

## 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  $\leq -2.5$ , 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