## **3 Simple Ways To Lower Your Risk Of Fractures:**

- 1. Get A Fall Risk Assessment Falls are one of the leading causes of fractures, especially as we age. A thorough physical therapy evaluation can accurately identify your risk—no fancy machines required. Experts recommend that everyone over 65 have an annual fall risk assessment. It's quick, effective, and could prevent serious injury.
- 2. Address Dizziness or Balance Issues Early If you experience dizziness or feel unsteady, don't ignore it. Many balance problems can be improved—or even eliminated—through a specialized physical therapy treatment called vestibular rehabilitation. Early intervention makes a big difference.
- **3. Start An Exercise Program Today** Weakness in the legs is a major contributor to falls. Strength training and weight-bearing exercises not only improve balance and mobility but also help slow bone loss. Building strength now means better protection later.



## Orthopaedic Team Rehabilitation

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## Understanding Osteoporosis Prevention, Diagnosis, and Treatment Options

## Why This Guide?

According to the Bone Health & Osteoporosis Foundation, osteoporosis causes more than 3 million fractures annually in the U.S., costing an estimated \$25.3 billion in healthcare expenses.

Osteoporosis—often called "porous bone"—is a preventable condition where bones become weak and fragile. Fractures can occur from a minor fall or, in severe cases, even from something as simple as a sneeze.

## The impact is serious:

An estimated 24% of hip fracture patients aged 65 and older die within one year of their fracture.

## Is There a Cure?

Unfortunately, there is no known cure for osteoporosis. But here's the good news: Symptoms can be managed. Many people can slow, stop, or even reverse bone loss with an evidence-based approach, which includes targetd physical therapy.

## What You Will Find Inside...

- Bone Density & Osteoporosis Basics
- Osteoporosis Treatment and Prevention
- Other Ways To Reduce Your Risk
  Of Fractures



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## **Bone Density & Osteoporosis Basics**

# **Overview Of Common Treatment Options**

## What is bone density and how is it measured?



Bone density refers to the amount of mineral in your bones, primarily calcium and phosphorus. Clinically, bone mineral density (BMD) is measured using DXA (Dual-energy X-ray Absorptiometry)—a quick, painless, and non-invasive test.

Modern DXA scanners use very low radiation—about 1/10th of a chest X-ray. The scan typically measures bone density at the lumbar spine, hip, and sometimes the forearm.

Results are expressed as T-scores, which compare your bone density to that of a healthy young adult (around age 30):

NORMAL BONE OSTEOPENIA

T-scores help predict fracture risk. A person may have different scores for different sites, so the lowest score usually guides diagnosis and treatment.

# At what point does low bone mineral density (BMD) become osteoporosis?

## T-score Range Categories: The World Health Organization Guidelines

Normal Range	+1 to -1	Average 30 year-old adult
Low Bone Density	-1 to -2.5	Low bone density, called "Osteopenia"
Osteoporotic	-2.5 or lower	Highest risk for fractures—"Osteoporosis"



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## What are the treatment options?

Osteoporosis treatment usually combines lifestyle changes—such as diet and exercise—with medications when needed. Research shows that effective treatment can reduce fracture risk by about 50% within 2–3 years. Your physician can help set realistic goals for lifestyle changes and recommend appropriate drug therapy. (This overview is for general information only and should not replace professional medical advice.)

## **Diet & Lifestyle Changes**

Note: Medications may not be affective without many of the diet and lifestyle habits known to promote bone health.

#### Quit Smoking

Research now shows smoking is a risk factor for osteoporosis.

## Healthy bone-friendly diet

High in calcium, vitamin D, magnesium, and vitamin k; low in calcium depleting foods such as animal protein, caffeine, alcohol, salt, and soda. Tip: The body absorbs more from foods than from supplements.

## **Common Medications**

For important information on side-effects, ask your doctor or pharmacist.

#### **Bisphosphonates:**

Brand name Fosamax, Boniva, Actonel, and Reclast slow the rate of bone mineral loss and even increase bone density. Pills and intravenous. This class of medication is not appropriate for pregnant women, people with chronic digestive problems, or kidney problems. Bisphosphonates slows the loss of bone mineral.

#### Raloxifene:

Brand name Evista. This pill is used only in postmenopausal women. The drug works like estrogen on bone tissue increasing density, and like an "anti" estrogen on the breasts and uterus, making it a good option for women with a high risk of breast cancer.

## **Daily Vitamin Supplements**

1000 – 1200mg calcium and 400-800 IU vitamin D., and other calcium absortion helpers like vitamin k, and magnesium.

#### **Calcitonin:**

Brand name Calcimar or Miacalcin. Given as a nasal spray or injection, this medication helps calcium levels and bone building. Calcitonin also contributes to pain relief for spinal compression fractures. No longer recommended for long-term osteoporosis treatment due to weak efficacy and cancer risk.

## **Weight Bearing Exercise**

Studies show weight bearing exercise can help reverse bone loss. Make sure to consult your doctor and physiotherapist to choose a supervised plan that will promote bone density without risking injury to joints and muscles.

#### **Hormone Therapy:**

ERT- Estrogen Replacement Therapy. An option for postmenopausal women mostly who have had a hysterectomy. Estrogen promotes strong bones. HRT—Estrogen & Progestin, used for the treatment of osteoporosis in some premenopausal women.

Hormone therapies are controversial since the longterm effects may include higher risk of certain cancers.

With your doctor, record your 12-month goal for your BMD here: