



# Osteoporosis

## Are you at risk?

**Take this Osteoporosis Self-test to find out.**

Put an "X" in the column that best describes you for each risk factor.

Risk Factors	Column A	Column B	Column C
<b>1. Gender</b>	<input type="checkbox"/> Male, female pre-menopause	<input type="checkbox"/> Female, uterus removed or not menstruating for other reasons	<input type="checkbox"/> Female, post-menopausal
<b>2. Race</b>	<input type="checkbox"/> African-American	<input type="checkbox"/> Hispanic	<input type="checkbox"/> White, Asian, Native American
<b>3. Age</b>	<input type="checkbox"/> Less than 60	<input type="checkbox"/> 60 to 64	<input type="checkbox"/> 65 or older
<b>4. Weight/BMI</b>	<input type="checkbox"/> Overweight Weight 154+, BMI greater than 25	<input type="checkbox"/> Normal weight Weight 127-153, BMI 18.5-24.9	<input type="checkbox"/> Very lean Weight less than 127, BMI < 18.5
<b>5. Fracture history</b>	<input type="checkbox"/> No family or personal history of broken bones from a fall	<input type="checkbox"/> Family history of broken bones from falls	<input type="checkbox"/> Personal history of broken bones from falls
<b>6. Physical activity</b>	<input type="checkbox"/> Weight bearing exercise 4+ times a week <b>and</b> do weight training	<input type="checkbox"/> Moderate activity such as walking, no weight or resistance training	<input type="checkbox"/> Sedentary, little or no regular physical activity
<b>7. Smoking</b>	<input type="checkbox"/> Never smoked	<input type="checkbox"/> Ex-smoker	<input type="checkbox"/> Current smoker
<b>8. Alcohol</b>	<input type="checkbox"/> Never drink alcoholic beverages	<input type="checkbox"/> Have up to 1-2 alcoholic drinks/day	<input type="checkbox"/> Often have 3+ alcoholic drinks/day
<b>9. Calcium intake</b>	<input type="checkbox"/> Eat 2 or more 8 oz. servings of milk or yogurt or calcium equivalent daily <b>OR</b> calcium supplement (5-600 mg/day)	<input type="checkbox"/> Eat only 1 serving of calcium rich food daily and no calcium supplement	<input type="checkbox"/> Seldom or never drink milk or other calcium fortified foods and take no calcium supplement
<b>10. Protein source</b>	<input type="checkbox"/> Eat primarily plant protein foods, seldom or never eat animal foods	<input type="checkbox"/> Eat animal protein foods daily (meats, poultry, or fish)	<input type="checkbox"/> Get most of my protein from animal foods (meats, poultry, or fish)
<b>11. Blood pressure</b>	<input type="checkbox"/> Normal: less than 120/80	<input type="checkbox"/> High normal: 120/80 to 139/89	<input type="checkbox"/> High: 140/90 or higher
<b>12. Medications</b> anti-convulsants steroids, drugs for hyperthyroidism	<input type="checkbox"/> Have never used these medications (see back) on a regular basis	<input type="checkbox"/> Have used these medications for a few months	<input type="checkbox"/> Have used these medications for many months or years
<b>13. Vitamin A (retinol)</b>	<input type="checkbox"/> Do not take vitamin supplements with vitamin A (retinol)	<input type="checkbox"/> Take vitamin supplements but less than 500 mcg/day of vitamin A	<input type="checkbox"/> Take vitamin A supplements of 700 mcg/day or higher
<b>14. Folate and Vitamin B-12</b>	<input type="checkbox"/> Have adequate intake: 400+ mcg folate or 2.5 mcg vitamin B-12 daily	<input type="checkbox"/> Have marginal intake of folate and vitamin B-12 daily	<input type="checkbox"/> Have a low intake of folate and vitamin B-12 daily
<b>15. Vitamin D</b>	<input type="checkbox"/> Get 400 IU vitamin D/day (700-800 if over age 70) in diet or from sun	<input type="checkbox"/> Get less vitamin D from sun and in diet than recommended	<input type="checkbox"/> Get very little sun and very little vitamin D in diet
<b>16. Vitamin K</b>	<input type="checkbox"/> Eat foods high in vitamin K 5+ times/week	<input type="checkbox"/> Eat foods high in vitamin K 2-4 times/week	<input type="checkbox"/> Seldom eat foods high in vitamin K, less than once a week
<b>Your Score</b>	<b># of checks in column A</b> <input type="text"/>	<b># of checks in column B</b> <input type="text"/>	<b># of checks in column C</b> <input type="text"/>

# Osteoporosis Risk-Scoring and Prevention Guidelines

**Scoring Your Results** Count the number of checked boxes in each column. Add columns B and C and write total in the overall risk score box.

- Any checks in Column A indicate “**Low Risk**” for that specific risk factor.
- Checks in Column B indicate “**Moderate Increased Risk**.”
- Checks in Column C indicate “**High Risk**.”

**Overall Risk Score**  (number of checks in column C). The greater the number of risks you have, the higher your over-all risk for osteoporosis. Review the explanations and suggestions below for enhancing bone health.

## Risk Factor Explanations

- [ ] **Gender** Women are more likely to develop osteoporosis than men and at an earlier age.
- [ ] **Race** Caucasians (whites) have the highest risk for osteoporosis. It is common in Asians and Native Americans, lower in Hispanics, and lowest in African Americans.
- [ ] **Age** Men and women lose bone tissue as they age. Some have stronger bones to start with. Others lose it more slowly. *See preventive actions that follow.*
- [ ] **Weight/BMI** Lean individuals (less than 154 lb) are at high risk. Maintaining a healthy weight is important, but being too lean (BMI <18.5) is not desirable.
- [ ] **Fracture history** If your parents had vertebral or other fractures due to osteoporosis, you may have inherited a similar tendency. If you have fallen and broken a bone yourself, you are at high risk for future problems.
- [ ] **Physical activity** Active people generally have stronger bones than inactive people. Bones grow stronger when stressed. Weight-bearing activities and weight lifting are best for increasing bone strength.
- [ ] **Smoking** To stop smoking is a positive way to build stronger bones and overall health.
- [ ] **Alcohol** A high intake of alcohol weakens bones and increases the risk of falls. Avoid or limit alcohol.
- [ ] **Dietary calcium** If calcium intake is low, bone strength is also likely low. 1,000 mg of calcium per day is recommended for adults, 1200 mg/day for persons 70 or older.
- [ ] **Dietary protein** Adequate protein is essential for all healthy tissue, including bones. Recent research shows that a high ratio of vegetable to animal protein protects bones, slows the loss of calcium, and reduces fractures. Good sources of vegetable protein include beans, lentils, split peas, soybeans, garbanzos, tofu, nuts, whole grains, soymilk, and gluten/soy-based meat alternates.
- [ ] **Blood pressure** High blood pressure (140/90 or higher) can increase the loss of bone in elderly individuals. Lowering blood pressure may reduce your risk of osteoporosis and heart problems.
- [ ] **Medications** Certain medications increase bone loss, for example, corticosteroids, excess thyroid hormone, anti-convulsants, hormone- and immune-suppression drugs. Ask your doctor for guidance regarding medication use.
- [ ] **Retinol** Beta-carotene does not increase risk, but a total intake of 1.5+ mg/day vitamin A or retinol increases risk.

- [ ] **Folic Acid/Vitamin B-12** Folic acid and vitamin B-12 reduce hip fractures. Recommendations: vitamin B-12: 2.5 mcg/day; folic acid: 400 mcg/day. Spinach and other leafy greens and lentils and other legumes are high in folate. Only animal foods or fortified foods have vitamin B-12.
- [ ] **Vitamin D** Adequate vitamin D comes from sunshine and diet. Adults need 400 IU daily, persons 70 and older need 700-800 IU daily. 1 glass of milk = 100 IU of vitamin D. Sunlight’s contribution varies by season and by exposure.
- [ ] **Vitamin K** In one study, women who ate 250mcg/day had half the fracture rates of those eating 60 mcg/day. Good sources: dark leafy greens, broccoli, cabbage. The recommended intake is 90 (women), 120mcg/day (men).

## Preventive Actions for Bone Health

If you are at increased risk be sure to take preventive actions as soon as possible. The national Osteoporosis Foundation recommends four important actions:

1. **Eat a balanced diet.** Get adequate calcium, folate, and vitamins D, B-12, and K. Good sources of calcium include lowfat milk and yogurt, lowfat cheese, dark leafy greens, calcium-enriched soy-milk and tofu, calcium-enriched orange juice, and V-8 vegetable juice. If needed, take a calcium and vitamin D supplement. Emphasize vegetable proteins in your diet. Limit intake of salt or sodium.
2. **Do weight-bearing exercises regularly.** The best activities are those that stress the bones: jog, jump rope, climb stairs, dance, play tennis, and weight lift (to build strength of bones in arms as well).  
Get guidance from your doctor or a knowledgeable fitness trainer on how best to start an exercise program.
3. **Follow a healthy lifestyle.** Avoid smoking, alcohol, and caffeine. They all increase bone loss. Be active in the sunlight, eat well, get adequate rest, and be positive on life.
4. **Get help from your doctor as needed.** Your doctor can check your bone mineral density. If needed there are also medications than can be taken to go along with a healthy lifestyle to prevent excessive bone loss. Discuss these and other options with your doctor.

### Sources:

1. National Osteoporosis Foundation, [www.nof.org](http://www.nof.org), 2005
2. NIH Consensus Panel, Osteoporosis Prevention, Diagnosis, and Therapy, JAMA 285:785-95, Feb. 14, 2001
3. Screening for Osteoporosis, NEJM 353:164-71, Jul 14, ‘05
4. Surgeon General’s Report on Bone Health & Osteoporosis, [www.surgeongeneral.gov](http://www.surgeongeneral.gov), 2004