

Overview of Osteoporosis Diagnosis and Treatment for Adults

A. Counsel all individuals on the risk factors for osteoporosis

Osteoporosis is a “silent” risk factor for fracture just as hypertension is for stroke; nearly one in two women and one in four men will experience an osteoporosis-related fracture at 50 or older.

B. Perform evaluation for osteoporosis using Bone Mineral Density (BMD) testing for the following at-risk populations:

- Women or men who have broken bones after 50
- All women 65 and older
- All men 70 or older
- Women younger than 65 who have reached menopause and have risk factors for osteoporosis, including stopping estrogen therapy
- Men 50 to 69 with risk factors for osteoporosis

No routine BMD testing is recommended for children, premenopausal women, or men younger than 50.

C. Counsel all patients on the strategies to promote bone health including nutrition and lifestyle modifications, and when appropriate, prescribe FDA-approved medications.

- Advise all patients to eat a varied, nutrient-rich diet including generous amounts of fruits and vegetables.
- Counsel all patients to obtain the recommended dietary allowance (RDA) for calcium (1000 to 1200 mg a day), preferably from food sources, and to include calcium supplements only if necessary.
- Recommend vitamin D intakes of 600 to 800 IU per day for healthy adults; this usually requires supplementation. Patients with osteoporosis typically require more vitamin D.
- Advise patients to avoid smoking and to limit alcohol intake.
- Educate patients about safety precautions to reduce the risk of falling and related fractures.
- Recommend regular physical activity including weight-bearing, muscle-strengthening, postural, and balance exercises. Consider a physical therapy consultation for patients with osteoporosis, a history of falls, and/or fracture.
- When appropriate, prescribe FDA-approved medications for osteoporosis.

FDA-Approved Osteoporosis Medications

- Bisphosphonates-
 - Alendronate (Fosamax™)
 - Ibandronate (Boniva™)
 - Risedronate (Actonel™, Atelvia™)
 - Zoledronic acid (Reclast™)
- Denosumab (Prolia™)
- Estrogen/Hormone Therapy
- Teriparatide (Forteo™)
- Raloxifene (Evista™)

D. Select the following candidates for treatment with FDA-approved osteoporosis medications:

- All men as well as postmenopausal women who present with vertebral or hip fracture
- Persons with a T-score ≤ -2.5 , at the femoral neck or spine, after appropriate evaluation to exclude secondary causes
- Low bone mass (T-score between -1.0 and -2.5 at the femoral neck or spine) and a 10-year probability of a hip fracture $\geq 3\%$ or a 10-year probability of a major osteoporosis-related fracture $\geq 20\%$ based on the US-adapted WHO algorithm in patients over 50 and not currently on osteoporosis medication (FRAX: <http://www.sheffield.ac.uk/FRAX>).
- Clinician's judgment and/or patient preferences may indicate treatment for people with 10-year fracture probabilities above or below these levels