CLINICAL PRACTICE GUIDELINES FOR OSTEOPOROSIS PREVENTION/MANAGEMENT

Adapted: 1998

Revised/Approved: 10/2000, 8/2002, 9/2003, 1/2007, 1/2008, 4/2010, 4/2012, 5/2014, 5/2016

Next Review Date: 5/2018

Purpose:

Scott & White Health Plan's (SWHP) Osteoporosis Guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients. Identifying and managing patients appropriately that are at risk or have osteoporosis will reduce fragility fractures and thereby improve their quality of life. These recommendations are not intended as a substitute for the reasonable exercise of independent clinical judgement by providers.

Scope:

Women who are 65 years of age or older and younger women whose fracture risk is equal to or greater than that of a 65-year old white woman who has no additional risk factors.[1]

Men 70 years of age or older and men aged 50-65 years of age based on the risk factor profile. [2]

Guideline:

I. Primary Prevention: Non-pharmacology Preventive Measures

1A. The following lifestyle are recommended for all adults:

- Exercise – regular weight-bearing, muscle building, balance and flexibility exercises
- Smoking cessation

1B. Home safety proofing is recommended for postmenopausal women and men at risk of falling.

1C. Routine use of hip protectors is not recommended as an intervention for reducing the risk of hip fractures in postmenopausal women and men aged ≥ 50.

Note: SWHP's Quality Improvement Department provides osteoporosis prevention and educational resources for clinic distribution. For more information contact 254-298-3397.

II. Supplemental Preventive Measures

2A. Calcium is recommended for all pre– or postmenopausal women and older men.

Age/Sex	Total Calcium Intake
Premenopausal women	1,000 mg/day
Postmenopausal women	1,200 mg/day
Men ≥ 50	1,200 mg/day

NOTE: Dietary calcium is highly recommended, however individuals with osteoporosis may require additional supplemental calcium therapy.

2B. Vitamin D (preferably vitamin D3) is also recommended for all pre– or postmenopausal women and men aged 50 or older to absorb calcium.

Age/Sex	Total Vitamin D Intake
Men and Women < 50	400-600 international units (IU)/day
Men and Women ≥ 50	600 IU/day
Men and Women >70	800-1000 IU/day

Note: Some individuals may need more vitamin D. According to the Institute of Medicine (IOM), the safe upper limit of vitamin D is 4,000 IU per day for most adults. [3]

2C. Hormone therapy (in Post-menopausal women) solely for the prevention or therapy of osteoporosis is not recommended.

III. Screening with Dual Energy X-Ray Absorptiometry (DXA)

Postmenopausal Women

3A. The U.S. Preventive Service Task Force (USPSTF) recommends a bone mineral density (BMD) test by DXA for women aged 65 years or older who are not on drug treatment for osteoporosis.

3B. For postmenopausal women under age 65, a BMD test by DXA is an option when selected risk factors are present.

NOTE: In addition to advancing age, female sex, contributors of osteoporosis in the Fracture Risk Assessment (FRAX) model include low body mass index (BMI), personal history of fragility fracture, parental history of hip fracture, rheumatoid arthritis, long-term exposure to glucocorticoids (3 months or more at doses ≥ 5 mg), high alcohol intake (about 3 units per day), cigarette smoking, and other causes of secondary osteoporosis (e.g., type 1 diabetes (insulin dependent), osteogenesis imperfecta in adults, untreated long-standing hyperthyroidism, hypogonadism or premature menopause (< 45 year), chronic malnutrition or malabsorption and chronic liver disease. [4]

Premenopausal Women

3C. Routine screening for osteoporosis with a BMD test by DXA is not recommended for premenopausal women.

Men

3D. Screening with DXA is an option for men ≥ 70 years of age with risk factors.

Optimal Screening Frequency

3F. The recommended retesting interval for individuals at risk of osteoporosis is a minimum of 2 years to determine fracture risk. However, individuals with osteoporosis or on therapy may require annual DXA scans as indicated.

IV. Bone Mineral Density Measurement Sites

4A. When BMD testing is indicated, the total proximal femur (total hip), femoral neck, and lumbar spine are recommended measurement sites for DXA to predict risk of osteoporotic fracture in women and men.

4B. If DXA testing is obtained, suggested rescreening intervals based on initial T-score (lowest T-score from total hip, femoral neck, or lumbar spine) are as follows:

V. Bone Density Test and Fracture Risk Assessment Tool (FRAX) Results and Treatment[5]

5A. The FRAX is recommended for assessing absolute fracture risk.

Bone Density Category	When to Consider Treatment with an Osteoporosis Medicine—In Postmenopausal Women and Men Age 50 and Older	T-Scores	
		Score Range	Possible Score
Normal	Most people with T-scores of -1 or higher do not need to consider taking a medicine.	≥ -1	+1.0 +0.5 0 -0.5 -1.0
Low Bone Density (Osteopenia)	People with T-scores between -1.0 and -2.5 should consider taking a medicine when there are certain risk factors suggesting an increased chance of breaking a bone in the next 10 years.	-1.1 to -2.4	-1.1 -1.5 -2.0 -2.4
	FRAX score less than 3% at the hip or less than 20% at other sites may not need medicine		
	FRAX score 3% or higher at the hip or 20% or higher at other sites may need to consider medicine.		

Osteoporosis	All people with osteoporosis should consider taking a medicine.	≤ -2.5	-2.5 -3.0 -3.5 -4.0

VI. Treatment for Postmenopausal Women Diagnosed with Osteoporosis

First-Line Drug Therapy

6A. Bisphosphonates.

6B. Alendronate (70 mg/week) is recommended for:

- Postmenopausal women with a prior fragility fracture
- Women ≥ 65 years of age with a diagnosis of osteoporosis (T-score ≤ -2.5)
- Postmenopausal women with a FRAX 10-year risk of hip fracture ≥ 3%

6C. Risedronate (35mg/week) is an alternative to alendronate for the individuals described in 6A.

6D. Ibandronate (150 mg/month) is an alternative to alendronate for the individuals described in 6A.

Second-Line Drug Therapy (*The following medications are for use only when oral bisphosphonates are contraindicated or not tolerated in postmenopausal women*).

6E. Raloxifene (60 mg/day).

6F. Calcitonin- nasal spray or injectable (counseling of the potential increase risk of malignancy is required by the U.S. Food and Drug Administration [FDA]). [6]

6G. Denosumab (60 mg subcutaneous/6 months), recommended for individuals with a high risk of fractures.

6H. Teriparatide (recombinant PTH) by daily injection is an anabolic agent that may be an option for high–risk women not tolerant of or responsive to other agents. It should be used only after specialist evaluation.

6I. Zoledronic acid (5mg intravenous/yearly).

VII. Treatment for Men Diagnosed with Osteoporosis

71. Alendronate (70 mg/week) is recommended as a first-line therapy for men ≥ 70 years of age diagnosed with osteoporosis or with a FRAX 10-year risk of hip fracture ≥ 3%.

Reviewing Physician: Veronica Piziak, MD (Endocrinology, BSWH)

Source(s):

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3. Ross, C., et.al (2011). Dietary Reference Intakes for Calcium and Vitamin D [Abstract]. doi:10.17226/13050

4. Ettinger, B., Hughes, B. D., & Melton, J., III. (n.d.). World Health Organization Collaborating Centre for Metabolic Bone Diseases, University of Sheffield, UK. Retrieved April 12, 2016, from http://www.shef.ac.uk/FRAX/tool.aspx?country=9

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