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## **Hip and back fractures increase mortality rates in people older than 50**

Vertebral and hip fractures are associated with an increased risk of death, found a new study of 7753 people in Canada aged 50 years and older published in *CMAJ (Canadian Medical Association Journal)* <http://www.cmaj.ca/press/cmaj081720.pdf> ([www.cmaj.ca](http://www.cmaj.ca)). According to the results, approximately 25% of people (both men and women) living in the community who develop a hip fracture and 16% who develop a spine fracture will die over a 5 year period.

The 5 year study, part of the Canadian Multicentre Osteoporosis Study, consisted of 2187 men and 5566 women from across Canada. It differs from other previous studies in that the study group is representative of the general population and participants were recruited through telephone lists by postal code areas. Previous studies have included only women, participants from specific geographic areas, patients with osteoporosis or have looked at only one type of fracture.

Fractures are associated with negative outcomes such as pain, immobility and reduced health-related quality of life.

All types of fractures were more common in women than men except for rib fractures. Other factors affecting mortality including smoking status, physical activity, and comorbidity of other diseases.

"Hip fractures may have long-lasting effects that result in eventual death by signalling or actually inducing a progressive decline in health," write Dr. George Ioannidis and coauthors.

"Our results also showed that vertebral fracture was an independent predictor of death."

The authors conclude that interventions must be introduced to reduce the likelihood of fractures, such as osteoporosis medications, fall prevention strategies, hip protectors and enhanced rehabilitation after fracture to improve mobility and strength.

In a related commentary <http://www.cmaj.ca/press/cmaj091212.pdf>, Dr. Karim Khan and Dr. Maureen Ashe write that cognitive impairment and dementia are major risk factors for fall-related fractures but patients with these conditions are usually difficult to recruit and thus under-represented in cohort studies. "If this was the case in this Canadian cohort (and it most likely was), the mortality data may contain "healthy volunteer bias" and the population mortality rates may be even higher than reported by Ioannidis and colleagues." They conclude that post-fracture care could be improved for this condition that kills at least 25% of people with fractures from falls within 12 months.

Dr. Khan and Dr. Ashe are with the Centre for Hip Health and Mobility at Vancouver General Hospital and the University of British Columbia.

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