



Michigan Quality Improvement Consortium Guideline

Management of Osteoporosis

The following guideline recommends assessment, pharmacologic treatment and self-management interventions for osteoporosis.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
<ul style="list-style-type: none"> ■ Women ≥ age 65 regardless of risk factors ■ Women age 60 - 64 with any of the following: <ul style="list-style-type: none"> ♦ Weight < 154 lbs. ♦ Smoking ♦ Personal or family history of osteoporotic fracture ■ Anyone on chronic glucocorticoid treatment 	Assessment	<ul style="list-style-type: none"> ■ Assess for loss of height (> 1.5 inches) and back pain ■ Assess other risk factors: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Modifiable:</p> <ul style="list-style-type: none"> ♦ Current cigarette smoking ♦ Low body weight (< 127 lbs.) ♦ Estrogen deficiency ♦ Premature menopause ♦ Excessive thyroid hormone replacement ♦ Chronic corticosteroid therapy ♦ Low calcium intake (life-long) ♦ Alcoholism ♦ Uncorrected visual impairment ♦ Inadequate physical activity ♦ Recurrent falls </div> <div style="width: 45%;"> <p>Non-Modifiable:</p> <ul style="list-style-type: none"> ♦ Personal or family history of fragility ♦ Family history of osteoporosis ♦ Caucasian or Asian race ♦ Age ♦ Gender ♦ Poor health/frailty ♦ Dementia ♦ Hypogonadism in males ♦ Fracture without substantial trauma </div> </div>	<ul style="list-style-type: none"> ■ Adult height assessments annually and at periodic well exams. ■ BMD test once for initial diagnosis [D]
	Core Principles of Management and Pharmacologic Treatment	<p>All patients in the eligible population should ensure they maintain:</p> <ul style="list-style-type: none"> ■ Sufficient intake of dietary calcium (typically 1200 - 1600 mg/d) and supplemental calcium, with 400-800 units vitamin D [B] ■ Make lifestyle changes: regular weight-bearing and muscle-strengthening exercises; physically challenged individuals may require rehabilitative interventions to improve activity levels; otherwise, patients may be encouraged to walk, jog, do weight training or participate in similar activity programs [A]; smoking cessation; moderation of alcohol consumption¹; minimize caffeine intake; and fall prevention strategies [C] 	<ul style="list-style-type: none"> ■ BMD testing more often than every two years is not useful ■ Consider rechecking BMD after at least two years of pharmacologic treatment to monitor effectiveness [D].

Definitions	Indication	Medication	Dosage
<p>Osteopenia</p> <ul style="list-style-type: none"> ♦ T-score 1 - 2.5 SD below healthy young adult mean [D] 	Prevention	Alendronate (Fosamax)	5 mg/d or 35 mg/week ^{2,3}
		Raloxifene (Evista)	60 mg/d
		Risedronate (Actonel)	5 mg/d or 35mg/week ^{2,3}
<p>Osteoporosis</p> <ul style="list-style-type: none"> ♦ T-score > 2.5 below healthy young adult mean 	Treatment	Alendronate (Fosamax)	10 mg/d or 70 mg/week ^{2,3}
		Raloxifene (Evista)	60 mg/d
		Risedronate (Actonel)	5 mg/d or 35 mg/week ^{2,3}
Referral	If patient does not tolerate treatment or shows progression or recurrent fracture after 2 years on treatment, consider referral to a specialist.		

¹ Moderate alcohol consumption is defined as up to two drinks per day for men, one drink per day for women and older people.

² Should not be used in patients with active upper GI disorders (e.g., GERD, PUD) [A]

³ Take medication on an empty stomach with water, remain upright for 30 minutes, no food or beverage for 30 minutes

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on several sources, including: Screening for Osteoporosis in Postmenopausal Women: Recommendations and Rationale, 2002 (www.preventiveservices.ahrq.gov). Individual patient considerations and advances in medical science may supersede or modify these recommendations.