

# Bone fracture rates in women found to vary dramatically by race

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Credit: Liliana Drew from Pexels

A new paper finds that bone fracture rates in older women differ by race, quite significantly. While researchers have known for years that the risk of bone fracture is highest for White women, this is the first study

to show the real fracture rate for Asian and Hispanic women.

Until recently, researchers have had limited data on fracture rates by specific race and ethnicity beyond White people, and even less fracture data within race and ethnic groups. Hispanic and Asian populations are the fastest growing populations of the United States. Some previous studies have suggested differences in fracture rates within Hispanic and Asian populations.

One earlier study, using 1992 Medicare data, suggested that women of Mexican and Puerto Rican origin had significantly lower hip fracture rates compared to non-Hispanic White women, but there was no significant difference in hip fracture rates between Cuban-American and White women. Another study using the same data found that, compared to Japanese-American women, Chinese-American women had a significantly lower risk for hip fracture, with no differences in hip fracture risk between women of Japanese or Korean origin.

While these studies provided important descriptive information on potential fracture differences, they reached their conclusions using algorithms that relied on geographic location (Hispanics) or surname (Asians) to classify people's Hispanic or Asian origin. While algorithms are a valid method to try to determine ethnic origin, they're not nearly as reliable as self-reported ethnic origin information from subjects.

Researchers here used data from the Women's Health Initiative, a project beginning in 1991 of the U.S. National Institutes of Health, to study major health issues in postmenopausal women. The Women's Health Initiative data provides the largest racial and ethnically diverse cohort evaluating fractures in [postmenopausal women](#).

The paper, "Fractures by Race and Ethnicity in a Diverse Sample of Postmenopausal Women: A Current Evaluation among Hispanic and

Asian Origin Groups," is [published](#) in the journal *Journal of Bone and Mineral Research*.

Over two decades, this research shows that 71,124 women, 44.2% of those observed in the study, experienced a fracture. The risk of any bone fractures was highest in White women, followed by American Indian/Alaskan Native, multiracial, Asian, and then Pacific Islander. Black women had the lowest rate of bone fracture.

Within Asian-Americans, the researchers here observed the highest risk of clinical fractures in women of Indian origin. Filipina women had the lowest fracture rate. When compared to fracture risk in White women, only Chinese, Filipino, Japanese, and women of unspecified Asian origin had considerably lower risk.

The researchers found that Hispanic women had a 10% lower risk of bone fracture compared to non-Hispanic women. Within Hispanic women, Cuban-American women had the highest (and women of unspecified Hispanic origin had the lowest) fracture risk.

"This study is the first to provide novel fracture incidence data in many racial, ethnic and origin groups that have been understudied in the US and highlights the need to understand the factors that underlie these differences," said the paper's lead author, Jane Cauley, a professor of epidemiology at the University of Pittsburgh. "The difference in fracture rates in detailed Asian and Hispanic groups highlight the difficulty in applying a single race/ethnic adjustment to fracture risk calculators."

"There's been a greater appreciation of racial disparities in osteoporosis management and fracture outcomes in the field," said Nicole Wright, another researcher involved in the study. "The data provided in this paper provides information that could improve fracture prediction algorithms that include race and ethnicity, particularly among different

Asian and Hispanic communities."

**More information:** Nicole Wright et al, Fractures by Race and Ethnicity in a Diverse Sample of Postmenopausal Women: A Current Evaluation among Hispanic and Asian Origin Groups, *Journal of Bone and Mineral Research* (2024). [DOI: 10.1093/jbmr/zjae117](https://doi.org/10.1093/jbmr/zjae117)

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