

CAN HIGH-INTENSITY RESISTANCE TRAINING HELP POSTMENOPAUSAL WOMEN?

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Breaking the Myth: Lifting Weights After Menopause Is Not Only Safe—It's Empowering

For years, women who were postmenopausal and diagnosed with osteoporosis have been told one thing: avoid lifting heavy weights. The fear of fractures, injuries, and strain has long discouraged resistance training in this group. But what if that advice is wrong? What if lifting weights is not only safe—but essential? A groundbreaking Australian study, LIFTMOR (Lifting Intervention for Training Muscle and Osteoporosis Rehabilitation), set out to challenge that long-standing narrative. Its goal? To determine whether high-intensity resistance training could actually help postmenopausal women with low bone mass.



“WHAT IF LIFTING WEIGHTS IS NOT ONLY SAFE - BUT ESSENTIAL?”

The Study: Muscle, Bone, and a Bold Hypothesis

The LIFTMOR study recruited postmenopausal women with a T-score of less than -1.0, indicating osteopenia or osteoporosis. For context, bone mineral density (BMD) is a measure of how much calcium and minerals are packed into a segment of bone. A T-score compares a woman's bone density to that of a healthy 30-year-old. A score from -1.0 to -2.5 indicates osteopenia; below -2.5 indicates osteoporosis.

Participants were split into two groups and followed an 8-month exercise program.

- **The Control Group** (52 women): Focused on low-intensity balance and mobility exercises twice a week. Think gentle lunges, calf raises, and stretches with body weight or up to 3 kg hand weights.
- **The HiRIT Group** (49 women): Participated in supervised High-Intensity Resistance and Impact Training (HiRIT) sessions twice a week. This group performed exercises like deadlifts, overhead presses, back squats, and impact-loading jump movements—gradually progressing to lifting 80–85% of their one-rep max over time.

The Results: Stronger Bones, Stronger Women

Before and after the study, researchers measured lumbar spine and femoral bone density, as well as functional strength indicators like the speed of standing from a chair and leg/back strength. The results were striking. (Cortical thickness is the thickness of the outer layer of the bone. BMD is the amount of minerals, like calcium, in the bone)

- **Femoral neck (hip) bone mineral density (BMD):** Increased significantly in the HiRIT group (+0.3g/cm²) and declined in the control group (-1.9 g/cm²).
- **Lumbar spine BMD:** Rose by 2.9 g/cm² in the HiRIT group versus a decrease of 1.2g/cm² in the control group.
- **Femoral neck cortical thickness (a key indicator of fracture resistance):** Doubled in the HiRIT group (13.6mm vs. 6.3mm).
- **Functional performance:** Improved across all measures in the HiRIT group.
- **Injuries?** One participant had a minor back spasm that resolved quickly.



FEMORAL NECK CORTICAL THICKNESS DOUBLED IN HIRIT GROUP

What This Means for You

Resistance training—done safely and with proper guidance—can dramatically improve bone density and functional ability, even after menopause. If you're postmenopausal, **lifting weights may not just be beneficial—it might be life-changing!**

The message is loud and clear: it's never too late to start building strength. Starting light and progressing gradually, over time and under supervision if needed, can help you build both bone mass and strength.

One thing to note about the control group is that they were exercising. But their weights never got above 3kg. Any kind of exercise is good, but to build muscle and bone mass and strength, we need to engage in resistance training.

**“FUNCTIONAL
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As women move through menopause, it's common to see a decline in bone density, size, and strength. This shift can increase the risk of falls and fractures—but it doesn't have to be inevitable.

IN LIFTMOR, the HiRIT group of women saw significant improvements—not just in bone mineral density (BMD), but also in cortical thickness, which is the strong outer layer of bone. In fact, the femoral neck—the critical area where the thigh bone connects to the hip—nearly doubled in outer thickness within just eight months. That's not just impressive—it's transformative.

The LIFTMOR study did more than lift weights. It **lifted expectations!** It proved that strength doesn't simply vanish with age; sometimes, it's just waiting to be awakened. For postmenopausal women, this is incredibly hopeful news: it's possible to rebuild strength, reduce injury risk, and reclaim confidence in your body.



“THINK OF IT LIKE A RETIREMENT ACCOUNT: STARTING EARLY IS IDEAL, BUT STARTING LATER IS STILL PROFOUNDLY VALUABLE.”

Now What?

A powerful takeaway from this research: It's never too late—or too early—to start. Building and maintaining muscle mass, bone strength, and overall resilience is essential for long-term health and independence. Think of it like a retirement account: starting early is ideal, but starting later is still profoundly valuable.

Importantly, the women in the study didn't jump straight into heavy lifting. For the first two months, they used only their body weight to perfect their form and build a solid foundation. Gradually, they began to add small amounts of resistance, progressing safely and effectively.

The results speak volumes. Bone density in the spine and hips increased significantly, with higher mineral content translating into stronger bones that are less likely to break. A higher BMD is closely associated with a lower risk of fracture—an outcome that can greatly enhance quality of life as we age.

So, if resistance training is already part of your wellness routine, keep going—you're investing in your future strength. And if you haven't started yet, today is a perfect day to begin. Start light, focus on form, and take the first step toward a stronger, more empowered you.

“IT'S NEVER TOO LATE—OR TOO EARLY—TO START”