

))) Listen to Your...

# BONES

There's nothing scary about your skeleton. Its 206 heroic bones support your every move, so use these strategies to keep your framework strong.

BY SARA ALTSHUL ILLUSTRATION BY MARK ALLEN MILLER

## BONES ARE LIKE FACTORIES

Though they appear to just sit there, bumpy and rocklike, bones are really busy worker bees. They manufacture and store marrow, a stem cell-rich substance that produces red and white blood cells. Your bones also constantly break down and rebuild themselves in a process called remodeling, which keeps your skeleton strong, helps it adapt when your weight changes, and regulates how much calcium is in your blood and tissues.

*Arms account for almost half of all adult broken bones.*

*The smallest, lightest bone is the stapes, in your middle ear.*

## YOUR SKELETON LOVES A GOOD WORKOUT

You can bulk up your bones by putting them under tension and pressure, so high-impact moves like jogging, tennis, or stair-climbing are ideal, says Kathleen D. Little, Ph.D., an associate professor of exercise science at Cleveland State University. Impact bends the bones a little, making certain cells attract calcium, she says. Oh, and your bones like weight training, too. They're not asking for much: only 10 minutes of exercise a few times a day. Most important is to get up and do *something*. Your skeleton lives by the use-it-or-lose-it principle, which is why astronauts lose bone mass in space with no gravity to work against.



ADDITIONAL SOURCES: VICTORIA J. DRAKE, PH.D., MANAGER, MICRONUTRIENT INFORMATION CENTER, LINUS PAULING INSTITUTE, OREGON STATE UNIVERSITY; KAREN KEMMIS, D.P.T., SPOKESPERSON, THE NATIONAL OSTEOPOROSIS FOUNDATION; CONNIE WEAVER, PH.D., DISTINGUISHED PROFESSOR AND NUTRITION SCIENCE DEPARTMENT HEAD, PURDUE UNIVERSITY, WEST LAFAYETTE, IN; LAURI WRIGHT, PH.D., R.D.N., ASSISTANT PROFESSOR OF NUTRITION, UNIVERSITY OF SOUTH FLORIDA; AND SPOKESPERSON, ACADEMY OF NUTRITION AND DIETETICS; VANESSA YINGLING, PH.D., DEPARTMENT OF KINESIOLOGY, CALIFORNIA STATE UNIVERSITY, EAST BAY



More than a quarter of the bones in your body are in your hands (54).

### GIVE THEM THE RIGHT FUEL

Calcium is key: If there's not enough onboard, your body will rob this mineral from your bones to use for other critical tasks (including keeping teeth strong, contracting muscles, and holding your weight steady). The result, of course, is weaker bones. More than a third of us don't get enough calcium, says Taylor C. Wallace, Ph.D., senior director of science policy for the National Osteoporosis Foundation. And about 70% of us don't meet our need for vitamin D, which helps you absorb the mineral. Aim for 1,000 mg of calcium and 800 IU of vitamin D a day. Women over 50 need more: 1,200 mg of calcium and 1,000 IU of vitamin D. If you're not hitting those marks with foods like milk, yogurt, tofu, and calcium-fortified orange juice, take supplements.

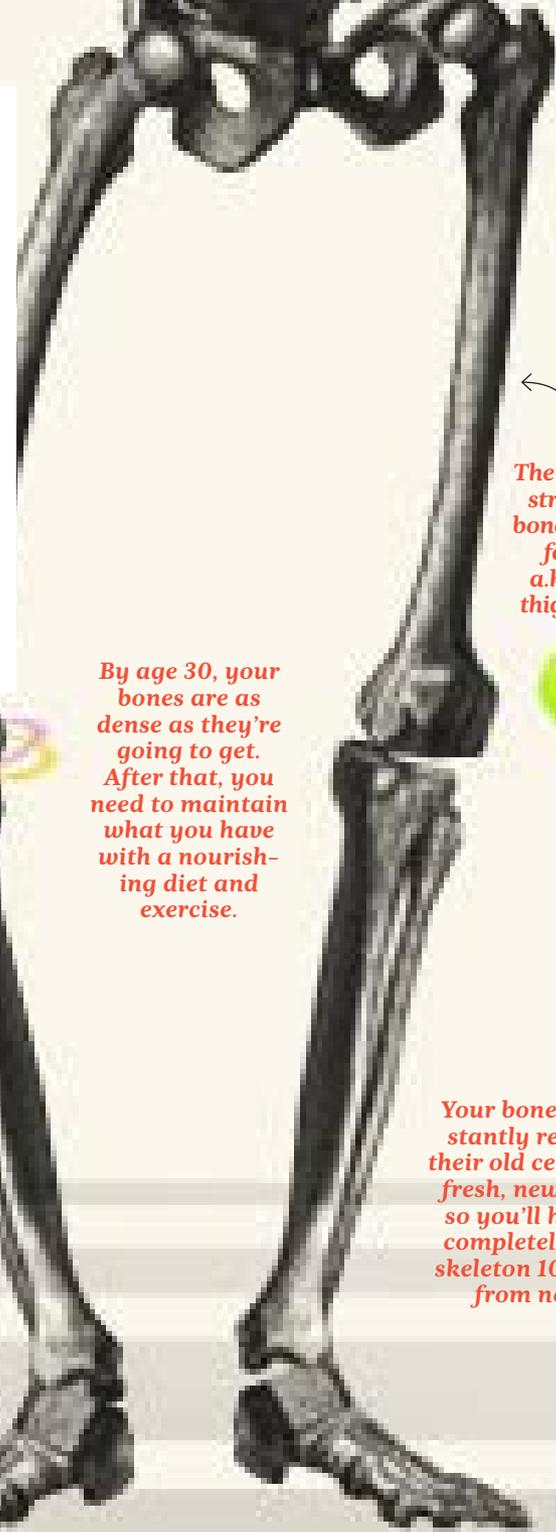
### AGE-PROOF YOUR ARMATURE

If bones had feelings, they'd fear menopause (OK, and maybe skateboarding). Thanks to dropping estrogen levels, you can lose up to 20% of your bone density within five to seven years after your last period, says Andrea J. Singer, M.D., director of bone densitometry at MedStar Georgetown University Hospital in Washington, D.C. That can set you up for osteoporosis, the disease that makes your skeleton lacy and fragile. So be sure to get enough calcium and exercise *before* menopause.



Each foot contains 26 bones.

By age 30, your bones are as dense as they're going to get. After that, you need to maintain what you have with a nourishing diet and exercise.



The longest, strongest bone is your femur, a.k.a. the thighbone.

Your bones constantly replace their old cells with fresh, new ones, so you'll have a completely new skeleton 10 years from now.



### BAD-TO-THE-BONE MOVES

Your skeleton really wants you to avoid:

**Slurping sodas.** Colas contain phosphorus (as do many processed foods), which increases your kidneys' workload and makes it harder for them to maintain a healthy calcium-phosphorus balance—and that's bad for bones.

**Drinking it black.** Some, but not all, studies show that drinking 300 to 500 mg of caffeine daily (that's about two to three 8-oz cups of coffee) causes calcium loss over time, especially for older women. Adding a few tablespoons of milk to your joe may offset the loss.

**Salt, salt, and more salt.** Too much sodium leaches calcium from your body. Aim to stay below 1,500 mg a day.