

FACT SHEET

Osteoporosis and Back Pain

Understanding bone thinning, spinal fracture risk, and what you can do about it

Osteoporosis is a condition in which bones gradually lose density and become more fragile. It is one of the most common and most overlooked contributors to back pain in older adults — particularly women over 60 — and it is frequently underdiagnosed until a fracture occurs. Understanding whether osteoporosis may be relevant to your back pain is an important part of getting the right care.

Osteopenia — the warning stage

Osteopenia is the term for bone density that is lower than normal but not yet low enough to be classified as osteoporosis. It is extremely common — approximately half of all women over 50 have osteopenia — and most are unaware of it. Osteopenia does not usually cause pain, but it significantly increases fracture risk if bones are loaded beyond what they can comfortably bear.

Understanding your DEXA scan result (T-score)

A DEXA scan measures bone density and produces a T-score comparing your bone density to that of a healthy young adult. The thresholds are:

T-score	Classification	What it means
Above -1.0	Normal	Bone density within normal range
-1.0 to -2.5	Osteopenia	Reduced density — intervention can prevent progression
Below -2.5	Osteoporosis	Significantly increased fracture risk — treatment recommended

If your DEXA result shows osteopenia, this is the critical intervention window. The following steps can slow or prevent progression to osteoporosis:

- Ensure adequate calcium (700– 1,200mg/day from diet and supplementation) and vitamin D (at least 800IU/day)
- Increase weight-bearing exercise — walking, gentle resistance training, Pilates
- Review medications that may affect bone density (corticosteroids, proton pump inhibitors, some antidepressants)
- Stop smoking and reduce alcohol intake
- Ask your GP whether bone protection medication is appropriate for your T-score and risk profile
- Request a repeat DEXA scan in 2–3 years to monitor progression

Who is at risk?

Osteoporosis can affect anyone, but risk increases significantly with age and is substantially higher in women after the menopause. The following table shows approximate risk by age and sex — these are general

indicators, not diagnostic thresholds.

	Under 40	40–60	60+
Women	Low	Moderate	HIGH
Men	Low	Low–Med	Moderate
Post-menopause	—	HIGH	HIGH
Long-term steroids	Any age	Any age	

Additional risk factors include:

- Family history of osteoporosis or hip fracture
- Previous fracture from minor trauma (this is a significant warning sign)
- Long-term use of corticosteroid medication (e.g. prednisolone)
- Low body weight or previous eating disorder
- Early menopause (before age 45)
- Vitamin D deficiency or low calcium intake
- Smoking or heavy alcohol use
- Rheumatoid arthritis or other inflammatory conditions
- Overactive thyroid or parathyroid
- Prolonged immobility or bed rest

How osteoporosis causes back pain

In healthy bone, the vertebrae of the spine are strong enough to withstand the loads of everyday activity. In osteoporotic bone, this is no longer the case. The vertebrae become compressed under normal loading — bending, lifting, even a cough or sneeze — and can collapse partially or fully in what is called a **vertebral compression fracture**.

What is a vertebral compression fracture?

A vertebral compression fracture is when a vertebra in the spine collapses under pressure. In severe osteoporosis, this can happen with no obvious injury — simply bending forward to pick something up, or even coughing. The pain is typically a sudden, sharp mid or lower back pain that is significantly worse on movement and does not radiate into the legs. Multiple fractures over time cause the characteristic forward curve (kyphosis) sometimes described as a dowager's hump.

How everyday activities affect your spine

Many common daily activities place significant load on the spine. In a healthy spine, these loads are managed without difficulty. In osteoporotic bone, the same activities can cause pain, structural change, or fracture. Understanding your loading patterns is a key part of managing osteoporosis.

Loading / lifestyle factor	How it affects the spine	Risk level
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Lifting grandchildren / children	Repeated flexion loading on already fragile vertebrae. Even moderate lifts can cause compression fractures in significant osteoporosis.	HIGH
Gardening (bending, digging, reaching)	Sustained flexion and rotational loading. A common cause of first presentation of vertebral fracture in older women.	HIGH
Carrying shopping bags	Asymmetric loading through the lumbar spine. Repeated over time increases fracture risk.	MODERATE
Falls (even minor)	In significant osteoporosis, a minor fall or stumble can cause vertebral compression fractures that may not be immediately obvious.	HIGH
Inactivity / sedentary lifestyle	Bone density decreases with disuse. Regular weight-bearing activity is one of the strongest protectors against osteoporosis.	MODERATE
Smoking	Directly reduces bone density and impairs calcium absorption. Approximately doubles fracture risk.	HIGH
Low calcium / vitamin D intake	Calcium and vitamin D are essential for bone maintenance. Deficiency accelerates bone loss significantly.	MODERATE

What osteoporosis-related back pain feels like

- **Sudden sharp mid or lower back pain**

Often the first presentation of a vertebral fracture. Worse on movement, better lying down. May or may not follow a specific incident.

- **Pain worse on standing and walking**

Compression fractures load more with axial weight-bearing. Many patients find lying down provides significant relief.

- **No leg pain or neurological symptoms**

Unlike disc herniation, osteoporotic compression fractures rarely cause sciatica or leg symptoms unless the fracture is severe.

- **Gradual height loss**

Repeated compression fractures cause progressive loss of height over years. Noticeable change in posture and an increasingly rounded upper back.

- **Thoracic (upper or mid back) pain**

Compression fractures are most common in the thoracic spine (T6–T12), producing mid or upper back pain that is often mistaken for muscle strain.

When to seek urgent medical attention

If you develop sudden severe back pain after a fall or minor trauma, especially if you are over 60 or have known risk factors for osteoporosis, seek medical assessment the same day. A vertebral fracture requires imaging to confirm and should be managed appropriately. Do not assume it is a muscle strain.

What to do if you think osteoporosis may be relevant

1. Speak to your GP

Ask for a DEXA scan (dual-energy X-ray absorptiometry) — this is the standard test for bone density. You can also ask about your FRAX score, which estimates your 10-year fracture risk based on your risk factors.

2. Review your calcium and vitamin D

Most adults with osteoporosis or at risk of it benefit from calcium and vitamin D supplementation. Your GP can advise on the right doses for you.

3. Consider bone protection medication

If your bone density is significantly reduced, your GP may recommend medication such as alendronic acid. These are taken weekly and are effective at reducing fracture risk.

4. Stay active — carefully

Weight-bearing exercise (walking, gentle resistance training) is one of the strongest protectors of bone density. Avoid high-impact activities or heavy lifting until your bone density is known.

5. Reduce fall risk

Falls are the most common cause of fractures in people with osteoporosis. Consider a home assessment for fall hazards, appropriate footwear, and balance exercises.

6. See a spinal care practitioner

An osteopath, physiotherapist, or chiropractor experienced in working with older adults can help manage pain, improve posture, and guide safe activity. Tell them about your osteoporosis — it changes how they will work with you.

Related conditions and further reading

If osteoporosis has been flagged as relevant in your assessment, the following fact sheets may also be useful:

Vertebral compression fracture	What happens when a vertebra collapses, how it is diagnosed, and how it is managed.
Spinal stenosis	Narrowing of the spinal canal — more common in older adults and often coexists with osteoporosis.
Facet joint osteoarthritis	Age-related wear in the small spinal joints — frequently present alongside osteoporosis in the over-60s.
Prostate cancer and back pain	For men over 60: prostate cancer is one of the most common causes of spinal metastases. Unexplained back pain in this group always warrants investigation.
Why staying active matters for back pain	The evidence for movement and exercise in managing and preventing back pain — and why rest alone makes things worse.

Pilates and yoga for back pain	How controlled movement rebuilds the relationship between the nervous system and the spine.
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<h3>Get this report by email</h3> <p>Enter your details and we will send you a copy of this fact sheet together with your personalised back pain report summary.</p> <p>Your name</p> <input type="text"/> <p>Email address</p> <input type="text"/> <p>Send Me the Report</p> <p>Your details are used only to send your report. We will not share your information with third parties.</p>	<h3>Book a consultation</h3> <p>Speak with a specialist about your back pain. Leave your details and we will be in touch to arrange a convenient time.</p> <p>Your name</p> <input type="text"/> <p>Email address</p> <input type="text"/> <p>Phone number <i>Best number to reach you</i></p> <input type="text"/> <p>Best time to call <i>e.g. mornings, weekday afternoons</i></p> <input type="text"/> <p>Preferred contact method</p> <p><input type="checkbox"/> Phone call <input type="checkbox"/> Video call <input type="checkbox"/> Email</p> <p>Briefly describe your back pain <i>What is your main concern? How long have you had it?</i></p> <input type="text"/> <p>Request a Consultation</p> <p>We aim to respond within one working day. Consultations are currently available in person and via video call. Your details are held securely and used only to arrange your consultation.</p>
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