

# Women who break a hip at increased risk of dying within a year

September 26 2011

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Women ages 65-69 who break a hip are five times more likely to die within a year than women of the same age who don't break a hip, according to a Kaiser Permanente Center for Health Research study funded by the National Institutes of Health and published online today in the *Archives of Internal Medicine*.

This paper breaks down [death risk](#) by age group. In addition to the finding for [women](#) ages 65-69, it finds that for women ages 70-79, a [hip fracture](#) doubles the risk of dying within a year. Most women 80 and older have the same risk of dying within a year whether they fracture their hip or not, but for women 80 and older who are in excellent health, a hip fracture nearly triples the risk of dying within a year.

"This study is a wake-up call that the first year after a hip fracture is a critical time for all [elderly women](#), but especially for younger women, ages 65-69, who face a much higher death rate compared to their peers," said Erin S. LeBlanc, MD, MPH, lead author and investigator at the Kaiser Permanente Center for Health Research in Portland, Ore. "We need to do more to prevent hip fractures from occurring, and we need to study how best to care for women after fracture to prevent these deaths."

Other studies have found that women who break a hip are at higher risk for earlier death, but most of those studies concluded that the increased risk was not because of the fracture, but because of underlying health conditions such as [heart disease](#), stroke, or diabetes. This study controlled for these underlying health conditions and also matched each

woman who broke her hip with four women of the same age who didn't break a hip.

"Our study suggests that it is the hip fracture, and not just [poor health](#), that puts these women at higher risk of dying," said Teresa Hillier, MD, MS, co-author and senior investigator at the Kaiser Permanente Center for Health Research. "We also found women are at the highest risk of dying within the first three months after hip fracture, which leads us to hypothesize that hospitalization, surgery and immobility lead to other complications that ultimately result in their death."

Another reason researchers think that hip fractures, and not other underlying [health conditions](#), put women at higher risk of death is their finding involving women aged 80 and older. These women are often sicker to begin with and most of them face the same risk of dying within a year whether they break their hip or not. But when researchers looked at a subset of women who were 80 and older and were also in excellent health, they found that those who fractured a hip were almost three times more likely to die compared to their counterparts who didn't break a hip.

"This finding suggests that it is the hip fracture itself that ultimately leads to death in these women. Even though they start out in excellent health the hip fracture is so devastating that many of them don't recover," said LeBlanc.

The study is part of the Study of Osteoporotic Fractures that has been ongoing for more than two decades. During 1986-88 SOF enrolled nearly 10,000 community-dwelling, ambulatory women ages 65 and older from Baltimore; Minneapolis; Portland, Ore.; and the Monongahela Valley near Pittsburgh.

Over the next 20 years, 1,116 of those women suffered hip fractures. Researchers categorized the women by age and then matched 4,464

women of the same age who didn't break a hip to serve as controls. They followed all of the women, sending out postcards every four months to check on their health status, and asking them to come in for clinic visits every 2 to 3 years. During the visits women were given a medical exam and asked to fill out questionnaires about their health status. Cause of death was determined by death certificates and other supporting documentation where available. The leading causes of death among all women in the study were heart disease, cancer and stroke.

Among women who broke a hip, more than half of the short-term deaths occurred within three months after the fracture and nearly three-quarters occurred within six months. The only women who had a higher long-term risk of death (within 10 years) after hip fracture were the [women ages 65-69](#).

According to the National Osteoporosis Foundation, about half of women over age 50 will break a bone because of osteoporosis, which is a thinning or weakening of the bone that can cause bones to break more easily. The foundation recommends that women 65 and older, and premenopausal women with risk factors such as low body weight, smoking or long-term steroid use, should get a bone density scan to determine if they have or are at risk for developing osteoporosis. Once diagnosed, many women start taking medication to strengthen their bones and decrease the risk of fracture.

Other tips to prevent hip fractures include:

- Ensure adequate calcium and vitamin D intake
- Do weight-bearing and balancing exercises
- Avoid cigarette smoking
- Have a home assessment to make sure your home is fall proof

Provided by Kaiser Permanente

Citation: Women who break a hip at increased risk of dying within a year (2011, September 26)  
retrieved 5 May 2024 from

<https://medicalxpress.com/news/2011-09-women-hip-dying-year.html>

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