



Men and Osteoporosis

Living with Osteoporosis: A Feature Profile



Today 2 million American men have osteoporosis, and another 12 million are at risk for this disease. Yet, despite the large number of men affected, osteoporosis in men remains under diagnosed, underreported, and inadequately researched.

It was the last thing Fr. Don

Stortz expected when he suffered three spine fractures in 2005. "I'm tired of all the advertisements for women and osteoporosis! Don't they know that men get this thing, too?" Fr. Don had considerable pain with the first fractures and was treated with vertebroplasty (insertion of material in fractured vertebrae to stabilize and reduce pain). He has recently suffered two more vertebral fractures and is currently recovering. Though retired, Fr. Don continues to celebrate Mass at Holy Cross where he is pictured.

During youth, bones grow in length and mass. During the teen years, maximum height is reached, but bones continue to grow more dense until about age 30 when peak bone density is attained. After that point, bone mass is stable for twenty or so years, after which they slowly start to lose density and strength. Throughout life, the amount of bone a person has is affected by heredity, diet, sex hormones, physical activity, lifestyle choices, and the use of certain medications. Men have larger, stronger bones than women which explains, in part, why

osteoporosis affects fewer men than women.

Risk factors for osteoporosis

The following risk factors are associated with osteoporosis in men:

- Prolonged exposure to certain medications, such as steroids, used to treat asthma or arthritis; anticonvulsants; certain cancer treatments and aluminum-containing antacids
- Chronic disease that affects the kidneys, lungs, stomach, and intestines and alters hormone levels
- Undiagnosed low levels of the sex hormone testosterone
- Lifestyle habits: smoking, excessive alcohol use, low calcium intake, inadequate physical exercise
- Age: Bone fragility increases with age
- Heredity
- Race: Of all men, white men appear to be at greatest risk for osteoporosis. However, men from all ethnic groups develop osteoporosis

How is osteoporosis diagnosed?

Unfortunately, the diagnosis of osteoporosis in men is often overlooked. The physician should take a medical history to identify risk factors and conduct a complete physical exam, including height, weight, x-rays, and urine and blood tests. He or she also may order a Bone Mineral Density Test (BMD Test) or bone mass measurement, a special type of x-ray that can diagnose osteoporosis.

Inform the doctor regarding loss of height, change in posture, or sudden back pain.

How can osteoporosis in men be prevented and treated?

The medical research on osteoporosis in men has been inadequate. However, experts agree that all persons should

take the following steps to preserve bone health.

- Recognize and treat any underlying medical conditions that affect bone health.
- Identify and evaluate the use of medications that are known to cause bone loss.
- Change unhealthy habits, such as smoking, excessive alcohol intake, and inactivity.
- Ensure a daily calcium intake of 1000 mg/day to age 50 and 1200 mg/day over age 50.
- Ensure adequate vitamin D intake.
- Engage in a regular regimen of weight-bearing exercises in which bone and muscles work against gravity. This includes walking, jogging, racquet sports, stair climbing, and team sports. Also, lifting weights or using resistance machines appears to help preserve bone density. Exercise also improves balance and muscle tone and imparts a sense of well-being. If you have already been diagnosed with osteoporosis, any exercise program should be evaluated for safety by your doctor before you begin. Twisting, bending and impact activities may need to be curtailed, depending on the severity of your condition.



What medications can slow or stop bone loss in men?

Medication	Brand Name	Class of drug	Administration	Dosage	Approved for Men
Alendronate	Fosamax	Bisphosphonate	Oral, once weekly	70 mg	Yes
Risedronate	Actonel	Bisphosphonate	Oral, once weekly	35 mg	Yes
Teriparatide	Forteo	Anabolic	Subcutaneous injection (like insulin)	20 mcgs/d	Yes
Testosterone	Androgel, Androderm	Hormone	Patch or gel applied to skin daily	Varies	Yes
Calcitonin	Miacalcin	Hormone	Injection or nasal spray.	Depends on form	No
Ibandronate	Boniva	Bisphosphonate	Oral once monthly or intravenous every 3 months	150 mg oral/ 3 mg I.V.	No

Information Courtesy of National Osteoporosis Foundation

How Patients & Friends

CAN HELP!

YOUR GIFT CAN HELP

...and will continue the Creighton Osteoporosis Research Center's Tradition of Innovation and Service to Humanity.

The cost to fund research, treatment and prevention of osteoporosis is expensive. As a non-profit institution, the Creighton Osteoporosis Research Center exists to serve and improve the plight of humanity. Because of this, the University relies heavily on goodwill contributions from patients and friends. Gifts to medicine and research are the key to sustaining this critically needed health program. Please help the Creighton Osteoporosis Research Center continue to educate and find tomorrow's cures.

Your support of the Creighton Osteoporosis Research Center can be expressed through a wide spectrum of giving options including:

- Cash
- Gift of appreciated securities or real estate owned for one year
- Bequest (by will or trust)
- Gift with life income for donor and/or spouse
- Gift of income with assets to heirs
- Gift of life insurance
- Gift of personal residence or farm
- Bequest of IRA or qualified retirement plan assets

I am interested in receiving information regarding support of the Creighton University Osteoporosis Research Center.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail: _____

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Osteoporosis Research Center

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Creighton
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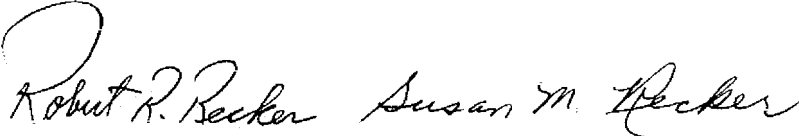
October, 2006

Dear Friends,

Thank you for participating in Creighton University Osteoporosis Research Center projects and seeking care for osteoporosis in the center. Without your trust and volunteerism, the center would not be able to advance the care of osteoporosis. With this issue of the newsletter, we are announcing the establishment of an endowment for the center. This endowment was created to ensure that the work of the Osteoporosis Research Center will continue into the future. The endowment needs broad support in order to sustain patient care and research in the center.

You are invited to contribute to this endowment. You may contact Susan Recker at 402-280-4810 if you have questions. You may send a contribution to the: "Recker/Pappajohn Endowed Research Fund", and mail to: Creighton University, Gift Processing, 2500 California Plaza, Omaha, NE 68178.

Sincerely,



Dr. and Mrs. Robert R. Recker



Address Service Requested

Creighton University Medical Center
Suite 4820
2500 California Plaza
Omaha, Nebraska 68178



Opportunities to Participate

The Creighton University Osteoporosis Research Center is conducting the following studies. If you have any questions, please call 402-280-BONE (280-2663) or Toll-free 1-800-368-5097.

ARE YOU SHRINKING?

If you have lost more than an inch in height, it could be a sign of osteoporosis. You may be eligible to participate in a 12 month research study using the newest bone forming medication for women with osteoporosis.

Eligibility requirements:

- Women between the ages of 60-85
- Post menopause for at least 5 years
- No history of cancer within past 5 years, except for skin cancer

There is no cost to you. For more information call 280-BONE (2663) or toll-free 1-800-368-5097 and mention the “carb-phos” study.

HAVE YOU HAD A BROKEN BONE?

You may qualify for a bone mineral density scan to evaluate your bone health at **no cost** to you. The study involves **no** medication. Do you meet the following criteria?

- Ages 20-48
- Having regular menstrual cycles
- Not currently on treatment for osteoporosis
- The broken bone occurred after age 18

For more information, please contact Jeanette LeMaster, RN, CCRC at 280-4839 or 1-800-368-5097 or e-mail jml@creighton.edu

THE MILK MINERAL STUDY

Milk, calcium supplements, Vitamin D and bone density scans provided at no cost. Stipend available. Only 4 visits in 6 months for those who qualify:

- Women over age 50
- Past menopause for more than 5 years but less than 10 years
- Dairy intake of 1 serving or less a day
- Must be willing to drink 3 servings of milk a day for the duration of the study or take a calcium supplement
- Not currently taking steroids, calcium supplements, hormone replacement or prescription osteoporosis medication

If interested contact Julie Stubby, Project Manager, at 280-BONE (2663) or 1-800-368-4958 and mention “milk mineral” study.

THE PHARMACODYNAMICS OF A SINGLE LARGE DOSE OF VITAMIN D3 IN AN ELDERLY POPULATION

- Who: Males and females, aged 19-50 or > 65
- When: starts October 2006
- Why: to determine the response of Vitamin D levels to a single dose of Vitamin D
- Commitment: 14 visits, (5-10 minutes/visit); Blood drawn each visit

*Stipend available

Contact: Laura Armas, MD or Marium Ilahi, M.D. at 280-4241. If you get the voice-mail, leave your name and number; your call will be returned within 24 hours.

In the News...

Osteonecrosis of the Jaw

What is it?

Recently reports have described a dental condition, osteonecrosis of the jaw or ONJ, in which bone in the lower jaw or less commonly the upper jaw becomes exposed, typically after a dental extraction or in association with other dental abnormalities or oral infection. The wound is usually not painful but fails to heal as usual. Infection in the area can occur and then the area may be painful. This can become a chronic problem in many of those who develop it. With careful dental management, use of antibiotics and daily rinsing of the mouth with antibiotic solutions, nearly all patients with the condition can experience healing over time.

Current information suggests that this condition appears to occur only rarely in patients with cancer who have severe chronic gum infections and who receive high doses of bisphosphonate drugs injected intravenously as a part of chemotherapy. The condition is very rare in women with osteoporosis taking oral bisphosphonate medications. It also occurs rarely in patients not taking bisphosphonates.

Of the cases reported to date, nearly 95% were cancer patients receiving an intravenous bisphosphonate, pamidronate (Aredia®) or zoledronate (Zometa®), typically given every three to four weeks. A very small number of patients being treated with the bisphosphonate pills alendronate (Fosamax®) or risedronate (Actonel®) for osteoporosis prevention or treatment have also been reported to have developed ONJ. Fosamax® and Actonel® have been available in the U.S. since 1995 and 1998, respectively, and have been used safely by many millions of patients. Ibandronate (Boniva®) is a new bisphosphonate now available that is given either once monthly orally, or once quarterly by IV injection. No cases of ONJ have been reported with ibandronate, and the risk of ONJ is not expected to be greater than with the other currently available bisphosphonates.

Last year the U.S. Food and Drug Administration (FDA) decided that a statement about ONJ would be required in the safety information provided in the package inserts of all bisphosphonate products so that doctors and patients would have this information.

What are points to consider?

Whenever a medication is prescribed, it is important for the patient to understand both the benefits and the potential risks or side effects associated with that medication.

Fosamax®, Actonel® and Boniva® were approved by the FDA for use in the prevention and treatment of osteoporosis after extensive clinical studies found them to be generally well tolerated and effective in reducing bone loss to prevent osteoporosis and in reducing the likelihood of fractures in patients with osteoporosis.

Based on information available to date, the incidence of ONJ appears to be extremely rare in people taking bisphosphonates for treatment or prevention of osteoporosis. It is important however, that patients taking bisphosphonates continue to get regular dental check-ups and to let their dentist know about all the medications they take. Though oral bisphosphonate use does not pose a threat

to routine dental procedures, it may be advisable before starting a bisphosphonate for osteoporosis to obtain an oral examination by a professional. Some authorities are recommending that patients have an oral examination by a dentist, and any needed dental work be completed prior to starting a bisphosphonate. However, many believe that an oral examination by a patient's personal physician is adequate prior to starting treatment.

There are reports that some dentists are advising patients to stop the use of bisphosphonates for a period of time (e.g. a month or two) before and after a tooth extraction or implant surgery, but there is no clear evidence, at this time, as to whether this is necessary.

Summary

Based on the currently available information, NOF believes that the benefits of oral bisphosphonate medications outweigh the potential risk of ONJ in the vast majority of patients who are receiving them. Without these medications, patients for whom these are appropriate treatments would be at higher risk of fractures.

The National Osteoporosis Foundation encourages all osteoporosis patients taking oral bisphosphonates to discuss their individual situation with their doctor or other health care professional. As clinical information is still incomplete and the causes not fully understood, research into ONJ continues. As new information becomes available, NOF will be providing updates. This section taken from web site www.nof.org

Rally with Sally for Bone Health SM

Actress Sally Field, surprised by her recent diagnosis of osteoporosis, decided to go public and launch a campaign encouraging women to protect themselves against fractures so that they can remain active and reduce their risk of a debilitating injury. "My generation has pushed for so much change to improve the lives of women, and today the biggest hurdle many of us face is our health....we've never been willing to sit back and take it - and that includes osteoporosis, too." You go, Gidget!

Calcium Confusion

Last February an article in the *New England Journal of Medicine* concluded that calcium and vitamin D supplementation did not significantly reduce hip fracture! (Believe me, we received a lot of calls on that one, so let's set the record straight!) That conclusion was taken from data from the Women's Health Initiative, or WHI. Dr. Heaney, of CUMC, explained in a local statement, "Careful reading of the reports shows that very few women in the study would have even been in a position to benefit..." The reasons include:

- Women in supplement and placebo groups both had calcium intakes greater than the national average.
- All participants were permitted to keep taking their own calcium
- Only a quarter were taking the supplements and
- Less than 60% were taking the prescribed amount by the end of the study

- Osteoporosis drugs were allowed, and half the women were on estrogen

In brief, most of the women in the WHI study were already getting enough calcium, and so were not in a position to benefit from taking still more. Officials at the National Institutes for Health, which sponsored WHI, issued a press release saying that nothing in the WHI changed current recommendations. Unfortunately the media failed to report that important fact.

Remember: food is the best source of calcium, but supplements help those who cannot meet their calcium needs by food alone. To get the most out of a supplement, take it with food, in divided doses and at different times than iron or zinc because calcium can interfere with absorption of these other minerals.

Vitamin D

- New research supports past evidence of a relationship of calcium and vitamin D reducing falls by 46%. *Archives of Internal Medicine* 2006 Feb 27;166 (4) 424-430
- May help reduce the risk of colon, breast, prostate and ovarian cancers *American Journal of Public Health* 2005 Dec 27
- Enhances immunity
- Helps body utilize calcium

Pass D cheese!

A recent FDA rule change allows cheese manufacturers to fortify cheese and cheese products with vitamin D₃ to a level that allows many cheese products to qualify as an “excellent” source of vitamin D. Vitamin D₃ is the actual source of the vitamin and is the form that works best in our bodies.

Milk, the sport drink

Chocolate milk outperformed both a commercial sports recovery drink and a fluid replenishing drink in a study by Indiana University researchers studying cyclists. The body needs both protein and carbohydrates to replenish itself after strenuous workouts. Moreover, calcium losses from perspiration with strenuous exercise can be very large. Milk, chocolate or otherwise, helps replace that lost calcium. None of the major sports-recovery drinks provides the needed calcium.

New Products

Dannon has three new products: 1. *Activia-lowfat* yogurt with a probiotic proven to help regulate the digestive system naturally by helping to reduce long intestinal transit time. 2. *DanActive light* is highlighting the immunity benefits of its product, and 3. *Light and Fit* a pending yogurt product with fiber and sucralose advertised as “crave control”

Calorie Countdown milk by Hood, previously sold as *Carb Countdown* is low in fat and carbohydrates.

Naturally Slender American cheese by Land O’Lakes has 25% less fat than pasteurized processed American and is available in white, yellow and hot pepper.

Bravo plans to launch milk drinks with flavors of General Mills cereals, such as *Trix*, *Lucky Charms*, etc....

Yokit is an instant milk product with the taste, texture and healthy attributes of yogurt. Add water, shake and eat. To be advertised as

“convenient for people on the go.”

Lifeline Food Company has what they say is the first natural cheese in the UL to offer live and active *Lactobacillus* cultures. Since that culture has been shown to enhance immunity and promote digestion, the company uses the promotional label “Immune Advantage” on the packaging.

Watch for

- * more Hispanic brands with flavors such as coconut, mango, etc...
- **Ultra-pasteurized milks that are processed at high temperatures so they can be stored on the shelf and remain fresh for months.

New Pharmaceuticals

Actonel with Calcium:-no more expensive than regular Actonel, but calcium not proven to be bioavailable.

Fosamax with D:-no more expensive than regular Fosamax and total amounts of vitamin D per pill is 400 IU/d which has been shown to improve calcium absorption but may still not be as much as some need.

Boniva: (pill) once monthly. No more effective than other bisphosphonates.

Boniva-Intravenous-option for those who cannot tolerate oral bisphosphonates.

*check with your insurance on coverage, as many are adding and/or deleting drugs from their plans. If there is an increase in the cost of your medications, it may be that the particular drug plan has changed it from a first, second or third tier.

Medicare D Updates

Medicare offered insurance coverage for prescription drugs for the first time in January 2006. This new voluntary coverage is called Part D and is available to all people on Medicare. What you may not know:

- You may change your plan every year
- If you are on Medicaid, you can change your plan every two months
- If a prescribed medication is not offered on your plan, you may be able to switch to another plan within that provider. If you have any questions, call your social security office or go on-line to www.medicareinteractive.org/nof

Medicare Interactive is your one-stop source for information on Medicare benefits and options, including information about the new Medicare Prescription Drug Plan. Other useful sites include:

www.MapRx.info The Medicare Access for Patients Rx Web site provides information specifically about the new Medicare Prescription Drug Plan, including links to federal, state and local resources that may be of assistance.

www.medicare.gov The official U.S. government Web site for people with Medicare. You can enroll through this website in the new Medicare Prescription Drug Plan.

www.socialsecurity.gov The official Web site of the U.S. Social Security Administration. Individuals with limited incomes can apply here for extra help with the new Medicare Prescription Drug Plan.

www.shiptalk.org SHIP, The State Health Insurance Assistance Program, offers one-on-one counseling to people with Medicare and their families. Contact information for your local SHIP is available through this link.