Osteoporosis File healthy files 2/19/2013

Scary news for those on Fosamax (a "bone building" drug)

New questions have emerged about whether long-term use of bone-building drugs for osteoporosis may actually lead to weaker bones in a small number of people who use them. The concern rises mainly from a series of case reports showing a rare type of leg fracture that shears straight across the upper thighbone after little or no trauma. Fractures in this sturdy part of the bone typically result from car accidents, or in the elderly and frail. But the case reports show the unusual fracture pattern in people who have used bone-building drugs called bisphosphonates for five years or more.
Some patients have reported that after weeks or months of unexplained aching, their thighbones simply snapped while they were walking or standing.

Many of these women will tell you they thought the bone broke before they hit the ground,? said Dr. Dean G. Lorich, associate director of orthopedic trauma surgery at NewYork-Presbyterian/Weill Cornell and the Hospital for Special Surgery. Dr. Lorich and his colleagues published a study in The Journal of Orthopaedic Trauma last month reporting on 20 patients with the fracture. Nineteen had been using the bone drug Fosamax for an average of 6.9 years.

Last year, The Journal of Bone and Joint Surgery published a Singapore report of 13 women with low-trauma fractures, including 9 who had been on long-term Fosamax therapy. The doctors emphasize that the problem appears to be rare for a class of drug that clearly prevents fractures and has been life-saving for women with severe osteoporosis. Every year, American adults suffer 300,000 hip fractures.

Merck, which makes Fosamax, says it will study whether the unusual fracture pattern is really more common in bone-drug users. Arthur Santora, Merck?s executive director for clinical research, noted that the fracture accounted for only about 5 or 6 percent of all broken hips, while drugs like Fosamax reduced the risk for the other 95 percent.
The fracture pattern did not emerge in placebo-controlled studies of bone drugs. But those studies have lasted only three to five years, although follow-up studies of the drug users have lasted longer. Now that the fracture pattern has been identified, researchers expect more doctors to publish reports.

?I have several similar patients myself,? said Dr. Susan M. Ott, associate professor of medicine at the University of Washington. ?Prior to these recent articles, there were a few cases here and a few cases there, but they are kind of starting to add up.?
Bones are in a constant state of remodeling ? dissolving microscopic bits of old bone, a process called resorption, and rebuilding new bone. After age 30 or so, a woman?s bones start to dissolve faster than they can be rebuilt, and after menopause she may develop thin, brittle bones that are easily broken. Bisphosphonates, including Fosamax, Procter & Gamble?s Actonel and GlaxoSmithKline?s Boniva, slow this process.
But some experts are concerned that microscopic bone cracks that result from normal wear and tear are not repaired when the bone remodeling process is suppressed. A 2001 study of beagles taking high doses of bisphosphonates found an accumulation of

microscopic damage, though there was no evidence that their bones were weaker. Last September, the medical journal Bone reported on a study of 66 women, financed by Eli Lilly, that showed an association between Fosamax use and an accumulation of microdamage in bones. In January 2006, the medical journal Geriatrics published an unusual autobiographical case report. Dr. Jennifer Schneider, a 59-year-old physician from Tucson, wrote that she was riding a New York City subway when the train lurched. ?I felt a crack and I fell,? she recalled in an interview. ?I knew I?d fractured my femur.? Dr. Schneider, who had been taking Fosamax for seven years, said she had had pain in her thigh, but X-rays and scans had not found a problem.

In recent years, another rare side effect has been associated with bone drugs: osteonecrosis of the jaw, in which a patient?s jawbone rots and dies. Most victims are cancer patients taking a potent intravenous form of the drug, but a small number of cases from ordinary users have been reported. Notably, studies suggest there is little extra benefit in taking the bone drugs more than five years. Dr. Lorich says that doctors should monitor the bone metabolism of long-term users and that some patients may want to consider taking time off the drugs. When fractures do occur, surgeons need to be alerted about long-term drug use, because the fracture may require more aggressive treatment and be slower to heal.

Dr. Ott says the focus should be on using bone drugs only in patients with a fracture risk of at least 3 percent over the next 10 years. (An online fracture risk tool is at www.shef.ac.uk/FRAX.) Too many of these people are not getting adequate treatment that definitely is beneficial,? Dr. Ott said. ?My major caution is that the bisphosphonates should not be used in people who don?t have a high risk of fracture.?

http://www.nytimes.com/2008/07/15/health/15well.html
Frank M. Painter, D.C.

"To D or not to D. That is the question"

OK, that's a corny title, but the recent research on vitamin D is anything but corny. You see the recent research on vitamin D has completely changed the way that we look at this essential nutrient.

When I studied nutrition many years ago, here's what we thought we knew about vitamin D.
1) Our bodies made vitamin D from a metabolite of cholesterol whenever we were in the sunlight, so we only needed vitamin D from external sources during the winter months or if we lived in Northern latitudes.
2) Vitamin D was essential for healthy bones & teeth, and that was about it. Vitamin D was a pretty boring vitamin.
3) Intakes of vitamin D as low as 1,800 IU could be toxic. If you were in the sun and drank two or more glasses of milk a day, you were told to avoid supplements containing vitamin D.

If that's pretty much what you've heard about vitamin D either your textbooks are out of date or you must be almost as old as I am - just kidding.

You see about 10-15 years ago scientists realized that wasn't just bone-forming cells that were affected by vitamin D. Almost every cell in our body has receptors for vitamin D. So scientists set out to discover what else vitamin D does. The short answer is "a lot".

For starters, vitamin D is essential for a strong immune system. Some experts think that may just be why winter is cold & flu season.

Studies have also shown that adequate vitamin D intake significantly reduces the risk of several types of cancer, especially colon, breast, lung and prostate cancer. Plus, some studies suggest that adequate vitamin D intake may make cancer treatment more effective. Vitamin D may reduce heart disease risk as well. Studies have shown that vitamin D supplementation reduces the levels of C-reactive protein, a marker for the inflammation associated with heart disease. In addition, a combination of vitamin D, calcium and magnesium can also lower blood pressure, which is a risk factor for heart disease.

Finally, there are a number of studies suggesting that vitamin D is beneficial in preventing autoimmune diseases. For example, in the Nurses Health Study just 400 IU of vitamin D was sufficient to reduce the risk of developing multiple sclerosis by 40%.

In Iowa another study followed 30,000 women age 55 to 69 for 11 years and found that those who got the most vitamin D from diet and supplementation were the least likely to develop rheumatoid arthritis.

And in Finland a recent study reported that kids who were given 2,000 IU of vitamin D in the 1960s had an 80% lower risk of developing type 1 diabetes (Don't ask me why they were giving kids 2,000 IU of vitamin D in Finland in the '60s).

There are more health benefits of getting enough vitamin D appearing in the literature every day. Vitamin D is anything but boring!

But how much vitamin D is enough? The answer to that question is changing as well.

With current technology it is possible to measure levels of the active metabolite of vitamin D in the blood and correlate blood levels of vitamin D with health outcomes.

When scientists did those studies, it turned out that there were some real surprises.

They found, for example, that most people didn't have adequate levels of vitamin D in their bloodstream - even in the summer. So you can forget that advice about not needing dietary vitamin D in the summer!

They also found that the previous ROAs for vitamin D (200 IU up to age 50,400 IU from 50 to 70 and 600 IU over age 70) were simply not adequate. Most experts now think that the ROA (which will be revised soon) should be increased to a least 1000 IU up to

age 50, and some experts think that the ROA should be as high as 2000 IU. Forget the idea of 1800 IU being toxic!

So what should you do? The simple answer is to get more vitamin D from sun exposure and your diet.

Forget the old advice to slather yourself with sunscreen every time you set foot outside of the house. While you still want to avoid prolonged sun exposure without sunscreen, most experts are now recommending 10-15 minutes sun exposure without sunscreen every day.

Forget the old ROAs. We will soon have new ROAs for vitamin D. But in the meantime, try to get at least 1000 IU of vitamin D from food (vitamin D fortified milk, salmon, mackerel, tuna & sardines are good sources) and supplementation.

And ask your doctor to test your blood levels of vitamin D when you go in for your next physical. We are all unique individuals. What may be perfectly adequate sun exposure and vitamin D intake for someone else may not be adequate for you. Only by having your blood levels tested will you know if you are getting enough of this vital nutrient.

To your health!

Dr. Stephen Chaney, PhO

What should I know about Osteoporosis?

If you are a woman over forty, you may be starting to worry about bone health. Everyone loses bone as they age. By the time a women is told she has osteoporosis, her gradual loss of bone mass has been progressing for years. Men lose bone too, but only about half as fast as women. Medically speaking, osteoporosis is characterized by low bone density and structural deterioration of bone tissue.

(1) The soft spongy bone in the wrists, hips, and spine are the most vulnerable to osteoporosis and prone to breakage as a result. Fractures due to osteoporosis are a major health problem in industrialized nations. In the United States, approximately 150,000 hip fractures occur annually in women over age 65, sentencing many women to long-term stays in nursing homes.

(2) These fractures can be fatal. By age 80, some 40 percent of all women will have a spinal compression fracture and suffer with back pain, loss of height, and disability.

(3) Unlike the dead, brittle skeleton hanging in the high school biology lab, bone is a living, metabolically active tissue. Throughout life, bone is constantly rebuilding itself. Bone serves as a storehouse for minerals, chiefly calcium, which can be tapped to meet the body's mineral requirements. Bone is broken down through a process called "resorption," releasing its minerals into the general circulation. New bone is then formed to replace the reabsorbed bone, preventing a net loss of bone. This is called bone "remodeling." As we age, however, bone formation begins to fall behind, causing the gradual bone loss that culminates in osteoporosis. Exactly why and how bone loss accelerates with aging is not completely understood. Many different physiologic changes appear to be involved.

(4) Bone cells called "osteoblasts" that rebuild bone seem to falter with aging. Hormones of the thyroid and parathyroid glands control the movement of calcium in and out of bone: calcitonin

secreted by the thyroid deposits calcium into bone while PTH from the parathyroids pull calcium out. As we age, calcitonin levels tend to fall coupled with a rise in PTH, tipping the scale toward bone breakdown.
(5, 6) Estrogen protects against bone loss and declining estrogen levels after menopause increase bone resorption. Add in the reduced absorption of dietary calcium that comes with aging and we have a constellation of interwoven factors favoring bone loss.
(7, 8) While a certain amount of bone loss seems inevitable with the passage of time, the process is not entirely beyond our control. Dietary and lifestyle measures can, to some degree, help maintain bone health. Poor nutrition and other health habits such as smoking, alcohol abuse, and physical inactivity contribute to bone loss. Exercise, especially through activities like walking that put pressure on the weight-bearing bones, stimulates bone remodeling. Exposure to sunlight is helpful. Sunlight forms vitamin D in the skin, vitamin D in turn increases calcium absorption. The risk of osteoporosis has been associated with heavy caffeine consumption. One study found that more than two cups of coffee or four cups of tea a day increased calcium excretion in the urine and the incidence of hip fractures.
(9) Too much phosphorus in the diet favors bone loss by increasing excretion of both calcium and magnesium. High phosphorus foods such as animal protein and soft drinks should be consumed in moderation. In addition, older women with low blood levels of vitamin B12 had greater bone mineral loss.
(10) Milk drinking is commonly believed to promote strong healthy bones, but recent studies have raised questions about this. A Japanese study demonstrated that supplementing with calcium (200mg oyster shell with seaweed) more effectively suppressed parathyroid hormone than supplementing with milk.
(11) Parathyroid hormone increases blood levels of phosphorus and increases calcium excretion in the urine. Sugar also stimulates calcium excretion.

(12) **Statistics National Institute of Arthritis and Musculoskeletal and Skin disease (NIAMS), 1999.**
• 10 million Americans are affected with osteoporosis.
• 18 million people are at risk for developing osteoporosis.
• Osteoporosis' cost to health care is $15-20 billion a year.
National Osteoporosis Foundation, 1999.
• 80% of the population with Osteoporosis are women.
• 1 in 2 women and 1 in 8 men 50 yrs. and over will have osteoporosis related fractures.
• Osteoporosis is responsible for more than 1.5 million fractures annually.
o 300,000 hip fractures
o 250,000 vertebrae
o 250,000 wrists
o 300,000 other bone fractures
Signs and Symptoms
Osteoporosis is often called the "silent disease" because bone loss occurs without symptoms. People may not know that they have osteoporosis until their bones become so weak that a sudden strain, bump, or fall causes a hip fracture or a vertebra to collapse. Collapsed vertebra may initially be felt or seen in the form of severe back pain, loss of height, or spinal deformities such severely stooped posture or the tell-tale "dawager's hump."

The following list does not insure the presence of this health condition. Please see the text and your healthcare professional for more information.
General
Bone weakness, increase in fractures, bone collapse in areas of the spine Loss of height Severe back pain

Stooped posture 1 Lambing CL. Osteoporosis prevention, detection, and treatment. A mandate for primary care physicians. Postgrad Med.
Jun2000;107(7):37-41, 44, 47-50.
View Abstract
2 Heinemann DF. Osteoporosis. An overview of the National Osteoporosis Foundation clinical practice guide. Geriatrics.
May2000;55(5):31-6.
View Abstract
3 Rushton N. Osteoporosis. J Bone Joint Surg Br. May1999;81(3):379.
4 Friedenstein AJ. Marrow stromal fibroblasts. Calcif Tissue Int. 1995;56(Suppl 1):S17.
5 Raisz LG. Bone resorption in tissue culture: factors influencing the response to parathyroid hormone. J Clin Invest. 1965;44:103-116.
6 Raisz LG. Recent advances in bone cell biology: interactions of vitamin D with other local and systemic factors. Bone
Miner. 1990;9:191-197.
7 Eriksen EF, Kudsk H, Emmertsen K, et al. Bone remodeling during calcitonin excess: reconstruction of the remodeling sequence in medullary thyroid carcinoma. Bone. 1993;14:399-401.
8 Hurley DL, Tiegs RD, Wahner HW, et al. Axial and appendicular bone mineral density in patients with long-term deficiency or excess of calcitonin. N Engl J Med. 1987;317:537-541.
View Abstract
9 Kiel DP, et al. Caffeine and the Risk of Hip Fracture: The Framingham Study. Am J Epidemiol. Oct1990;132(4):675-84.
View Abstract
10 Stone KL, et al. Low Serum Vitamin B-12 Levels Are Associated with Increased Hip Bone Loss in Older Women: A Prospective Study. J Clin Endocrinol Metab. Mar2004;89(3):1217-1221.
View Abstract
11 Ohgitani S, et al. Effects of Calcium Supplementation using AAACa or Ilk on Nocturnal Bone Resorption in Young Women. Nippon Ronen Igakkai Zasshi. Sep1997;34(9):743-47.
View Abstract
12 Lemman J, et al. Possible Role of Carbohydrate Induced Calciuria in Calcium Oxalate Kidney Stone Formation. N Engl
J Med. 1969;280:232.

70% of Women on Rx Osteoporosis Medication Missing Three-Fold Bone-Building Benefits Reports Ongoing Study

Prevention, Detection and Treatment Discussed At World Congress on Osteoporosis - CHICAGO, June 15 /PRNewswire/ -- International scientific leaders participating in the World Congress on Osteoporosis 2000, June 15 -- June 18, agree that treatment of osteoporosis with any drug therapy also requires sufficient calcium and vitamin D intake. However, less than 70 percent of women taking the top three osteoporosis medications also use a calcium supplement reveals a continuing syndicated study conducted by healthcare consulting firm Scott-Levin.

According to the recent Physician Drug & Diagnosis Audit (April 1999 - April 2000), more than 3.5 million recommendations were made by physicians for the top three osteoporosis medications, Fosamax®, Evista® and Miacalcin® Nasal Spray. However, the overall treatment regimen included calcium less than 30% of the time, despite prescribing insert suggestions from product manufacturers and strong clinical data.

``Many women incorrectly assume that they need only the prescription medication to fight osteoporosis,'' states Bess Dawson-Hughes, M.D., Professor of Medicine, USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA. ``But in reality, to get the full benefit of therapy, women also need adequate calcium and vitamin D.”

The latest NIH consensus panel (March 2000) determined that treatment of osteoporosis with any drug therapy also requires sufficient calcium and vitamin D to achieve optimal benefits. Evidence from a 1997 National Osteoporosis Foundation-sponsored analysis conducted by J.W. Nieves, Ph.D. and colleagues at Helen Hayes Hospital and Columbia University, New York supports the recommendation. The NOF's position is that calcium is an important part of an overall prevention or treatment program for osteoporosis.

Jeri W. Nieves and her co-authors of the analysis ``Calcium Potentiates The Effect Of Estrogen and Calcitonin On Bone Mass" concluded that meeting the calcium requirement of 1,200 mg daily can result in an added beneficial effect on bone density, even when superimposed on standard therapy for osteoporosis. While studies of estrogen alone showed a significant effect on the maintenance of bone mineral density (BMD), when average calcium daily intake was 1,200 mg rather than 600 mg per day these positive effects were three-fold greater. This analysis included a review of 31 trials to determine the effects of calcium supplementation when used in combination with the osteoporosis treatment, estrogen. ``

These trials provide convincing evidence that women on osteoporosis drug therapy should ensure that they receive adequate calcium intake for optimal treatment results," noted Dr. Dawson-Hughes. ``In addition, the recent PDDA data should alert physicians that it's important to discuss calcium with their patients, so that this critical component of therapy is not overlooked."

John Bilezikian, M.D., Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York, NY agrees. ``Calcium and vitamin D are necessary to maximize the effects of treatment. Unfortunately, the average woman only gets half the daily requirement of calcium through her diet. Therefore, patients on osteoporosis therapy should also take a calcium supplement like Shaklee* to help meet the 1,200 -- 1,500 mgs required for postmenopausal women." Osteoporosis, a disease that progressively weakens bones and often leads to painful and debilitating fractures, is a major public health threat to 28 million Americans. This disease causes nearly 1.5 million fractures annually and costs the United States nearly $14 billion dollars in health costs each year. Vertebral fractures may lead to stooped posture, loss of height, chronic pain and disability, and may cause compression of the lungs and stomach. Hip fractures are debilitating and life threatening. Within the year following a hip fracture, there is a twenty percent increase in mortality. Healthcare professionals recommend that women consult their doctors about the proper treatment regimen for them. *editor's addition

********** I had a nurse call me yesterday...she's been using Shaklee for years. She had a bone density test done...had had one a year ago & got a scare. She told me that there was a 7% improvement. She has faithfully used Shaklee's calcium for the past year. The doctor was absolutely amazed. He said that even with Fosamax they are hoping to see a 2-3% improvement in a year at the most. June Ost
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Fosamax May Damage Liver

Doctors from Israel describe a 71-year-old woman who developed liver damage 2 months after starting Fosamax, the popular bone-resorption inhibitor, used in the prevention and treatment of osteoporosis and they feel strongly that the drug was the cause or a major contributing factor.

Some of the known side effects of Fosamax are gastric and esophageal inflammation, but renal failure, ocular damage, skin reactions, and hypocalcemia have also been reported.

A case of hepatitis that developed after treatment with alendronate was recently reported in a 77-year-old woman.

The authors admit that the mechanism by which alendronate may cause liver damage is not known, although one possibility is that the fosomax inhibits the synthesis of cholesterol in the liver, which may alter liver function.

Regardless of the mechanism, physicians treating patients with a fosamax or related drugs should be alert to the possibility of liver dysfunction and monitor properly for it. The New England Journal of Medicine August 3, 2000;343:365-366.

Re-mineralizing Bones with Shaklee

I have had a wonderful reversal with Shaklee products over the past 4 years, showing re-mineralizing at hip and lumbar spine with each 18 monthly scan. Because my bone loss was a minor part of my heath concerns I didn't focus specifically on its cure but hoped all I was doing nutritionally would help there as a side benefit. In other words I may have used more products and larger quantities than needed for my bones. Every nutritional product Shaklee offers, in therapeutic amounts (i.e. more than the minimum food supplement level on the labels). (I have used most of the herbal products but don't think these related directly to my bone density gain.) I believe the most important for my bones are the **Vita Lea (3 daily) and Soy Protein (minimum 6 TBS daily) and Calcium. I use Calcium Magnesium and Calcium Complex adequate to reach 2,500 to 3,000 mgs.** daily. I exercise daily too, and avoiding all the dietary challenges to strong bones….*Genevieve S*

INCREASING BONE DENSITY

I had a hysterectomy at age 41. A couple of years later after I started on Shaklee and had my first bone density scan. I too had bone loss. I was devastated because I thought as long as I was taking the right amounts of supplements and doing the right things, it should stay at an acceptable level---but not the case.

A couple years later, another loss in density. My doctor told me to step up the exercise. Then someone on Team 21 mentioned that they had used Optiflora and had an increase in density. So I tried it and she was right. On my next density almost 2 years ago, my doctor was absolutely thrilled that I had gained density and told me to keep up whatever I was doing.

Try Optiflora, take it everyday, not every other day, and I think you will see the results you are looking for.

June L

Essential Nutrition for Osteoporosis

- Protein
- OsteoMatrix

- Vitamin D
- Alfalfa
- OmegaGuard
- Calcium/Magnesium
- VitaLea or Vitalizer.