# Men and Osteoporosis

Men who suffer from osteoporosis may not be identified using existing guidelines. In a study reported in the media, existing guidelines identified only 16% of men whose osteoporosis had progressed to the stage where they suffered bone fractures. The study concluded that male osteoporosis guidelines are needed as men may experience broken bones when they have a higher bone mineral density than women.

According to Dr. Eric Orwoll of Oregon Health Sciences University, failure to diagnosis osteoporosis in men can have tragic consequences:

> *"… men are much more likely than women to die or experience chronic disability after a hip fracture."*[i]

Dr. Jane Cauley of the University of Pittsburgh Graduate School of Public Health elaborates on the need for male-specific guidelines:

> *"If doctors use a female (guidelines) in diagnosing osteoporosis in men, they could be missing many men who are at risk of fracture. Male (guidelines) should be created and standardized to better identify at-risk men who could benefit from medications that prevent further bone loss."*
>
> *"As the population continues to age, (male guidelines) would mean getting more at-risk men into appropriate therapies to slow or stop the loss of bone before they experience a life-threatening fracture. These interventions would make a big difference in men's heath, just as they have improved women's health over the past decade."*[ii]

In 1999, the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) in partnership with the National Institute on Aging and the National Cancer Institute at NIH announced a seven-center grant to study osteoporosis in men.

*The National Institutes of Health Osteoporosis and Related Bone Diseases Resource Center provides the following information. Please access the National Resource Center for additional information.*[iii]

## What Are the Risk Factors for Men?

Several risk factors have been linked to osteoporosis in men:

- Chronic diseases that affect the kidneys, lungs, stomach, and intestines or alter hormone levels.
- Undiagnosed low levels of the sex hormone testosterone.
- Unhealthy lifestyle habits (e.g., smoking, excessive alcohol use, low calcium intake, inadequate physical exercise).
- Age: The older you are, the greater your risk.
- Heredity: A son is almost four times as likely to have low bone mineral density (BMD) if his father has low BMD, and nearly 8 times as likely if both parents have low BMD.
- Race: Caucasian men appear to be at particularly high risk, but all men can develop this disease.

**Please Note:** Men's Health Network does not provide medical services. Rather, this information is provided to encourage you to begin a knowledgeable dialogue with your physician. Check with your health care provider about your need for specific health screenings.

## What Causes Osteoporosis?

Bone is constantly changing - that is, old bone is removed and replaced by new bone. During childhood, more bone is produced than removed, so the skeleton grows in both size and strength. The amount of tissue or bone mass in the skeleton reaches its maximum amount by the late twenties. By this age, men typically have accumulated more bone mass than women. After this point, the amount of bone in the skeleton typically begins to decline slowly as removal of old bone exceeds formation of new bone.

In their fifties, men do not experience the rapid loss of bone mass that women have in the years following menopause. By age 65 or 70, however, men and women lose bone mass at the same rate, and the absorption of calcium, an essential nutrient for bone health throughout life, decreases in both sexes.

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Once bone is lost, it cannot be replaced. Excessive bone loss causes bone to become fragile and more likely to fracture. This condition, known as osteoporosis, is called a "silent disease" because it progresses without symptoms until a fracture occurs.

Fractures resulting from osteoporosis most commonly occur in the hip, spine, and wrist and can be permanently disabling. Hip fractures are especially likely to be disabling. Perhaps because such fractures tend to occur at older ages in men than in women, men who sustain hip fractures are more likely to die from complications than are women. More than half of all men who suffer a hip fracture are discharged to a nursing home, and 79 percent of those who survive for one year after a hip fracture still live in nursing homes or intermediate care facilities.

## Primary and Secondary Osteoporosis

There are two main types of osteoporosis: primary and secondary. In cases of primary osteoporosis, the condition is either caused by age-related bone loss (sometimes called *senile osteoporosis*) or the cause is unknown (*idiopathic osteoporosis*). The term idiopathic osteoporosis is used only for men less than 70 years old; in older men, age-related bone loss is assumed to be the cause.

At least half of men with osteoporosis have at least one (sometimes more than one) secondary cause. In cases of secondary osteoporosis, the loss of bone mass is caused by certain lifestyle behaviors, diseases or medications. The most common causes of secondary osteoporosis in men include exposure to glucocorticoid medication, hypogonadism (low levels of testosterone), alcohol abuse, smoking, gastrointestinal disease, hypercalciuria and immobilization.

## How Can Osteoporosis Be Prevented?

There have been fewer research studies on osteoporosis in men than in women. However, experts agree that all people should take the following steps to preserve their bone health.

- Avoid smoking, reduce alcohol intake, and increase level of activity.
- Ensure a daily calcium intake that is adequate for your age.
- Ensure an adequate vitamin D intake. Normally, the body makes enough vitamin D from exposure to as little as 10 minutes of sunlight a day. If exposure to sunlight is inadequate, dietary vitamin D intake should be at least 400 IU but not more than 800 IU/day; 400 IU is the amount found in one quart of fortified milk and most multivitamins.
- Engage in a regular regimen of weight-bearing exercises where bones and muscles work against gravity. This includes walking, jogging, racquet sports, stair climbing, team sports, lifting weights, and using resistance machines. A doctor should evaluate the exercise program of anyone already diagnosed with osteoporosis to determine if twisting motions and impact activities, such as those used in golf, tennis, or basketball, need to be curtailed.
- Discuss with the doctor the use of medications, such as steroids, that are known to cause bone loss.
- Recognize and treat any underlying medical conditions that affect bone health.

| Recommendations for Calcium and Vitamin D Intake in Men | | |
|---|---|---|
| Age | Calcium (mg) | Vitamin D (IU) |
| 19-30 | 1,000 | ---- |
| 31-50 | 1,000 | 200 |
| 51-70 | 1,200 | 400 |
| 70+ | 1,200 | 600 |
| Upper limit | 2,500 | 2,000 |

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[i] November 15, 1999. http://about.onhealth.com/family/in-depth/item/item,55061_1_1.asp
[ii] September 25, 2000. http://about.onhealth.com/family/briefs/item%2C101332.asp
[iii] http://www.osteo.org/bone_health_info.html