

# Hip fractures will nearly double worldwide by 2050

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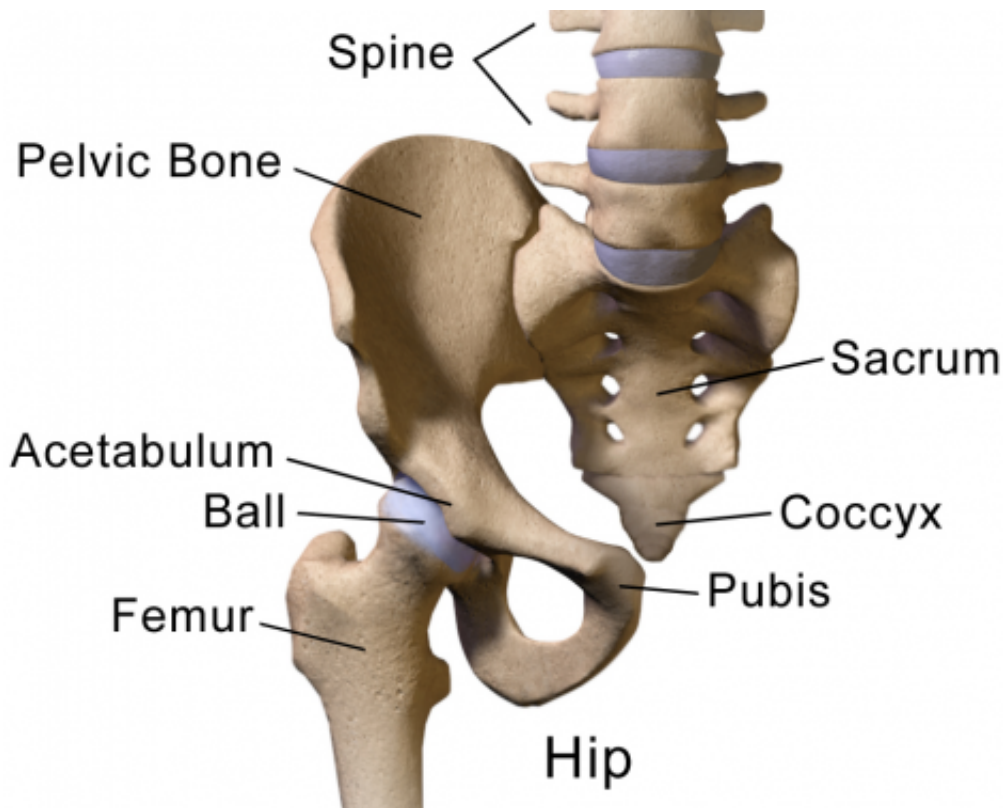


Illustration of Hip (Frontal view). Credit: Wikipedia

Osteoporotic hip fracture, already a dangerous and debilitating problem for older men and women worldwide, is poised to become a far more severe global public-health issue as the population grows older and frailer, according to a new study led by researchers at the University of Hong Kong. The risk—and thus the need for far better study, prevention

and treatment of osteoporosis and fractures—is especially great among men and those over 85 years old, the study reported.

Ching-lung Cheung, Associate Professor, in the University of Hong Kong's Department of Pharmacology and Pharmacy, presented the findings today at the annual meeting of the American Society of Bone and Mineral Research in Austin, Texas.

The study analyzed data in 19 countries for patients 50 and older who had fractured their hips between 2005 and 2018. It found that total hip fracture counts were expected to increase over time in 18 of the 19 countries. Hip fracture counts were projected by 2030 and 2050 using predicted population size provided by the World Bank. By 2050, the worldwide hip fracture counts will have likely doubled compared with 2018, with a larger proportional increase in men than women.

The study noted some possible reasons for the sex discrepancy. Although the incidence of hip fractures declined in most countries during the study period, the magnitude of decline was smaller for men. Men's life expectancy, meanwhile, has been increasing, a result of better medical care, hygiene, diet, and other factors. The United Nations projects that the [life expectancy](#) of men globally will likely reach over 75 years by 2050, the age after which this study showed a high risk of hip fracture. Thus, researchers expect that the proportion of men with a high risk of hip fracture will grow.

At the same time, osteoporosis in men has been underdiagnosed and undertreated for years, Dr. Cheung reported. "Our study also showed that the use of anti-osteoporosis medications following a hip fracture is lower in men than in women by 30% to 67%," he said. "Thus, more attention should be paid to preventing and treating hip fractures in men."

Previous reports on hip fracture incidence are based on outdated data with heterogeneity in methods and study periods. This study examined the most currently available secular trends of hip fracture incidence, mortality, and use of post-fracture pharmacological treatment across 19 countries.

A common protocol and a common data model were applied across all sites to provide comparable data. Age- and sex-standardized annual incidence of hip fracture, mortality, and pharmacological treatment rates within 12 months were calculated.

Using descriptive analyses of patient-level healthcare data, the researchers found wide variability among the 19 countries studied. The overall age- and sex-standardized incidence of hip fracture was estimated to be 180 per 100,000 individuals (Women 236; Men 118). But the average change in hip fracture incidence varied from -2.8% to +2.1% per year. The most pronounced declines in fractures were seen in Denmark (-2.8%), Singapore (-2.8%), and Hong Kong (-2.4%). The biggest increases were in the Netherlands (+2.1%), and South Korea (+1.2%). One-year all-cause mortality ranged from 14.4% to 28.3%, while mortality trends varied from -5.3% to +18.4% per year, with the largest decreases in Australia (-5.3%), the Netherlands (-4.6%), and Singapore (-4.3%). Use of anti-osteoporosis medications within 12 months of hip fracture ranged from 11.5% to 50.3%, with trends varying from -9.6% to +12.7% per year and declining in 6 out of 15 sites.

The reasons for the observed variability among countries would require further in-depth research, co-author Chor-Wing Sing, a research assistant professor said. "One potential reason that some countries have seen relatively large declines in hip fractures is better osteoporosis management and post-fracture care," she said. "Better fall-prevention programs and clearer guidelines for clinical care have likely made a difference." Dr. Sing also noted people's greater awareness of bone

health, resulting in an increase in bone mineral density, or BMD, may also have helped. She cited a study in Hong Kong, which had one of the largest declines in hip fractures, which showed that women 50 and older had become more physically active and started doing more weight-bearing exercise, resulting in a significant long-term increase of BMD.

The new study's key message, the authors said, is that the decline in hip fractures in many countries in recent years is not enough to offset the effect of the growing aging population. The burden of hip fracture is going to grow. But post-fracture treatment remains inadequate in many countries. Meanwhile, the incidence of hip fracture in people over 85 (the "oldest old") remains more than double that of other age groups, while post-fracture treatment in this population is generally conservative. A larger and more [collaborative effort](#) among [healthcare providers](#), patients, and caregivers will be needed to prevent hip [fractures](#) and improve the treatment gap and post-fracture care, especially in men and the oldest old. This need is urgent, and growing, worldwide.

Provided by The American Society for Bone and Mineral Research (ASBMR)

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