

YOU HIT THE GYM FOR RIPPED ABS, KILLER ARMS and a tighter booty, but have you ever thought about sculpting stronger bones? Considering more than 6 million Aussies are living with osteopenia – that's low bone density, FYI – it's probs about time you gave it some thought.

A tougher skeletal system will make you stronger and support your bod during intense workouts, plus, weak bones equal fractures and a whole lotta pain – and nobody wants that, right? Luckily, it turns out your workouts can improve your bones (score). Here's what you need to know...

INSIDE STORY

This just in: Your bones are alive. They're more than just static building blocks that keep you together (although that is kind of important), they're living, breathing tissue. They also store your body's minerals, contain the marrow where your blood cells are made and do a solid job of protecting your squishy organs, too. Oh, and because of them, you can move.

To do their job properly, your bones should have a healthy bone mineral density level, which is basically the amount of bone you have in comparison to how big they are, says Jarrod Meerkin, exercise physiologist and founder of Measure Up Health Clinic (measureup.com.au). "Bone density is essentially a measure of how strong your bones are," he adds.

So, what do 'healthy' bones look like, exactly? According to Adrian Holdsworth, personal trainer and national development manager at Fitness First (fitnessfirst.com.au), the inside of your bones should resemble a strong, complicated matrix, kind of like honeycomb. If you have low bone density, however, this structure becomes more brittle and the holes get bigger. "Poor bone density can eventually lead to osteoporosis, which results in a higher incidence of fractures and postural deformities," explains Holdsworth.

AND, ACTION!

To repeat our favourite wellness mantra, prevention is better than cure – so you should totes start working on your bone health *now* and not when you're over the proverbial hill. "Women reach their peak bone density levels between the ages of 20 and 25," says Meerkin. After hitting your peak, your bone density begins to flatline – until you hit menopause, that is, where fluctuations in hormones cause your bone density to deplete.

Because of this, Meerkin says it's best to work on banking as much bone

as possible through exercise. "Women shouldn't rely on what's in their bone bank in their mid-twenties. Instead, you should aim to *increase* your peak bone density beyond this time," he explains. "The higher your bone density is when you go into menopause, the more delayed the decrease will be," he says, which serves to maintain your bone health and lower your risk of developing osteoporosis.

GAME PLAN

Just like it helps your muscles, exercise makes your bones stronger – but not all workouts are made equal. "Exercises that involve impact or ground force are critical to improving and maintaining bone density," tips Holdsworth. Simply put, anything that requires you to work against gravity or lift something heavy will give your bones a boost – which means sports like swimming and cycling aren't all that helpful for your skeleton. Still not sure which workouts are best? Try these:

* *Weight-bearing activities*

Nope, we're not talking about pumping iron (we'll get to that later), we're talking about using your body weight to make you sweat. Brisk walks, hiking, dance classes, running, skipping, Pilates and tennis are great for improving bone health, Holdsworth tips, as they provide the necessary impact to strengthen bones.

* *Resistance training*

As well as toning up your muscles, lifting free weights or hitting the machines can build some serious bone strength, too. You don't even have to go super-heavy to reap the benefits, either. According to a study published in the *Journal of Sports Medicine and Physical Fitness*, doing high reps of light to moderate weights a few times a week can increase your bone mineral density by eight per cent, and even more if you have osteopenia. When it comes to the best resistance moves for bone health, Meerken loves a good ol' squat, deadlift and leg press combo. 

FOOD RULES

Back up your workouts with all the nutrients that your bones need to stay strong



Calcium:

This mineral is a major building block of bone tissue, says nutritionist Robbie Clark (robbieclarknutrition.com).

It's responsible for the construction and maintenance of your bone matrix, but 73 per cent of women aren't getting enough.

Munch on: Milk, yoghurt, cheese, leafy greens, sardines, anchovies, tofu, legumes, nuts and seeds.



Vitamin D:

"The body can't effectively absorb calcium without vitamin D," says Clark, which makes it the second-most important nutrient for bone health.

Munch on: Oily fish (think salmon, mackerel and trout), mushrooms, wholegrains, milk, cheese and eggs.



Vitamin K2:

This vitamin assists in depositing calcium into your bones instead of your blood vessels, which helps keep both osteoporosis *and* heart disease at bay.

Munch on: Leafy greens, parsley, dried basil, Brussels sprouts and asparagus.



Protein:

Not only good for muscle repair, protein makes up 20 to 30 per cent of your bone density and can help heal fractures.

Munch on: Lean meat, poultry, fish, green leafy veg, soybeans and eggs.



Vitamin C:

"Collagen is the main protein in the bone matrix, and vitamin C is essential for collagen production," explains

Clark. It's also a potent antioxidant, which helps protect your bones from free-radical damage.

Munch on: Citrus fruits, tomatoes, chillies and vegetables.



Magnesium:

A key player in the transportation and absorption of bone-loving calcium,

magnesium plays a big part in bone formation. If you're an athlete or prone to stress, Clark recommends chatting to your doc about taking supplements.

Munch on: Dark leafy greens, legumes, nuts, seeds, quinoa, fish and avocado.

BUFF BONES

Fit bodies need a good frame, so get your skeleton into shape with our expert guide