HEALTH PLAN OF NEVADA
A UnitedHealthcare Company

SIERRA HEALTH AND LIFE
A UnitedHealthcare Company

Created: July 2001
Revised: 6/2003,
7/2003, 7/2005
Last Revision: 7/2007

# Health Plan of Nevada/Sierra Health & Life Osteoporosis Diagnosis, Treatment and Management Guidelines

| | |
|---|---|
| **DESCRIPTION:** | The National Osteoporosis Foundation practice specific guidelines, first published in 2000, have been updated and republished in 2006. The guidelines are based on the analysis of the current evidence for prevention, diagnosis, and treatment of osteoporosis. Osteoporosis is a devastating disorder with significant physical, psychosocial, and financial consequences that is an increasing health concern due to the aging of the population of the United States. Osteoporosis occurs in all populations and in all ages, though it is more prevalent in Caucasian and Asian men and postmenopausal females. |
| **COUNSELING** | Counseling on the risk factors of osteoporosis and related fractures is recommended for all men and women. Recommendations for prevention include obtaining an adequate intake of dietary calcium (at least 1200 mg/d,) and vitamin D (400 to 800 IU per day below the age of 50; 800 to 1000 IU per day after the age of 50). Regular weight-bearing and muscle-strengthening exercise, avoiding tobacco, moderating the use of alcohol are also suggested. Lowering the risk factors remains to be the best way to avoid bone loss. |
| **RISK STRATIFICATION IN PATIENTS WITH OSTEOPOROSIS** | • Advanced age<br>• Alcohol in amounts > 2 drinks per day<br>• Autoimmune disease, such as Rheumatoid Arthritis<br>• Corticosteroid use<br>• Current cigarette smoking<br>• Dementia<br>• Endocrine disorders, such as Hyperparathyroidism or Hyperthyroidism<br>• Estrogen deficiency at an early age (≤ 45 yrs) or bilateral ovariectomy<br>• Gastrointestinal disease or bariatric surgery<br>• History of fragility fracture in a first-degree relative<br>• Impaired vision despite adequate correction<br>• Low body weight (< 127 pounds)<br>• Low calcium intake (lifelong) or low Vitamin D intake<br>• Low physical activity<br>• Low testosterone levels<br>• Personal history of fracture as an adult |

| | |
|---|---|
| | • Poor health/frailty<br>• Recent falls<br>• Use of glucocorticoid therapy (7.5 mg or more a day for more than 3 months) |
| **FURTHER ASSESSMENT** | Further assessment is recommended for those with specific risk factors using the Bone Mass Densitometry (BMD). Bone densitometry is the best objective, quantitative measurement for the detection of osteoporosis. BMD is utilized for diagnosis of osteoporosis, fracture risk prediction and serial monitoring of bone mineral density to measure response to interventions. Those individuals, with specific risk factors, can be evaluated using heel screening with a follow up dual energy x-ray absorptiometry (DEXA) if an abnormal result is recorded, or a DEXA alone. For individuals with high risk disease and age 65 years and older, the preferred screening method is DEXA, scanning two sites.<br>A baseline test is recommended at age 65, for women, and at age 70 for men, if one has not been performed. Bone Density Testing can be repeated every 24 months, for diagnostic or treatment monitoring purposes.<br>For those with significant risk factors, screening should be considered at an earlier age. |
| **INDICATIONS FOR BMD** | • 65 years of age for women, 70 years of age for men<br>• Younger men or women with one or more risk factor<br>• Presence of a vertebral compression fracture or other suspicious fracture |
| **BMD RESULTS** | BMD T-scores below –2 in the absence of risk factors, initiate therapy to reduce fracture.<br>BMD T-scores below –1.5, with other risk factors, initiate therapy to reduce fracture risk. |
| **INTERVENTIONS** | Prevention:<br>Non-Pharmacological:<br>• Intake of calcium (1200 mg/d) and Vitamin D (400 to 800 IU per day below the age of 50, and 800 to 1000 IU per day after the age of 50)<br>• Regular weight bearing and muscle-strengthening exercise<br>• Avoidance of tobacco<br>• Moderate alcohol intake<br>Pharmacological:<br>• Agents listed under treatment may also be considered if above fail or patient is at high risk. |

| INTERVENTIONS | Treatment: |
|---|---|
| | Non Pharmacological Treatment includes:<br>Lifestyle modifications with efforts made to provide patients with appropriate counseling and education as needed. Lifestyle modifications include tobacco avoidance, moderation of alcohol intake, nd more exercise. Calcium and Vitamin D should be a part of all therapies.<br>Pharmacological options for osteoporosis treatment includes:<br>**ANTIRESORPTIVE (BONE RETAINING)**<br>• Biosphophonates: Risedronate, Alendronate, Ibandronate): Most effective, for vertebral, non vertebral and hip fracture prevention, effective in glucocortioic -induced osteoporosis.<br>• Selective Estrogen Receptor Modulator (SERM) for women only: Raloxifene, vertebral only<br>• Calcitonin-Salmon for women only/Calcitonin nasal spray: less effective, vertebral fractures only, should be used in mild disease or those intolerant of above options<br>• Hormone replacement therapy (HRT), for women only: Used concurrently for the relief of estrogen deficiency symptoms. Should not be considered solely for the treatment or prevention of osteoporosis.<br>• **ANABOLICS (BONE FORMING)**<br>• PTH (teriparatide) should be reserved for treatment failures or severe cases. |

This guideline is an educational tool to aid clinical decision making. It is not a standard of care. The physician should adapt this guideline when clinical judgment so indicates.

---

**REFERENCE PERSON:**

Gregg Middleton M.D., Rheumatology, Southwest Medical Associates.

**REFERENCES:**


- National Osteoporosis Foundation. Bone Tool Kit. 2007 Osteoporosis Awareness and Prevention Campaign.
- Institute for Clinical Systems Improvement. Health Care Guideline: Diagnosis and Treatment of Osteoporosis, 2006.
- National Academy of Sciences. Dietary Reference Intakes, 2004.
- National Women's Health Information Center. Osteoporosis FAQs. U.S. Department of Health and Human Services, Office of Women's Health, August 2004.
- National Osteoporosis Foundation. Physicians Guide to Prevention and Treatment of Osteoporosis, 2003.
- Recommendations on Diagnosis and Management of Osteoporosis in Postmenopausal Women. May/June 2006 issue of Menopause.