

Persistent Back Pain?

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Sudden back pain after a simple fall: Signs you may have a spine fracture due to osteoporosis

Aches and pains after the age of 50 are easily mistaken for arthritis, so knowing the difference can save you a lot of agony and help you find the right treatment, says neurosurgeon Dr Colum Patrick Nolan



Osteoporosis typically occurs in those above the age of 50, as that is the age where bone tissue is lost faster than new tissue can grow to replace it. PHOTO: GETTY IMAGES

As you age, your bones start to lose minerals such as calcium at a rate higher than your body can replenish them. This causes your bone structure to become weak, brittle and prone to fractures.

Over time, this can lead to osteoporosis, in which bones lose their strength and thickness.

“Osteoporosis typically occurs in those above the age of 50, especially in women, as that is the age where bone tissue is lost faster than new tissue can grow to replace it,” explains senior consultant neurosurgeon and medical director Dr Colum Patrick Nolan, [Oxford Spine and Neurosurgery Centre](#).

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To understand osteoporosis better, picture your bone structure as a porous honeycomb that is constantly undergoing renewal, advises Dr Nolan, who also has a subspecialty in spine surgery.

Having osteoporosis means that the holes inside the honeycomb-like bone structure get increasingly larger, which can weaken the bone structure, putting one at greater risk of fractures.

A [medical paper](#) projects that the number of people in Singapore suffering from osteoporotic fractures is expected to increase by 57.9 percent, from 15,267 in 2017 to 24,104 by 2035.

Having osteoporosis does not mean you will suffer from a fracture, but it does increase your likelihood of doing so since you have lower bone density. “The lower your bone density, the more likely that exertion of external forces on your body will result in fractures,” adds Dr Nolan.

Knowing the difference between osteoporotic fractures and arthritic pain

Since fractures and arthritic pain (osteoarthritis) tend to surface at around the same time as you age, they can be easily mistaken for each other.

This is often dangerous for the patient as untreated fractures can lead to new ones or result in disability.

“What differentiates fracture pain from arthritic pain is a sudden back pain which

can occur after a simple fall or without a fall,” points out Dr Nolan. “Arthritic pain is usually present early in the morning and eases with movement. Patients may also notice that they are more hunched over due to osteoporotic compression fractures.”

Some early signs and symptoms of osteoporosis include back pain and loss of height over time, resulting in a stooped posture. While osteoporosis can be painful, you can feel worsening pain if you have a fracture due to the condition.



A bone mineral density test can help to determine if you have osteoporosis and also estimate your risk of fractures.
PHOTO: GETTY IMAGES

Women are also more prone to osteoporosis than men due to lower oestrogen levels once they reach menopause.

Dr Nolan urges patients who suspect they have a fracture caused by osteoporosis to consult a doctor before the condition worsens.

The first step would be to take a bone mineral density (BMD) test, also known as Dual Energy X-ray Absorptiometry (DXA), to check your bone mineral density levels and confirm if you have osteoporosis. It involves doing a scan at the spine and hip. Blood tests are also done to check calcium and vitamin D levels.

Minimising your risk of osteoporotic fractures

If you have osteoporosis, be mindful when you go about your daily activities to reduce the risk of fractures since your bones are weaker and more brittle.

“A sudden change in pressure, such as when sneezing or coughing violently, may result in fractures if your osteoporosis is severe,” explains Dr Nolan. “The strain from lifting a heavy object or even bending to pick something up can also result in fractures. These tend to occur in the spine rather than other bones.”

The most common fracture is the vertebral compression fracture (VCF) or a spine fracture. Patients will most likely feel a pain in the back, which can be felt mostly

when walking, moving or bending down. It can even radiate to the surrounding area.

“Sometimes, the VCF may affect spinal nerves as well, causing difficulty in walking and shooting pain that radiates into the limbs,” adds Dr Nolan.

Although it’s rare, VCFs can result in spinal cord compression which could cause weakness in the lower limbs and affect bowel and bladder function. The back pain usually fades away when lying down, but can worsen when trying to get up and move around, or when walking or bending down.

Other common osteoporotic fractures include hip and wrist fractures.



Patients who suspect they have an osteoporotic fracture should consult a doctor before the condition worsens, says senior consultant neurosurgeon Dr Colum Patrick Nolan. PHOTO: OXFORD SPINE AND NEUROSURGERY CENTRE

Ways to treating osteoporotic fractures

Osteoporotic fractures are diagnosed with an X-ray and an MRI (Magnetic resonance imaging) scan. An MRI helps to see if the fracture is acute and if there is any nerve root or spinal cord compression. It also assesses for any associated ligament injury and helps to rule out any other causes of the fracture, such as cancer.

Making lifestyle changes is important to reducing your risk of fractures. This includes staying active, not smoking, and drinking less alcohol.

Increasing your calcium and vitamin D intake, either through diet or a supplement, may also help. Medications such as bisphosphonates, biologics and hormone pills are also available to reduce bone loss.

If you have mild VCF which does not compress the spinal cord, the first line of treatment is medication and braces.

Dr Nolan recommends braces to be worn for no more than two months, to prevent

the patient's back muscles from weakening, followed by physiotherapy.

VCF is considered mild if the patient loses up to 25 per cent of their height. A loss of height of over 40 per cent would be deemed severe. With severe VCF, where there is significant injury to the ligaments which makes the fracture unstable, would require surgery – either a vertebroplasty or kyphoplasty.

Vertebroplasty involves injecting bone cement into the fractured bone to stabilise it, while kyphoplasty involves inserting a balloon into the affected area to create a cavity and injecting the bone cement there.

Dr Nolan explains that doctors will also look at how well the patient responds to treatment before recommending surgery. “Someone whose pain remains quite severe despite medications and is unable to move about due to the pain may benefit from vertebroplasty or kyphoplasty.”

Both procedures are minimally invasive and do not require overnight stays in the hospital.

“The success rate of these procedures for improved pain control is about 90 per cent,” says Dr Nolan. “Patients usually report fairly immediate improvements in their back pain and can typically move around on the same day or the next day. We recommend to continue using a brace after the procedure.”

In rarer cases where there is significant associated ligament injury or where there is compression of the spinal cord more extensive surgery may be required, adds Dr Nolan.

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