



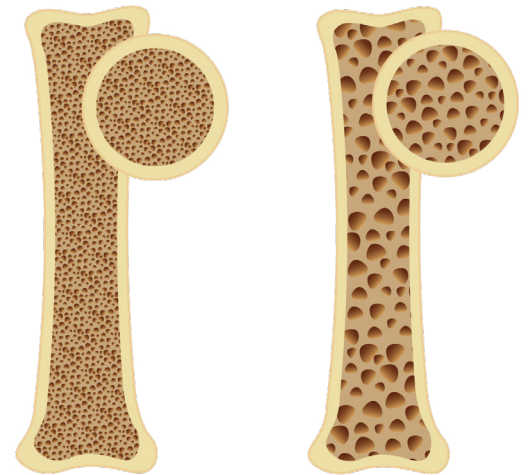
THE HIDDEN IMPACT

of Osteoporosis on Americans

Low bone mass and strength increase the risk of fracture, but can be prevented and treated.

Osteoporosis, or porous bone, is a disease characterized by reductions in bone mass and quality. Porous bones are weaker and more susceptible to fractures, especially in the spine, hip, and wrist.

Osteoporosis is primarily diagnosed by a test that measures bone mineral density (BMD) using dual energy X-ray absorptiometry (DXA). When older people sustain a hip or vertebral (spine) fracture, they are considered to have osteoporosis, even if their BMD has not been measured using a DXA test.

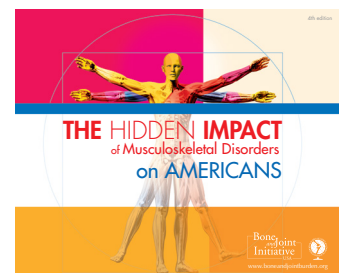
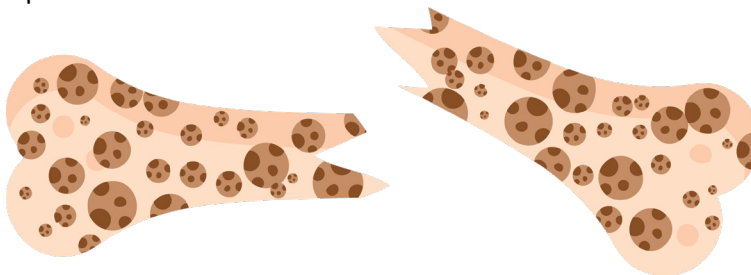


Normal

Osteoporosis

Current Prevalence: Who Has Osteoporosis?

The overall prevalence of osteoporosis among U.S. adults aged 50 and over is over 11%, or at least 12 million adults (based only on DXA test result data, so likely much higher), and is expected to grow to 13.6 million by 2030. Osteoporosis is much more common in women (16.5%) than men (5.1%). Another 44.5% of adults aged 50 and over, or approximately 45 million adults, had low bone mass, a possible precursor to osteoporosis. Again, the prevalence of low bone mass was higher among women than men. Non-Hispanic Asian women over the age of 50 had the highest prevalence among women (40%), followed by Hispanic women (20.5%). Recent analyses have found variations within racial and ethnic groups.



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Fragility Fracture Trends, Treatment, and Prevention

Among 19.5 million hospital discharges of adults aged 50 and over, 2.8% (540,600) were for fragility fractures; among women, these accounted for 3.7% of total hospital discharges, compared to 1.8% among men. Figure 1 shows six major types of osteoporosis fractures among a sample of Medicare patients, with 465,820 fractures of the hip, spine, pelvis, femur, wrist, and humerus identified, and 75% of these occurring among women. Fractures that affect other joints may not lead to contacts with hospitals or health care providers, so the true number of fractures is likely to be much higher.

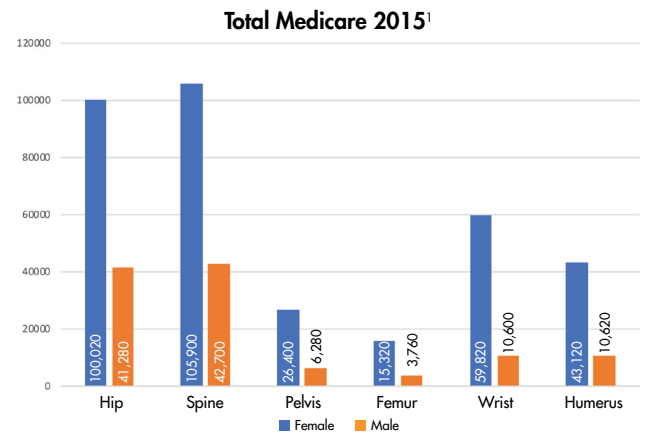
Medicare inpatient claims data of women with postmenopausal osteoporosis show a steady increase in hip fracture incidence starting in 2013, which researchers believe may be related to “treatment gaps” caused by decreases in DXA testing, the smaller number of providers performing DXAs, and patients suspending or ending treatment with bone-strengthening medications due to concerns over rare adverse events. Use of anti-osteoporosis medications reached a high of 31 million in 2008 but decreased to 14.7 million in 2012, according to a study of commercial pharmacy data.

An initial fragility fracture increases the risk for a second one—by as much as 37% at the same fracture site to nearly seven-fold for different sites. Preventing secondary fractures through health education, BMD testing, and referral tools such as the Fracture Liaison Service, Own the Bone, and Capture the Fracture could help reverse these trends.

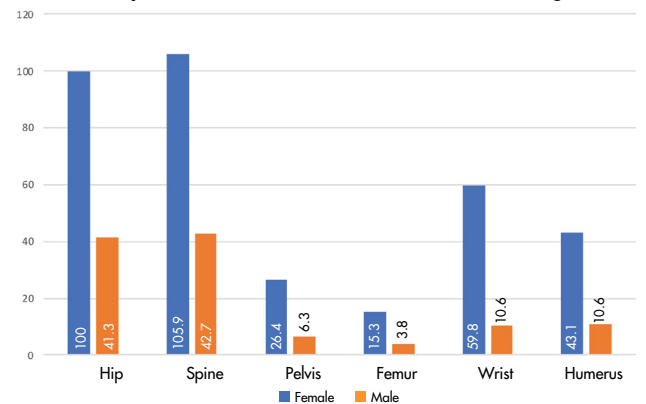
Research needs include new drugs and therapies to treat the condition, heal faster, and prevent additional fractures; changes to treatment care approaches; culturally appropriate outreach and education to Hispanic and Black communities; and funding to test the effectiveness of new therapies and treatments.

For more information and sources of data quoted in this document, visit the chapter on Osteoporosis (4th Edition) and Fast Facts sheet on Osteoporosis at boneandjointburden.org.

Incidence of Major Osteoporotic Fractures by Sex in Medicare Database, United States 2015



Incidence per 1,000 Beneficiaries with a Fracture Diagnosis²



¹ 5% sample times 20 (calculated value).

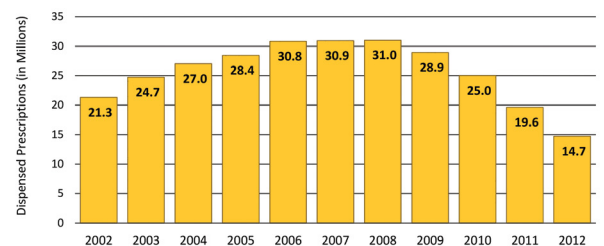
² Total Medicare incidence divided by 1,000 (calculated value).

Source: Centers for Medicare & Medicaid Services. Chronic Conditions Data Warehouse, 100% Medicare Files, 2015.

<https://www2.cdcdata.org/web/guest/about-ccw>. Accessed December 15, 2018

Fig. 1

Nationally Estimated Number of Dispensed Prescriptions for Oral Bisphosphonates in US Outpatient Retail Pharmacies, 2002-2012



¹ Alendronate, risedronate, and ibandronate.

Source: Wysocki, D.K. and P. Greene, Trends in osteoporosis treatment with oral and intravenous bisphosphonates in the United States, 2002-2012. *Bone*, 2013. 57(2): p. 423-8. Reproduced with permission.

Fig. 2



About the United States Bone and Joint Initiative

The United States Bone and Joint Initiative (USBJI) is part of the worldwide multi-specialty campaign to advance understanding, prevention, and treatment of musculoskeletal disorders through education and research.

To learn more, visit usbji.org.