

Upright Citizens

Stand strong and tall with this bone-building advice.

BY KAREN ASP

DESPITE THE SKELETON'S morbid associations, bone is very much living tissue, just like skin and hair. Our bodies are constantly producing new bone and losing old bone; growth outpaces loss until bone mass peaks in our 20s, says Andrea Singer, MD, chief medical officer of the National Osteoporosis Foundation. After that, loss slowly overtakes growth (that's why it's so important to build up bone in our early years). In women, age-related decline in estrogen can accelerate this process—potentially leading to up to a 20 percent decrease in bone density in the five to seven years following menopause. Still, Singer maintains that “weak bones aren't a normal part of aging.” Genetics do affect risk, but through medication and lifestyle choices, you can help prevent fractures. Start by boning up on these rules:

1 FEED YOUR SKELETON

A recent study found that postmenopausal women ages 45 to 65 who stuck to a Mediterranean diet—high in veggies, fruits, cereals, and olive oil; moderate in fish and wine; low in dairy and meat—were less likely to have lower bone mass. Researchers suspect the women were getting adequate amounts of nutrients (including beta-carotene, selenium, magnesium, and vitamins C, E, and K) that aid in bone formation or help guard against damage.



2 HEFT MORE WEIGHT

While traditional strength training, in which you typically crank out multiple sets of eight to 12 reps, has been a go-to choice for healthy bones, you might also consider high-intensity resistance and impact training (HiRIT), in which you amp up the weight to at least 80 percent of the maximum you can lift just once. When postmenopausal women with low to very low bone mass did 30 minutes of HiRIT twice a week, their bone density and strength increased, according to a 2017 study. “It also helped with kyphosis—the slouched posture known as dowager’s hump—as well as improved balance, function, and quality of life,” says Belinda Beck, PhD, study senior investigator and professor of exercise science at Griffith University in Australia.

3 POUND THOSE BONES

Repetitive force causes fluid to flow across cells, triggering the release of chemicals that break down and rebuild bone. In a 2017 study, doing just one to two minutes of weight-bearing activity daily (like running, low jumping, skipping rope, or sidestepping) was associated with

4 percent better bone health. “The rate of loss in bone density in older women is about 1 percent per year, so you’re essentially buying back four years’ worth of decline,” says lead study author Vicky Stiles, PhD, senior lecturer in sport and health sciences at the University of Exeter in the United Kingdom.

4 GET ON YOUR FEET

The more that women in their early 60s move, the stronger their bones, according to a study in the *Journal of Public Health*. For every 1,415 extra steps a woman took (they averaged 1,371 to 19,294 steps per day), researchers saw increased bone density, specifically in the hip, a common site of fractures. “The lesson is simple: Use your legs—or lose your bones,” says study coauthor Fraser Birrell, PhD, of Newcastle University in the UK.

5 POP A PROBIOTIC

Women who took the probiotic supplement *Lactobacillus reuteri* 6475 daily lost half as much bone density in their legs after a year as women taking a placebo, found a study in the *Journal of Internal Medicine*. The reason might have to do with how the “good” bacteria reduce intestinal inflammation, which may result in reduced activation of bone-degrading cells, says lead author Mattias Lorentzon, MD, PhD, professor and chief physician of geriatric medicine at Sahlgrenska University Hospital in Sweden. Study subjects were 75 to 80 years old, but Lorentzon believes results would be the same for younger women.

6 HIT THE MAT

In a 2016 study of women whose average age at the start was 68, doing 12 yoga poses (see sciatica.org) daily for two years increased bone density. In the spine, it improved more in women who practiced yoga than in those who took prescription meds for bone loss. “Yoga pits one set of muscles against another, directing beneficial force where the muscles attach to the bones,” says Loren M. Fishman, MD, study principal investigator and medical director of Manhattan Physical Medicine and Rehabilitation. It also improves balance, strength, coordination, and range of motion, helping you stand firm for the long haul.

ONE
IN
TWO
WOMEN OVER
AGE 50 IN THE U.S.
WILL HAVE AN
OSTEOPOROSIS-
RELATED FRACTURE
IN HER LIFETIME.
OSTEOPOROSIS
LITERALLY MEANS
“POROUS BONE.”