



# BUILDING BETTER BONES

## Bouncing, Leaping and Lunging Our Way to Bone Health

by Kathleen Barnes

Success in the quest for stronger bones is possible at any age.

### Start and Stay Young

“Peak bone strength is reached by the age of 30, so it’s vital for young people to engage in dynamic impact movement through their teen years and 20s,” says Sherri Betz, chair of the American Physical Therapy Association bone health group, a doctor of physical therapy and geriatric-certified specialist with a private practice in Santa Cruz, California.

Engaging in sports during our youthful developing years helps build strong, wide and dense bones that will carry us well into old age, literally giving us a firmer base to stand on. It’s paramount to encourage children and young people to be physically active and for us all to continue with athletic activities throughout adulthood to preserve the bone health peak we reach at age 30.

### Optimal Bone Exercises

“Adulthood is a perfectly good time to start building and improving bone fitness and health. The outcome is just a little bit less,” says Steven A. Hawkins, Ph.D., a professor of exercise science at California Lutheran University, in Thousand Oaks.

“Bone responds to exercise much like muscle,” explains Larry Tucker, Ph.D., professor of exercise sciences at Brigham Young University, in Provo, Utah. “Bone doesn’t grow, *per se*, but like muscle, it does get denser and stronger according to the stresses and strains put on it.”

“The key is to put a heavy load on bones to stimulate them to grow,” Hawkins notes.

Standing exercises are recommended, because the bones most likely to benefit from strengthening

exercise are 30 targeted leg and hip bones, says Tucker.

“Surprising the bone is your best bet,” points out Betz. “Don’t do the same things over and over again at the same time, either repetitive exercises like running or weight lifting or consistent combinations; even high-intensity exercise can diminish the effects.”

The most highly recommended exercises involve those that require changing directions, bouncing and leaping—from basketball to lively dances, and even some intense yoga postures. Hopping and jumping are probably the best way to strengthen bones, but must be done in the proper way, according to Tucker and others. Research by Tucker’s team published in the *American Journal of Health Promotion* studied the effects of jumping on hip bone density in premenopausal women. It may seem counterintuitive, but Tucker reports that most benefits are gained from jumping as high as possible, resting 30 seconds and repeating up to 10 times twice a day in intervals at least eight hours apart. “If you jump continuously, the exercise loses effectiveness pretty quickly,” he says.

Those that enjoy circuit training should do something else during the 30-second rests between repetitions, Tucker advises. Because it’s the jolt of jumping that stimulates bone strength, using a mini-trampoline or another cushioning device to lessen impact on the body won’t increase bone density.

Betz cautions against starting a jumping program too quickly. “Proper alignment, balance and body awareness come first,” she says. “Do 20 to 25 heel raises in a row, a full squat with good alignment and a full lunge to ready the body for a jumping program.” Such strengthening safeguards against falling and injury.

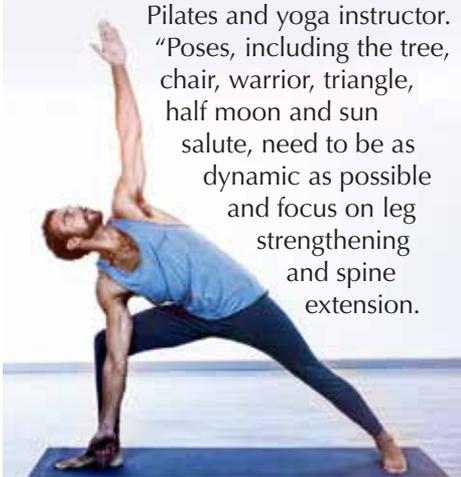
### Walking Isn’t It

Walking, running, weight training

and other repetitive exercises don't improve bone density, says Hawkins. "Walk and do other repetitive exercises for cardiovascular health and general fitness. While these might help maintain current bone strength, they won't improve bone density." Walking reduced the risk of hip fracture by 41 percent for postmenopausal women walking four hours a week, with fewer

## YOGA FOR BONES

Yoga doesn't involve bouncing or jumping for the most part, but it can be helpful in maintaining strong bones, says Sherri Betz, a Santa Cruz, California, physical therapist and Pilates and yoga instructor. "Poses, including the tree, chair, warrior, triangle, half moon and sun salute, need to be as dynamic as possible and focus on leg strengthening and spine extension."



falls due to improved strength, balance and other factors per the *Journal of the American Medical Association*.

Numerous studies confirm that exercise of any kind keeps us healthy, but for bone health, the answer is to start weight-bearing exercises early and sustain the practice for a lifetime.

*Kathleen Barnes is a health writer and author of [The Calcium Lie II: What Your Doctor Still Doesn't Know](#), with Dr. Robert Thompson. Connect at [KathleenBarnes.com](#).*

## BEST BONE TEST



The most common way of testing bone density is a DEXA (dual-energy X-ray absorptiometry) scan. The result is called a T-score and is one case where a zero is perfect. A score of +1.0 to -1.0 is considered normal. A score between -1.0 and -2.5 is considered osteopenia, or weakened bones. A score lower than -2.5 indicates some level of osteoporosis.

The National Osteoporosis Foundation recommends bone density testing for women and men older than 65 and 70, respectively, and those that are petite, prone to breaking

bones or have other risk factors.

For more information, visit [Tinyurl.com/BoneDensityTest](#).