



## Raymond Wayne Whitted MD, MPH

*...dedicated to safe, state-of-the-art surgery and health life-styles for women of all ages*

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### Bone Health

Bones play many roles in the body. They provide structure, protect organs, anchor muscles, and store calcium. Adequate calcium consumption and weight bearing physical activity build strong bones, optimizes bone mass, and may reduce the risk of osteoporosis later in life.

For more information on bone health and osteoporosis please visit the National Osteoporosis Foundation online at <http://www.nof.org/>\*

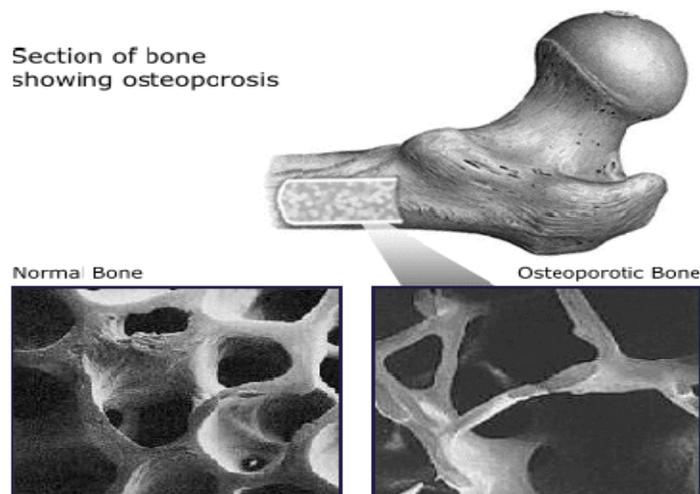
### Peak Bone Mass

Peak bone mass refers to the genetic potential for bone density. By the age of 30, the average woman has acquired most of her skeletal mass. A large decline in bone mass occurs in older adults, increasing the risk of osteoporosis. For women this occurs around the time of menopause.

It is important for young girls to reach their peak bone mass in order to maintain bone health throughout life. A person with high bone mass as a young adult will be more likely to have a higher bone mass later in life. Inadequate calcium consumption and physical activity early on could result in a failure to achieve peak bone mass in adulthood.

### Osteoporosis

Osteoporosis or "porous bone" is a disease of the skeletal system characterized by low bone mass and deterioration of bone tissue. Osteoporosis leads to an increase risk of bone fractures typically in the wrist, hip, and spine.



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While men and women of all ages and ethnicities can develop osteoporosis, some of the risk factors for osteoporosis include those who are

- Female
- White/Caucasian
- Post menopausal women
- Older adults
- Small in body size
- Eating a diet low in calcium
- Physically inactive

To find out more about the prevalence and risk factors associated with osteoporosis, please visit the National Osteoporosis Foundation Web site at <http://www.nof.org/osteoporosis/stats.htm>.\*

## Calcium

Calcium is a mineral needed by the body for healthy bones, teeth, and proper function of the heart, muscles, and nerves. The body cannot produce calcium; therefore, it must be absorbed through food. Good sources of calcium include

- Dairy products—*low fat or nonfat milk, cheese, and yogurt*
- Dark green leafy vegetables—*bok choy and broccoli*
- Calcium fortified foods—*orange juice, cereal, bread, soy beverages, and tofu products*
- Nuts—*almonds*

Recommended amount of calcium vary for individuals. Below is a table of adequate intakes as outlined by the National Academy of Science.

### Recommended Calcium Intakes

Ages	Amount mg/day
Birth–6 months	210
6 months–1 year	270
1–3	500
4–8	800
9–13	1300
14–18	1300
19–30	1500
31–50	1500
51–70	1500
70 or older	1200
Pregnant & Lactating	1000

Source: Dietary Reference Intakes for Calcium, National Academy of Sciences, 1997

Vitamin D also plays an important role in healthy bone development. Vitamin D helps in the absorption of calcium (this is why milk is fortified with vitamin D).

For more information on calcium and children visit the National Institute of Child Health and Human Development (NICHD) Web site at <http://www.nichd.nih.gov/milk/milk.cfm>.

## Weight-Bearing Physical Activity

Regular physical activity has been associated with many positive health benefits including strong bones. Like proper calcium consumption, adequate weight-bearing physical activity early in life is important in reaching peak bone mass. Weight-bearing physical activities cause muscles and bones to work against gravity. Some examples of weight bearing physical activities include

- Walking, Jogging, or running
- Tennis or Racquetball
- Field Hockey
- Stair climbing
- Jumping rope
- Basketball
- Dancing
- Hiking
- Soccer
- Weight lifting

Incorporating weight-bearing physical activity into an exercise plan is a great way to keep bones healthy and meet physical activity recommendations set forth in the Dietary Guidelines for Americans.

**Adults:** Engage in at least 30 minutes of moderate physical activity [on] most, preferably all, days of the week

**Children:** Engage in at least 60 minutes of moderate physical activity [on] most, preferably all, days of the week

For more information on the Dietary Guidelines for Americans please visit the Web site at <http://www.nal.usda.gov/fnic/dga/dguide95.html>.