

# Osteoporosis & Bone Health

The silent disease: bones weaken for years without a single symptom — until a fracture. The good news: it's measurable, preventable and very treatable.

**Silent until fracture · DEXA scan diagnoses it · Never ignore a fragility fracture**

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## What is it?

Osteoporosis means bone has lost density and internal structure, becoming fragile enough to break from minor events — a fall from standing height, or even a cough (spine fractures). Common sites: wrist, spine and hip.

Bone is living tissue, constantly renewed. Peak bone mass is reached around age 30; after that, withdrawals exceed deposits — rapidly so in women after menopause.

## Causes & risk factors

Major risks: age, female sex and menopause (oestrogen protects bone), family history, low body weight, smoking, excess alcohol, vitamin D deficiency (extremely common in India despite abundant sunshine), low calcium intake, sedentary lifestyle, and long-term steroid use.

Medical contributors include thyroid/parathyroid disease, diabetes, rheumatoid arthritis and some medications — worth screening for.

## Symptoms

Usually none until a fracture occurs. Clues that deserve investigation: loss of more than 3–4 cm of height, a developing stoop (from silent spine fractures), or any fracture from a trivial fall after age 50.

A fragility fracture is bone's cry for help — it multiplies the risk of the next fracture several-fold, and should always trigger bone health assessment.

## Diagnosis & investigations

The DEXA scan — a quick, painless, low-radiation test — measures bone mineral density at the hip and spine, reported as a T-score: above  $-1$  is normal,  $-1$  to  $-2.5$  is osteopenia (low bone mass), below  $-2.5$  is osteoporosis.

Blood tests check vitamin D, calcium and screen for secondary causes. Guidelines recommend DEXA for all women 65+, men 70+, and earlier with risk factors or any fragility fracture.

## Non-surgical treatment

Foundation for everyone: calcium 1000–1200 mg/day (diet first — dairy, ragi, sesame, leafy greens), vitamin D supplementation to healthy levels, protein adequacy, and exercise — specifically weight-bearing (walking, stair climbing, dancing) and resistance training, which directly signal bone to strengthen. Balance work (yoga, tai chi) cuts falls.

When medication is indicated — osteoporosis on DEXA, or any fragility fracture — modern drugs (bisphosphonates and others) reduce fracture risk by 30–70%. They are far safer than the fractures they prevent.

## When surgery helps

Fractures still happen, and osteoporotic fractures are treated actively: hip fractures need surgery within 24–48 hours for the best outcomes (fixation or replacement, walking as soon as possible); wrist fractures may need fixation to preserve function; painful spine fractures usually heal with bracing, occasionally helped by cement procedures (vertebroplasty/kyphoplasty) in selected cases.

Every fracture treatment plan should include treating the osteoporosis itself — fixing the bone without fixing the bone quality invites the next fracture.

## Recovery & rehabilitation

After a fragility fracture, rehabilitation restores strength, confidence and balance. Fear of falling leads to inactivity, which weakens bone and muscle further — a spiral worth actively breaking with supervised, progressive exercise.

Bone-protecting medication typically continues 3–5 years with periodic reassessment.

## Prevention tips

Build maximum bone before 30 (exercise + nutrition in youth is a lifelong gift), then: stay active daily, get sensible sun exposure, don't smoke, limit alcohol, review medications with your doctor, and fall-proof the home — good lighting, grab bars, non-slip mats, and treated eyesight. After 50, discuss screening; after any low-impact fracture, insist on it.

## Frequently asked questions

### **I drink milk daily. Can I still have osteoporosis?**

Yes. Calcium intake is only one factor — vitamin D status, hormones, genetics, activity and medications all matter. Only a DEXA scan actually measures your bone density.

### **Do calcium tablets cause kidney stones?**

Dietary calcium doesn't, and supplements at recommended doses with adequate water rarely do. Taking calcium with meals reduces any risk. Discuss your individual situation if you've had stones.

### **Are osteoporosis medicines dangerous? I've read scary things.**

The rare side effects that make headlines (jaw problems, atypical fractures) occur in roughly 1 in 10,000–100,000 patient-years — while the medicines prevent common, devastating hip and spine fractures. For a person with osteoporosis, the maths overwhelmingly favours treatment.

**Can osteoporosis be reversed?**

Density can be meaningfully increased and fracture risk substantially cut with medication, nutrition and exercise. 'Cured' is the wrong frame — 'well-managed for life', like blood pressure, is the right one.

**What exercise is best for bones?**

Bones respond to loading: brisk walking, stair climbing, dancing and resistance training. Swimming and cycling are great for the heart but don't load bone much. Add balance training to prevent the falls that break bones.

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**Questions about your specific case?** Book a video, audio or in-clinic consultation with an OssifiDE orthopaedic surgeon: visit [ossifide.com/consultation.html](https://ossifide.com/consultation.html), WhatsApp **+91 90760 79000**, or email [ossifide@gmail.com](mailto:ossifide@gmail.com).