruises to fractures and other serious injuries requiring hospitalisations. Four injurious falls categories were therefore distinguished for this review, based on severity or medical care.

Most of the exercise interventions tended to reduce injurious falls in all categories. Exercise seemed to significantly decrease the rate of falls resulting in medical care, serious injuries and fractures.

This review provides evidence that fall prevention exercise programmes for older people not only reduce fall rates but also prevent injuries resulting from falls in older community-dwelling individuals. The researchers say this effect appears most pronounced for the most severe fall-related injuries.

All the exercises that proved to be effective for fall prevention emphasised balance training which the researchers say is "ample evidence that this type of programme improves balance ability". They also add that this may be down to "improving cognitive functioning".

The researchers say that this review, the first of its kind, suggests that "reducing the risk of falling and improving protective responses during a fall may be an important and feasible means of preventing fractures and other serious injuries in the elderly". They add this finding is especially important as most fractures in the population occur in [older people](#) at moderate "bone risk" for their age and that "additional effective strategies that can be proposed to larger segments of the elderly

population will be necessary to reduce the burden of fractures".

In conclusion, the researchers say that the results show a "positive effect of exercise on injurious falls, including the most severe falls". They add that the results provide useful additional evidence for health care providers to encourage patients to take part in [exercise](#) fall-prevention programmes. They suggest that future trials should aim to address some of the limitations by providing data on other important outcomes, such as the quality of life.

Provided by British Medical Journal

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