

Osteoporosis Bone Loading

A supervised strength-and-impact program that builds bone, sharpens balance, and builds real heart-and-lung fitness — lowering your risk of falls and fractures. Grounded in the landmark **LIFTMOR** research, and leveled up the Forward way.

Supervised 1-on-1

Evidence-based

Individualized to you

Covered by most insurance

— WHAT THE PROGRAM IS

Strong bones are built, not just protected

Bone is living tissue — it gets stronger when you challenge it. This program uses **progressive strength training** (lifting with a barbell) paired with **impact loading** (hops and heel drops) to signal your body to lay down new bone and hold onto the bone you have.

It's modeled on the **LIFTMOR trial** — research in women with low bone density that showed supervised strength training plus impact safely improved bone density in the spine and hip, along with strength, posture, and balance. This isn't fragile "take it easy" rehab. It's a confidence-building program that treats you as capable — coached every step by a **Doctor of Physical Therapy**, a movement specialist trained at the doctoral level.

— IS THIS PROGRAM RIGHT FOR ME?

Who it's for

You don't need a stack of test results to know your own body. If you're **feeling weaker, your balance isn't what it used to be, and the years are adding up** — this program is for you. It's also a clear fit if you have, or are at risk for:

- ◆ **Osteoporosis** (low bone density on a DEXA scan)
- ◆ **Osteopenia** (early / mild bone loss)
- ◆ **A low-trauma or "fragility" fracture** (a break from a minor fall)
- ◆ **Post-menopausal bone loss**
- ◆ An **elevated fall or fracture risk**
- ◆ On (or considering) **bone medication** and want to add exercise

You can advocate for yourself. You don't have to wait to be told — ask your doctor for a bone-density (DEXA) scan or a referral to Forward, or reach out to us directly. Every patient starts with a **physical therapy evaluation** so we tailor the program to you and make sure it's safe to begin. And connecting is easy *by design*: Forward is **fully independent** and works with every major health system in the area — UW Health, SSM, and more — backed by a directory of **500+ local providers**, so coordinating with your doctor is simple.

— WHAT TO EXPECT

Your visit, start to finish

Each session is a **full hour, one-on-one** with your Doctor of Physical Therapy, and runs in the same clear order every time:

- ◆ **Movement prep** — mobility and warm-up to move well
- ◆ **Main lifts** — your strength work, coached rep by rep
- ◆ **Impact & balance** — bone-building hops plus fall-prevention drills
- ◆ **Conditioning** — heart-and-lung work, precisely dosed (more below)

You'll **progress through phases as your body adapts** — not on a fixed calendar. The original research followed a set timeline; we do it your way: you move to the next phase when your **objective results** (strength, balance, and performance tests) and your **own feedback** both say you're ready. Weights start light while you learn the movements, then climb steadily as you get stronger.

Everything is supervised, scaled to your ability, and adjusted for any other conditions you have — you're coached through every rep, never handed a heavy bar and left on your own.

THE EXERCISES, IN PLAIN TERMS

What you'll actually do

Deadlift **STRENGTH**

Lifting a weighted bar from the floor — the single best exercise for loading the spine and hips safely.

Squat **STRENGTH**

Sitting back and standing tall against resistance — builds legs, hips, and everyday get-up strength.

Overhead Press **STRENGTH**

Pressing weight overhead — loads the upper spine and shoulders and helps posture.

Impact Work **BONE**

Heel drops, hops, jumping, and jogging — progressing to box jumps and drop-landings from a raised surface. Progressive impact that signals bone to grow stronger.

Balance & Neuro **FALLS**

Standing and reactive-balance drills so you're steadier on your feet and less likely to fall.

Carries & Conditioning **FITNESS**

Loaded walks plus bike/rower/treadmill work to build stamina and whole-body strength.

HOW YOU PROGRESS

The four phases

Week ranges are typical guideposts from the research — you advance on your data and how you feel, not the calendar.

WEEKS 1–4

Foundation

Learn the movements with lighter loads.
Build confidence and clean technique.

WEEKS 5–12

Progressive

Weights climb steadily. Add impact volume and moderate conditioning.

WEEKS 13–24

Peak

Your heaviest, most powerful phase — full strength and impact stimulus.

WEEK 25+

Maintenance

Hold your hard-won gains. Re-test progress about every 12 weeks.

THE FORWARD DIFFERENCE

Where exercise physiology meets physical therapy

Where the research lab meets the real-world clinic — leveling up LIFTMOR

Strong bones don't count for much if you can't climb a flight of stairs.

The LIFTMOR studies proved the lifting-plus-impact recipe works — in a controlled research lab. **Forward's job is connecting that research to your real life.** We also add something almost no other PT clinic does: we **precisely dose your cardio conditioning using the Talk Test**, a simple, research-backed way to train in the exact intensity zones (your ventilatory thresholds) that build heart-and-lung fitness — not just guesswork. And because much of it is weight-bearing, it keeps loading your bones — especially the hip — while it builds your engine.

So this isn't only about stronger bones. You become **fitter, steadier, and more resilient** — with a heart and lungs trained as deliberately as your skeleton — the kind of resilience you carry with you for life.

And it's all **built on Forward's own technology** — your lifts, tests, and milestones are tracked, and your program is progressed from your real results, not a one-size-fits-all handout.

EASY ZONE

You can hold a comfortable conversation. Warm-up and recovery.

MODERATE ZONE

Short sentences, a breath between phrases. Your fitness-building zone.

HARD ZONE

Only a few words at a time. Brief, powerful bursts — used sparingly.

— HOW OFTEN

Twice a week is the goal — especially at the start

The research standard — and what we aim for — is **two supervised sessions per week**. This matters most in the **first several weeks**: most people beginning this program are new to structured strength training, so you'll work **one-on-one with your Doctor of Physical Therapy** to learn each movement safely and build real confidence.

A bonus as you progress

OPTIONAL

Once you've built a foundation, you also have access to our **adult resistance-training class — run and programmed by a Doctor of Physical Therapy, and built for the older adult**. A great way to add training, keep your momentum, and stretch your insurance-covered visits further.

Built around your life

FLEXIBLE

Schedules and coverage differ. We'll build the most effective plan your situation allows and give you safe work to continue on your own. A great program done consistently beats a perfect one you can't sustain.



Insurance is accepted

This is **skilled physical therapy** and is covered by most major insurance plans when medically indicated — billed just like your other PT visits. Our team **verifies your specific benefits before you start**, so you'll know what to expect. Questions about coverage? Just ask us.

— OUR COMMITMENT TO YOU

A lifelong partnership — we meet you where you are

Strong bones are a **lifelong commitment**, and so is our support. Our goal isn't to keep you in the clinic forever — it's to **teach you, give you the tools, and build the confidence** to keep going strong on your own, with our team, or any mix that fits your life.

Whether you're just starting out, coming back after a break, or maintaining for years, **we meet you where you are**. For many, our **adult resistance-training class** becomes the natural home for that ongoing work — and if it's not the right fit, we have other options. Whenever you need us, we're here.

— FOR YOUR PHYSICIAN

Clinical summary

This program applies **guideline-concordant exercise for bone health**: supervised, progressive resistance training plus weight-bearing (impact) loading, individualized by a Doctor of Physical Therapy after evaluation and with medical clearance as indicated. It advances across four phases toward compound lifts (deadlift, squat, overhead press) at moderate volume (5×5), paired with impact loading and fall-prevention balance work, with aerobic conditioning dosed to each patient's tolerance. Progress is **objectively re-assessed on a structured outcome battery about every 12 weeks**, and advancement is guided by that data rather than a fixed timeline. Consistent with the LIFTMOR trial and the *Too Fit To Fracture* and ACSM recommendations for exercise in osteoporosis.

- Watson SL, Weeks BK, Weis LJ, et al. High-Intensity Resistance and Impact Training (LIFTMOR). *J Bone Miner Res*. 2018.
- Giangregorio LM, et al. Too Fit To Fracture: exercise recommendations for osteoporosis. *Osteoporos Int*. 2014.
- ACSM Position Stand — physical activity & bone health.

Forward Physical Therapy · Phone **608-561-7733** · Fax **608-561-7763**

This guide is educational and is not medical advice. Talk with your physician before beginning any new exercise program, especially with a history of fracture or spinal conditions.