

Risk of second major osteoporotic fracture is greatest immediately after first fracture

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Today, at the World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases, an international research team presented the preliminary results of a new study which aimed to determine whether the predictive value of a past major osteoporotic fracture (MOF) for future MOF changed with time.

They studied a database of 118,872 men and women born between 1907 and 1935 who were part of the Reykjavik Study during 1967-1991. Data on all [fractures](#) from participant entry into the study until December 31, 2012 were extracted.

Of the 5039 [patients](#) who experienced one or more major osteoporotic fractures and were included in the analysis, 1919 patients experienced a second fracture. The [analysis](#) showed:

- The risk of a second major osteoporotic fracture after a first increased by 4% for each year of age and was 41% higher for women than men.
- The risk of a second major osteoporotic fracture was greatest immediately after the first fracture. Although the risk thereafter decreased with time, it remained higher than the population risk throughout follow-up.

One year after the first major osteoporotic fracture the risk of a second fracture was 3 times higher than that risk amongst those who had not experienced a fracture. After 10 years this risk was still elevated, at 2

times the risk in the non-fracture population but was lower than at one year.

Presenting author Prof. Nicholas C. Harvey of the MRC Lifecourse Epidemiology Unit, University of Southampton, stated, "The results of our study show that the risk of further fracture after a first major osteoporotic fracture is greatest immediately following the first event, with a declining, but still increased, risk in subsequent years. These results suggest that pharmacological treatment for secondary [fracture prevention](#) should be considered during the period immediately following a first fracture."

The results of this study support international efforts to promote secondary fracture prevention in clinics worldwide. Studies have shown that half of all individuals who suffer a hip fracture have already come to clinical attention because of a prior fragility fracture. All too often the broken bone is simply 'repaired' and the patient is sent home without proper diagnosis and management of the underlying cause of the first fracture. It is estimated that approximately 80% of patients who suffer a first fracture are never diagnosed and treated. In order to address this serious problem, the implementation of coordinated systems of secondary fracture prevention has become a major health-policy focus of the International Osteoporosis Foundation (IOF) through its Capture the Fracture® initiative: <http://www.capturethefracture.org>

Provided by International Osteoporosis Foundation

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