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The Wellness Column

Everything You Need to Know About Osteoporosis and Bone Health - Part 6



When I was first diagnosed with osteoporosis following a DXA scan, I did what many people do: I became afraid of doing what I loved. Could I still cycle? Could I ski? Was jumping dangerous? Even yoga suddenly seemed to contain movements I was supposed to avoid according to my doctor.

Six months later, however, a REMS scan – an ultrasound-based assessment of bone density and quality – indicated that I had been misdiagnosed and that my results were within the osteopenic rather than osteoporotic range. Relieving but all so confusing.

But it reinforced one of the most important lessons from this series: a scan result should never be viewed in isolation. The type of scan, fracture history, medical background, strength, balance and existing fitness all influence both your treatment, as well as what exercise is appropriate.

Either osteopenic or osteoporotic – you should seek a specialist to guide you as an individual. So I decided to book a private session with Mallorca-based personal trainer and Pilates instructor Kate Sotelo, who has a growing focus on women's bone health.

I arrived feeling quietly confident – I cycle, walk, hike and practise yoga – surely I was already doing many of the right things?

I was. But being active and specifically training your bones are not necessarily the same thing.

BONES NEED A REASON TO ADAPT

Walking, cycling, swimming, yoga and Pilates offer enormous benefits in cardiovascular fitness, mobility, balance, flexibility, posture, mental wellbeing and body awareness. What they do not provide, however, is sufficient progressive resistance or impact to significantly stimulate bone.

"An effective bone-health programme should include progressive strength training, appropriate impact, balance, posture and mobility work," Kate explained. "Each plays a different role."

Bone is living tissue, continuously breaking down and rebuilding. When muscles contract against resistance, they pull on the bones; lifting also places force through the skeleton. Provided that the stimulus is sufficiently challenging – and the body has enough nourishment and recovery – bone responds through its natural remodelling process.

This is why resistance training is increasingly regarded as one of the foundations of healthy ageing. It helps preserve muscle, supports the skeleton, improves balance and makes everyday activities easier. Stronger muscles may also reduce the likelihood of falling and improve our chance of protecting ourselves if we do.

During my assessment, Kate looked beyond my scan results. She considered my injury history, current activity and exercise experience, then assessed my posture, mobility, balance, coordination, strength and movement patterns.

I already had good body awareness and a solid fitness base. My programme could therefore include squats, deadlifts, loaded carries, pushing and pulling movements, with exercises designed to improve trunk stability and resist

unwanted rotation.

Someone older, weaker, in pain or with previous vertebral fractures would require a very different starting point.

HOW HEAVY IS HEAVY ENOUGH?

Many women have spent years using very light weights, partly from fear of injury or becoming bulky. Light weights are a sensible beginning – but they should not remain the long-term destination.

Kate suggests choosing a weight that can be lifted for approximately eight repetitions with good technique, but which makes the final repetitions genuinely challenging. Other experts favour fewer repetitions with heavier loads, particularly after menopause. The precise number is less important than the shared principle: the body must eventually be challenged sufficiently to adapt.

This is known as progressive overload. As strength improves, the exercise gradually becomes harder by increasing the weight, repetitions, sets or complexity. Doing exactly the same routine with the same light weights isn't definitely not going to stimulate either muscle or bone.

Technique must come first. Kate had me practising with a broom handle held at my back at first – demonstrating a well-executed deadlift movement involving hinging from the hips while maintaining a controlled, neutral spine and neck – so you are not rounding forwards to haul up a heavy weight. With osteoporosis, loaded or deep spinal flexion, forceful end-range twisting and movements combining bending with rotation needs modification, particularly following vertebral fractures.

But excessive caution carries its own risk. Fear can lead people to move less, gradually losing strength, balance and confidence. Osteoporosis should not make us afraid of our bodies; we need to be taught to load them more intelligently.

SHOULD WE ALL BE JUMPING?

Impact creates rapid ground-reaction forces that can stimulate bone. Depending on the individual, this might include heel drops, stair climbing, jogging, hopping, skipping or jumping.

However, "just start jumping" is not responsible advice – particularly for women with low bone density. Research into jumping alone has produced mixed results, with clearer benefits in younger women than in older populations. Some studies suggest it may help postmenopausal women maintain bone rather than substantially rebuild it.

Before introducing impact, Kate considers bone density, fracture history, joint health, pain, lower-body strength, balance and landing control. Can the person climb stairs comfortably, perform a controlled squat or sit-to-stand (without wobble or need for support), rise onto her toes, stand on one leg and manage a small step-down without instability?

You might begin with brisk walking, stairs, deliberate stomping or controlled heel drops before advancing to small jumps, hopping or skipping. The aim is not impact at any cost, but the right level of impact for that particular body.

Evidence from the LIFTMOR trial has shown

that supervised high-intensity resistance and impact training can improve bone density and physical function in postmenopausal women with low bone mass. Crucially, this was a closely supervised programme – not an instruction to attempt heavy lifting and jumping without preparation.

MORE THAN A NUMBER ON A SCAN

A good bone-health programme should also address the areas most vulnerable to fracture. Squats, lunges, step-ups and hip hinges load the hips. Rows, loaded carries and appropriately selected back-strengthening exercises support the spine and posture. Grip work, carrying weights and progressively introduced wall or incline push-ups can help load the wrists and forearms.

Balance, coordination and reaction speed may not directly increase bone density, but they can prevent the fall that causes a fracture. Standing on one leg, moving in different directions and learning to take a rapid corrective step are not optional extras; they are part of the protection plan.

Kate recommends resistance training two to three times a week, but sessions do not need to last an hour. A 5–10 minute warm up, followed by a **focused 20-minute programme** provides a valuable foundation if it is consistent, appropriately challenging and progressively developed.

Progress should not be judged solely by the next scan. Lifting a heavier weight, balancing for longer, moving with better technique, climbing stairs confidently, carrying shopping or getting up from the floor more easily are all meaningful improvements – and will appear long before measurable changes in bone density.

Exercise supplies the stimulus, but the body also needs the raw materials to respond. Adequate energy and protein support muscle repair and adaptation, while bone depends upon a varied fresh food diet with nutrients including calcium, magnesium, phosphorus and vitamins D, C, K2 and A (see Part 4 in this series). **Routinely combining demanding exercise with fasting or chronic under-fueling will work against both muscle and bone.** For women in particular, even if first thing in the morning, start with a small snack of protein and carbohydrate such as a banana, chia seeds, yoghurt or nuts.

For someone frightened or unsure where to begin, Kate suggests three simple steps: practise sitting down and standing up from a chair; try wall or kitchen-counter push-ups; and seek guidance from a trainer who understands osteoporosis and can teach safe lifting technique.

Her final message is reassuringly simple: **"It is never too late to begin. Stop putting it off and simply start."**

Perhaps that is the real conclusion to this series. Strong bones require more than calcium, a daily walk or a number on a scan. They need nourishment, muscle, balance, intelligent challenge – and our willingness to become stronger.

Kate has a studio in Puigpunyent Mallorca, works online and does house visits. Contact her @kbsplatesfit.

You can find Sources and the extended article to include footwear and routine recommendations at MallorcaWellnessLiving.com.