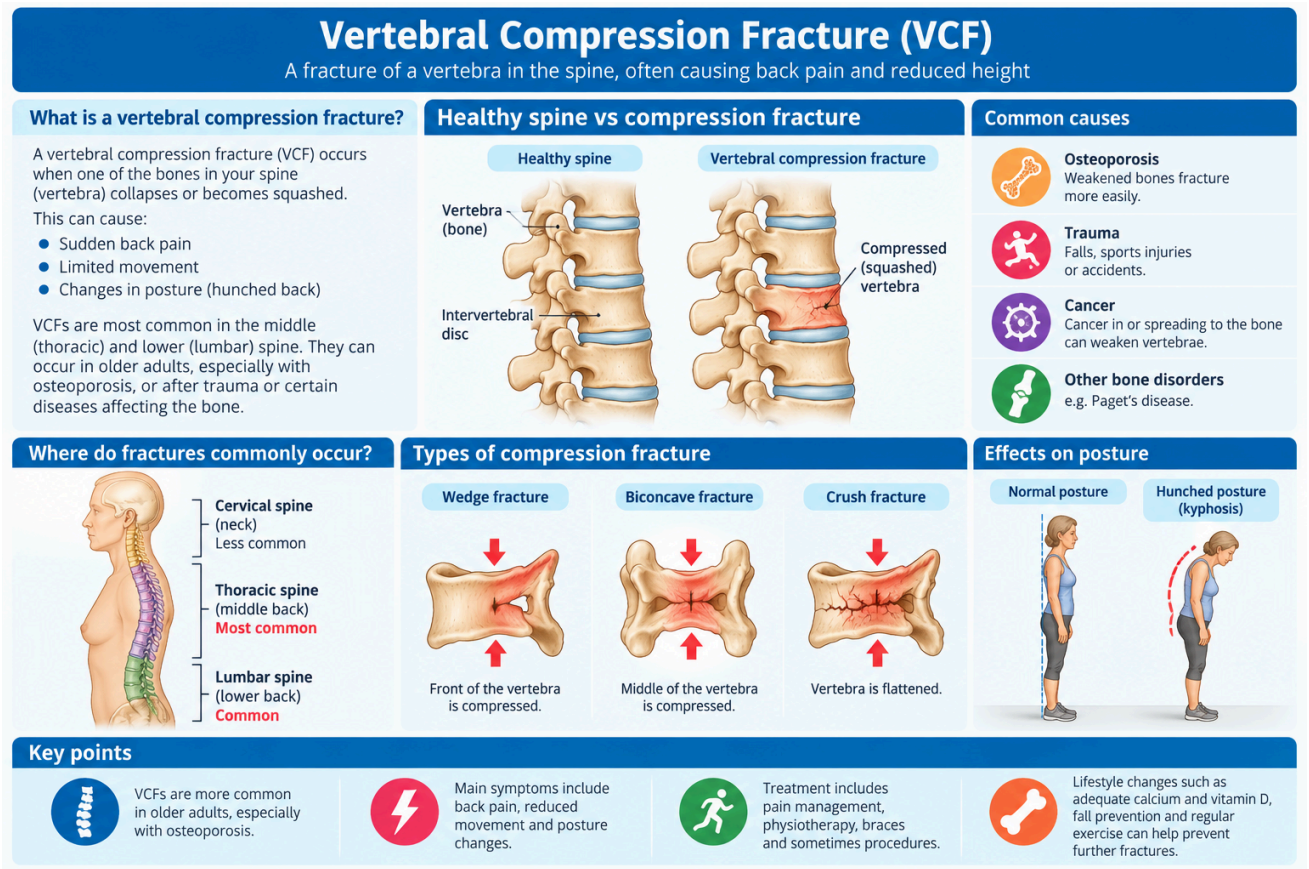
Vertebral Compression Fracture (VCF)

Understanding spinal fractures, symptoms and recovery

Vertebral Compression Fracture

A guide to causes, symptoms, treatment and recovery



What is a vertebral compression fracture?

A vertebra collapses or becomes compressed, sometimes causing sudden back pain, restricted movement or a stooped posture. Fractures commonly affect the middle (thoracic) or lower (lumbar) spine.

Who can be affected?

VCFs are more common in older adults with osteoporosis. They can also occur after trauma or with certain conditions that weaken bones.

Causes, symptoms and diagnosis

Recognising symptoms and understanding assessment

Common causes

1. Osteoporosis: weakened bones can fracture more easily.
2. Trauma: falls, sports injuries or accidents.
3. Cancer affecting or spreading to bone.
4. Other bone disorders, including Paget's disease.

Symptoms

- Sudden or worsening middle or lower back pain.
- Pain may increase when standing or walking and ease when lying down.
- Loss of height over time or stooped posture (kyphosis).
- Reduced movement; rarely numbness, tingling or weakness in the legs.

How is it diagnosed?

A clinician may recommend:

- X-ray to identify a fracture.
- MRI to assess soft tissues and estimate fracture age.
- CT for detailed bone images, when required.
- DEXA bone-density scan if osteoporosis is suspected.

Reducing the risk of further fractures

Bone health: Ask about osteoporosis assessment or treatment.

Nutrition: Ensure adequate calcium and vitamin D.

Fall prevention: Keep walkways clear and use suitable footwear.

Activity: Return to safe movement gradually with clinical guidance.

Exercises and rehabilitation

Exercise examples - only after individual clinical clearance

Vertebral Compression Fracture (VCF) – Exercise Examples

Gentle exercises to help reduce pain, improve mobility, strengthen the back and support posture

1 Pelvic tilts



- Lie on your back with knees bent and feet on the floor.
- Gently tighten your abdominal muscles and flatten your lower back into the mat.
- Hold for 5–10 seconds.
- Repeat 5–10 times.

2 Knee to chest stretch



- Lie on your back.
- Gently bring one knee towards your chest, keeping the other leg relaxed on the floor.
- Hold for 15–30 seconds.
- Repeat 3 times each leg.

3 Lower trunk rotations



- Lie on your back with knees bent and feet on the floor.
- Keep your shoulders flat on the floor.
- Gently let your knees fall to one side, then return to the centre, and repeat to the other side.
- Repeat 5–10 times each side.

4 Cat–camel (gentle)



- Start on your hands and knees.
- Gently arch your back, then gently round your back.
- Move slowly within a comfortable range.
- Repeat 5–10 times.

5 Back extension (prone press up)



- Lie on your front with elbows under your shoulders.
- Gently lift your chest, keeping hips on the floor.
- Hold for 5–10 seconds.
- Repeat 5–10 times.

6 Seated posture exercise



- Sit on a chair with your feet flat on the floor.
- Gently lengthen your spine and bring your shoulders back.
- Hold for 5–10 seconds.
- Repeat 5–10 times.

7 Thoracic extension (towel roll)



- Lie on your back with a rolled towel placed under your upper back.
- Gently open your chest and relax your arms out to the sides.
- Hold for 30 seconds.
- Repeat 3 times.

8 Standing wall slides



- Stand with your back against a wall.
- Keep your lower back gently against the wall.
- Slide your arms up and down within a comfortable range.
- Repeat 5–10 times.

Important information

Start gently
Perform exercises within a comfortable range. Stop if pain increases.

Be consistent
Aim to do these exercises regularly, ideally once or twice daily.

Build gradually
Increase repetitions and activity levels as your symptoms improve.

Stay active
These exercises can help improve mobility, reduce pain and support better posture.

Exercise safety after a spinal fracture

Ask your physiotherapist which movements are safe for your fracture.

Avoid bending, twisting or loaded spinal movements until cleared.

Recovery guidance

Start with gentle walking and posture advice as recommended.

Stop if pain increases and seek individual advice.

Treatment and rehabilitation

Management, recovery and when to seek help

Pain management

Ask a clinician or pharmacist about suitable pain relief.
Prescription medicines may be considered for more severe pain.

Physiotherapy and activity

Follow personalised advice on walking, posture and safe movement.
Avoid heavy lifting and twisting while the fracture heals.

Bracing and procedures

A short-term brace may help in some cases.
Selected procedures may be considered for persistent pain.

Bone health and self-care

Prevent falls; discuss osteoporosis treatment if relevant.
Adequate calcium and vitamin D help support bone health.

Recovery and outlook

Pain often improves over 6-12 weeks, although recovery varies.
Build activity gradually with professional guidance.

When to seek urgent medical help

Seek urgent care for new leg weakness or numbness, loss of bladder or bowel control, or severe unrelenting back pain.

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