The Best Exercises for Building Strong Bones That Last a Lifetime

4 MIN READ

MAY. 16, 2025

BY DANN ALBRIGHT, CSCS

There are two times in life when your risk of bone fractures increases dramatically: midlife and older age.

But whether you're 30 or 65, it's never too late to build strong bones and set yourself up for resilient, healthy aging.

An **extensive study on fractures** found that there's a notable increase in broken bones between 40 and 50 years of age, and another between 70 and 80. Whether you're a woman entering perimenopause, a man over 50, or someone planning to stay **active into your 70s and beyond**, building strong bones now can set you up for decades of vitality.

Fortunately, the research is clear: resistance training can help you avoid bone loss and build the strength and capability to avoid falls. **Lifting weights is good for your brain**, too, so you'll reap extra benefits while you strengthen your bones.

We'll talk about five exercises that are great for maintaining strong, resilient bone density. But first, we need to talk about an important concept.

For Healthy Bones, Lift Heavy

To build strong bones with resistance training, you'll need to lift enough weight to put stress on your bones. That means lifting heavy. Possibly heavier than you've lifted in the past.

A **2023 meta-analysis** of studies focused on postmenopausal women found that lifting at a moderate intensity three times per week was the most effective in improving bone mineral density. They defined moderate intensity as 65–80% of one-rep max (1RM).

(At 65% of your 1RM, you should be able to complete about 15 repetitions before you can't do another one. At 80%, it's about 8 repetitions.)

How to Find the Right Weight for Bone-Building Resistance Training

Here's how to figure out how much weight you should be lifting:

- Choose a weight you think you can lift eight to 12 times, but no more than that.
- Do a set of eight to 10 repetitions. By the end of the set, you should feel like you could only do a couple more reps.
- As you progress your workouts, add reps when you feel like you can do a couple more.
- Once you've added two reps (for example, if you were doing sets of eight and you're now doing sets of 10) in two consecutive weeks, add weight and cut the reps back down.

In practice, that might look like lifting 60 lbs. for 10 reps for a couple weeks. Then, when you feel stronger, adding two more reps for a total of 12. Once you've done 12 reps two weeks in row, you go back down to 10–but this time with 65 lbs.

If you're not sure how to choose the right weight or you want to make sure you're lifting heavy enough, a few sessions with a personal trainer will get you set for success.

Lifting for Bone Health Is a Long-Term Project

Most studies show that lifting with moderate to heavy weight two to three times per week will help avoid bone loss. But you'll need to stick with that regimen for a while. It can take several months, or up to a year, to really start making a difference in your bone density.

Fortunately, resistance training is one of the **best habits you can build for supporting longevity**. We're playing the long game here. Make investments early and they'll pay off for decades. Push yourself. It's worth it.

The Best Exercises for Building Bone Density

Researchers have tested a wide variety of exercises for building bone density and have shown that almost any type of lifting can have benefits when it comes to building healthy, strong bones.

In general, you'll want to focus on exercises that work the muscles attached to your hip or pelvis and your spine. You can use **free weights or machines** as long as you're working hard enough. Free weights have some advantages when it comes to long-term bone health.

We'll start with three classic exercises: squats, deadlifts, and bench press. These three lifts make up traditional powerlifting. Why these three? Because they're highly functional exercises and because powerlifters show some of the **highest bone mineral densities on record**.

1) Squats

There may be no better exercise for bone health than the squat. It uses the biggest muscles in your lower body, all of which are attached to your hip and femur. Those

are prime locations for bone loss, so keeping your quads, hamstrings, glutes, and deep core muscles working is highly relevant to our goal.

Here’s a progression that will take you from squatting for the first time to building serious strength and bone density:

1. **Bodyweight squat**
2. **Goblet squat**
3. **Dumbbell front squat**
4. **Barbell back squat**

Balance bonus: To improve your balance while making the muscles around your hip even stronger, try **split squats**. By focusing on one leg at a time, you’ll work a lot of stabilizer muscles, which can help prevent falls. Plus you can get a fantastic workout without adding much weight.

2) Deadlifts

The deadlift is another fantastic lower body exercise that targets muscles around your hip—but also has the bonus of strengthening your lower back, which is great for resilient aging.

Here’s a progression for deadlifting:

1. **Good morning** (start without weight)
2. **Dumbbell Romanian deadlift** (RDL)
3. **Barbell RDL**
4. **Barbell deadlift**

Balance bonus: Want to add more stabilizer action and improve your balance while activating all the muscles of the deadlift? **Single-leg RDLs** are your friend here. Even unweighted, they can be a big challenge.

3) Bench press

While bench pressing doesn't directly involve muscles anchored to your spine, it's a great upper body exercise that activates some of the most important muscles you'll need for daily life.

Here's how you can start building pressing strength to work up to the full bench press:

1. 1 **Knee push-ups**
2. 2 **Push-ups**
3. 3 **Dumbbell bench press**
4. 4 **Barbell bench press**

Two Bonus Exercises for Stability and Bone Strength

Integrating three lifts above into your workout routine will help you prevent bone loss, improve bone density, and give you the functional strength you need to continue aging well. But if you want to go above and beyond, try adding these two exercises that will supercharge your stability and bone density:

Farmer's carry

The **farmer's carry** is one of the most overlooked functional exercises around. It's

simple: pick up two heavy weights and walk with them. But it helps keep your grip strong, works important muscles for stability, and—if you use heavy enough weights—could put enough stress on your skeletal system to promote bone growth.

There's really no progression for this one—just pick up two dumbbells, kettlebells, or anything else heavy, and walk. Keep the weights by your sides and squeeze your shoulders down and back, then try to keep your hands and upper body as still as possible while you walk.

Running

When you run, your body feels forces of multiple times your body weight. That's a huge stimulus for bone growth. And because you can use running for building both **VO2 max and zone 2 cardio**, which are linked to longevity, it's a fantastic activity for super agers.

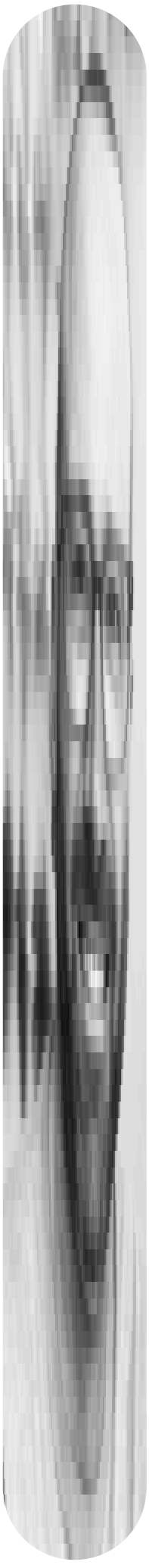
If you're not already running, it's best to start by alternating between running and walking. Start with 30 seconds of running and a minute of walking. Do that for 20 minutes. When the running starts to get easier, switch to a minute of running and 30 seconds of walking. Keep shortening the walking time until you're spending most of your time running, and you'll be strengthening bones in no time.

You don't need to tailor your entire workout for bone health. But because the exercises above are good for general fitness as well, you can't go wrong by building your workouts around them.

Remember that it takes a long time to build bone density. Start resistance training (and running, if you feel so inclined) today and stick with it. You'll be stronger, more resilient, and better prepared for a long life full of fulfilling activities.

*The information provided in this article is for educational and informational purposes only and is not intended as health, medical, or financial advice. Do not use this information to diagnose or treat any health condition. Always consult a qualified healthcare provider regarding any questions you may have about a medical condition or health objectives.**Read our disclaimers**.*

WRITTEN BY:



Dann Albright, CSCS