

Weight loss of 10 percent or more in seniors significantly raises hip fracture risk, study finds

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While a low body mass index (BMI) of less than 20 kg/m² has been shown to be an independent risk factor for hip fractures, far less is known about the relationship of body weight changes on hip fracture risk.

The findings of a new study presented today at the IOF Regionals Asia-Pacific Osteoporosis Meeting in Taipei, show that among middle-aged to elderly Singapore Chinese, weight loss of 10% or more was associated with a 56% higher hip fracture risk.

The researchers used data from the Singapore Chinese Health Study, a population-based cohort of 63,257 Chinese men and women aged 45-74 years at recruitment (1993-1998). After an average of 5.7 years, the researchers conducted a follow-up interview (1999-2004) among 52,322 surviving subjects in the group studied.

A total of 775 incident hip fracture cases were identified from the follow-up interview until December 31, 2010 [interval of 9.0 years]. The mean age at hip fracture was 75.3 years.

The main findings showed:

- Compared to subjects with stable weight (loss or gain less than 5%), those with weight loss of 10% or more had a 56% increase

in hip fracture risk, and the elevated risk was present in both men and women. Even after accounting for health conditions and follow-up BMI subsequent to the weight change, those with weight loss of 10% or greater still had a 39% increase in hip fracture risk.

- The increase in risk for those who had lost 10% or more in weight was more prominent in those subjects whose baseline BMI was equal to or greater than 20 kg/m², but it was not observed in those who were already very lean at recruitment (baseline BMI 25 kg/m²) and subsequently lost 10% or more in weight had the greatest increase in risk.
- Overall, weight gain was not associated with hip fracture risk. Although weight gain equal to or greater than 10% appeared to reduce [hip fracture](#) risk in those with a baseline BMI ≤ 25 kg/m², the association was not statistically significant.

Lead author, Dr. Zhaoli Dai of the Saw Swee Hock School of Public Health, National University of Singapore, stated, "The results of this study suggest that doctors should be alert to the need to identify and manage the risk in patients who have experienced substantial [weight loss](#). Hip fractures are a major cause of disability and premature death in seniors, and it is therefore important that preventive action be taken in patients who are at high risk."

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