Department of Veterans Affairs

Memorandum

Date: NOV 29 2010

From: Chief Patient Care Services Officer (11); Deputy Under Secretary for Health for Operations and Management (10N)

Subj: Distribution of Patient Education Materials on Post Fracture Education

To: Network Directors (10N1-23)

1. As part of the action plan to respond to the Office of the Inspector General (OIG) report on Management of Osteoporosis in Veterans with Fracture, it was noted that the Office of Patient Care Services will collaborate with the Office of the Deputy Under Secretary for Health for Operations and Management to distribute the publication "Once is Enough: A Guide to Preventing Future Fractures" published by the National Institutes of Health Osteoporosis and Related Bone Disease National Resource Center, available at: http://www.niams.nih.gov/health_info/bone/osteoporosis/fracture/preventing_fracture.pdf

2. This material was developed by the federal government and is thus free from industry influence, and is compliant with federal standards.

3. These materials will be available to Veterans and their families and or caregivers at the time of discharge and should be publicized in the revised Information Letter on Male Osteoporosis. An Employee Education Service–Pharmacy Benefits Management teleconference was held on September 30, 2010.

4. To increase awareness of the field, we would request that both the OIG report on Management of Osteoporosis in Veterans with Fractures and the link to the educational material be forwarded to hospitalists, orthopedists, nursing service, primary care, and patient educators through your VISN distribution channels.

5. Most importantly, we would request that the importance of educating Veterans and caregivers at the time of discharge be emphasized, and that documentation be provided in the discharge planning notes.

6. Having knowledgeable, active patients and family members is conceptually consistent with the chronic care model, and along with increased coordination with primary care teamlets post-discharge, is expected to contribute to an increase in appropriate management.

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Attachment

Once Is Enough: A Guide to Preventing Future Fractures

National Institutes of Health
Osteoporosis and Related Bone Diseases ~ National Resource Center

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The NIH Osteoporosis and Related Bone Diseases ~ National Resource Center is supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases with contributions from the National Institute on Aging, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, the National Institute of Dental and Craniofacial Research, the National Institute of Diabetes and Digestive and Kidney Diseases, the NIH Office of Research on Women's Health, and the HHS Office on Women's Health.

The National Institutes of Health (NIH) is a component of the U.S. Department of Health and Human Services (HHS).

So, you've broken a bone. Only those who have experienced a fracture can truly understand how painful and debilitating it can be. Recovering should be your first priority. However, you and your doctor also will want to determine whether this fracture is a symptom of osteoporosis. If you have this underlying disorder, it puts you at greater risk for future fractures. *If you are age 50 or older, there is a very good chance your fracture is related to osteoporosis.* This fact sheet will help you better understand the relationship between fracture and osteoporosis, so you can take action *now* to strengthen and protect your bones.

Many people are unaware of the link between a broken bone and osteoporosis. Osteoporosis, or "porous bone," is a disease characterized by low bone mass. It makes bones fragile and more prone to fractures, especially the bones of the hip, spine, and wrist. Osteoporosis is called a "silent disease" because bone loss occurs without symptoms. People typically do not know that they have osteoporosis until their bones become so weak that a sudden strain, twist, or fall results in a fracture.

Osteoporosis is a major public health threat for an estimated 44 million Americans, 68 percent of whom are women. In the United States today, approximately 10 million people already have the disease and nearly 34 million more are believed to have low bone mass, which leaves them at increased risk for osteoporosis. Of the 10 million Americans estimated to already have osteoporosis, 8 million are women and 2 million are men.

One in two women and one in four men will have an osteoporosis-related fracture in their lifetime. At least 90 percent of all hip and spine fractures among older white women can be attributed to underlying bone fragility. Moreover, women near or past menopause who have sustained a fracture in the past are *twice as likely* to experience another fracture. Yet, unfortunately, only 5 percent of patients with osteoporotic fractures are referred for an osteoporosis evaluation and medical treatment.

The Osteoporosis Evaluation

I've already had a fracture. Is it too late to talk to my doctor about osteoporosis?
It is never too late. Ideally, you should talk to your doctor during your recovery about whether you might be a candidate for an osteoporosis evaluation. But even if your fracture has healed, you can be evaluated and begin taking steps to protect your bones now.

What kind of doctor should I see about getting an osteoporosis evaluation?
Many different kinds of doctors can evaluate and treat osteoporosis. Start with your primary care doctor or the doctor treating your fracture. He or she probably can conduct the evaluation and may then refer you to a specialist, such as an endocrinologist or rheumatologist, if you require treatment.

What does an osteoporosis evaluation involve?
One thing your doctor will do is ask about your medical history and lifestyle to determine whether you have risk factors for osteoporosis. Some of the factors that increase the risk of developing osteoporosis include personal or family history of fractures; low levels of the hormone estrogen or testosterone; and the use of certain medications, such as glucocorticoids or anti-seizure medications, that may contribute to bone fragility. Your doctor also may want to test your blood or urine and may suggest that you have a bone mineral density test.

What is a bone mineral density test? Is it painful?
A bone mineral density (BMD) test is the best way to determine your bone health. This test can identify osteoporosis, determine your risk for fractures (broken bones), and measure your response to osteoporosis treatment. The most widely recognized BMD test is called a dual-energy x-ray absorptiometry, or DXA test. The test is safe and painless, a bit like having an x ray, but with much less exposure to radiation. It can measure bone density at your hip and spine and takes only 15 minutes to complete. For a DXA test, you will be asked to lie on a table while a machine above you measures your bone density.

Some private insurance plans will cover BMD tests ordered by your doctor. Medicare also may pay for a BMD test under certain circumstances for women and men age 65 or older. Your doctor and his or her office staff can help you determine if Medicare will cover a BMD test for you.

Strategies to Reduce Your Risk of Fractures

If I am diagnosed with osteoporosis, what should I do next?
You may feel concerned or even frightened after being diagnosed with osteoporosis. However, the good news is that, armed with information and the support of your doctor, you *can* significantly improve your bone health and reduce your risk of future fractures with a combination of medication, diet, exercise, and lifestyle modifications.

Some of my friends take medication for osteoporosis. Should I consider this?
Yes. Several medications are available to prevent and treat osteoporosis. These products have been proven effective at minimizing additional bone loss and reducing fracture risk. Your doctor can help you understand the benefits and risks of each of the following medications and select one that is right for you:

- bisphosphonate drugs: alendronate (Fosamax),[1] risedronate (Actonel), ibandronate (Boniva), and zoledronic acid (Reclast)
- calcitonin (Miacalcin and Fortical)
- raloxifene (Evista), a selective estrogen receptor modulator (SERM)
- teriparatide (Forteo), a form of the parathyroid hormone (PTH), which is secreted by the parathyroid glands
- estrogen therapy (also called hormone therapy when estrogen and another hormone, progestin, are combined).

In men, reduced levels of testosterone may be linked to the development of osteoporosis. Men with abnormally low levels of testosterone may be prescribed testosterone replacement therapy to help prevent or slow bone loss.

What else can I do to protect my bones?
In addition to taking your medication, some of the most important things you can do are to follow a diet rich in calcium and vitamin D, maintain an adequate daily intake of protein, monitor your sodium intake, and get plenty of exercise.

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[1] Brand names included in this publication are provided as examples only, and their inclusion does not mean that these products are endorsed by the National Institutes of Health or any other Government agency. Also, if a particular brand name is not mentioned, this does not mean or imply that the product is unsatisfactory.

- **Calcium** is needed to maintain healthy, strong bones throughout your life. Unfortunately, most Americans do not get enough calcium from their diets. Dairy products such as milk, cheese, and yogurt are excellent sources of calcium, and some nondairy foods such as broccoli, almonds, and sardines can provide smaller amounts. In addition, many foods that you may already enjoy – juices, breads, and cereals – can now be found fortified with calcium. Calcium supplements can ensure that you get enough calcium each day, especially in people with a proven milk allergy. The Institute of Medicine recommends a daily calcium intake of 1,000 mg (milligrams) for men and women, increasing to 1,200 mg for adults age 50 and older.

  Calcium supplements are available without a prescription in a wide range of preparations and strengths. Many people ask which calcium supplement they should take. The "best" supplement is the one that meets your needs based on tolerance, convenience, cost, and availability. In general, you should choose calcium supplements that are known brand names with proven reliability. Also, you will absorb calcium better if you take it several times a day in smaller amounts of 500 mg or less each time.

- **Vitamin D** plays a significant role in helping your body absorb calcium. The relationship between calcium and vitamin D is similar to that of a locked door and a key. Vitamin D is the key that unlocks the door, allowing calcium to enter your bloodstream. As we age, our bodies become less able to absorb calcium, which makes getting enough vitamin D even more important. The recommended daily intake for vitamin D is 400 to 600 IU (International Units). Many people get this amount through natural exposure to sunlight, which our bodies use to make vitamin D, and by consuming vitamin D-fortified foods such as milk. In addition, many calcium supplements are fortified with vitamin D.

- **Sodium**, a main component of table salt, affects our need for calcium by increasing the amount of it we excrete in urine. As a result, people with diets high in sodium, or table salt, appear to need more calcium than people with low-sodium diets to ensure that, on balance, they retain enough calcium for their bones.

- **Protein** in excess amounts also increases the amount of calcium we excrete in urine, but it provides benefits for bone health as well. For example, protein is needed for fracture healing. In addition, studies have shown that elderly people with a hip fracture who do not have enough protein in their diets are more likely to experience loss of independence, institutionalization, and even death after their fracture. The recommended daily intake for protein is 56 grams for men and 46 grams for women.

I've always been active, but I don't want to risk breaking another bone. Maybe I need to spend more time "on the sidelines" from now on.
It is perfectly understandable that you want to avoid another fracture. No one who has broken a bone wants to revisit that pain and loss of independence. However, living your life "on the sidelines" is *not* an effective way to protect your bones. Remaining physically active reduces your risk of heart disease, colon cancer, and type 2 diabetes. It may also protect you against prostate and breast cancer, high blood pressure, obesity, and mood disorders such as depression and anxiety. If that isn't enough to convince you to stay active, consider this: exercise is one of the best ways to preserve your bone density and prevent falls as you age.

What type of exercise is best to reduce my risk of another fracture?
Exercise can reduce your risk of fracturing in two ways – by helping you build and maintain bone density and by enhancing your balance, flexibility, and strength, all of which reduce your chance of falling.

- **Building and maintaining bone density:** Bone is a living tissue that responds to exercise by becoming stronger. Just as a muscle gets stronger and bigger with use, a bone becomes stronger and denser when it is called upon to bear weight. Two types of exercise are important for building and maintaining bone density: weight-bearing and resistance. Weight-bearing exercises are those in which your bones and muscles work against gravity. Examples include walking, climbing stairs, dancing, and playing tennis. Resistance exercises are those that use muscular strength to improve muscle mass and strengthen bone. The best example of a resistance exercise is weight training, with either free weights or weight machines.

- **Reducing the risk of falling:** You can significantly reduce your risk of falling by engaging in activities that enhance your balance, flexibility, and strength.
  - **Balance** is the ability to maintain your body's stability while moving or standing still. You can improve your balance with activities such as tai chi and yoga.
  - **Flexibility** refers to the range of motion of a muscle or group of muscles. You can improve your flexibility through tai chi, swimming, yoga, and gentle stretching exercises.
  - **Strength** refers to your body's ability to develop and maintain strong muscles. Lifting weights will increase your strength.

Smart Moves

- Walking
- Strength training
- Dancing
- Tai chi
- Stair climbing
- Hiking
- Bicycling
- Swimming
- Gardening

How can I exercise safely if I have osteoporosis?
If you have osteoporosis, it is important for you to get plenty of exercise. However, you will need to choose your activities carefully. Be sure to avoid activities with a high risk of falling, such as skiing or skating; those that have too much impact, such as jogging and jumping rope; and those that cause you to twist or bend, such as golf.

Unfortunately, some people become so afraid of breaking another bone that they become more sedentary, which leads to further loss of bone and muscle. Rest assured, however, that by practicing proper posture and learning the correct way to move, you can protect your bones while remaining physically active. Every activity can be adapted to meet your age, ability, lifestyle, and strength. Your doctor or a physical therapist can help you design a safe and effective exercise program. In the meantime, here are some general guidelines for safe movement:

Don't:

- wear shoes with slippery soles
- slouch when standing, walking, or sitting at a desk
- move too quickly
- engage in sports or activities that require twisting the spine or bending forward from the waist, such as conventional sit-ups, toe touches, or swinging a golf club.

Do:

- pay attention to proper posture. This includes lifting your breastbone, keeping your head erect and eyes forward, keeping your shoulders back, lightly "pinching" your shoulder blades, and tightening your abdominal muscles and buttocks.
- make sure to use a handrail when climbing stairs
- bend from the hips and knees and never from the waist, especially when lifting.

Before embarking on any exercise program,
be sure to consult your doctor.

My fracture happened after I tripped on a rug in my own home. How can I prevent another fall?

Falls are a major source of fractures. The likelihood that you will fall depends on both personal and environmental factors.

- **Personal factors:** A fall may occur because your reflexes have slowed over time, making them less able to react quickly to a sudden shift in body position. Loss of muscle mass may occur as you age, which can diminish your strength. Changes in vision and hearing can also affect your balance, as can the use of alcohol and certain medications. People with chronic illnesses that affect their circulation, sensation, mobility, or mental alertness are more likely to fall. To reduce your risk of falling, keep this personal safety checklist in mind:

  Personal safety checklist

  - ✓ Stay active to maintain muscle strength, balance, and flexibility.
  - ✓ Have your vision and hearing checked regularly and corrected as needed.
  - ✓ Discuss your medications with your doctor to see if one of them (or their combination) might lead to falls.

- **Environmental factors:** At any age, people can make changes in their environment to reduce their risk of falling and breaking a bone. The following safety checklists provide a few tips that should help:

  Indoor safety checklist

  - ✓ Use nightlights throughout your home.
  - ✓ Keep all rooms free from clutter, especially the floors.
  - ✓ Keep floor surfaces smooth but not slippery. When entering rooms, be aware of differences in floor levels and thresholds.
  - ✓ Wear supportive, low-heeled shoes even at home. Avoid walking around in socks, stockings, or floppy slippers.
  - ✓ Check that all carpets and area rugs have skid-proof backing or are tacked to the floor, including carpeting on stairs.
  - ✓ Keep electrical cords and telephone lines out of walkways.
  - ✓ Be sure that all stairways are well lit and that stairs have handrails on both sides. Consider placing fluorescent tape on the edges of top and bottom steps.

- ✓ Install grab bars on bathroom walls beside tubs, showers, and toilets. If you are unstable on your feet, consider using a plastic chair with a back and nonskid leg tips in the shower.
- ✓ Use a rubber bathmat in the shower or tub.
- ✓ Keep a flashlight with extra batteries beside your bed.
- ✓ Add ceiling fixtures to rooms lit only by lamps, or install lamps that can be turned on by a switch near the entrance to the room.
- ✓ Use at least 100-watt light bulbs in your home.

Outdoor safety checklist

- ✓ In bad weather, consider using a cane or walker for extra stability.
- ✓ In winter, wear warm boots with rubber soles for added traction.
- ✓ Look carefully at floor surfaces in public buildings. Many floors are made of highly polished marble or tile that can be very slippery. When floors have plastic or carpet runners in place, try to stay on them whenever possible.
- ✓ Use a shoulder bag, fanny pack, or backpack to leave hands free.
- ✓ Stop at curbs to check height before stepping up or down. Be cautious at curbs that have been cut away to allow access for bikes or wheelchairs. The incline may lead to a fall.

What is hip padding? Should I consider it?

Research has shown that hip protectors can decrease the risk of hip fracture among people who are at high risk for falls. Most hip protectors are washable undergarments that fit over the hips. On each side of the garment is a thin layer of lightweight foam plastic. Hip protectors are typically worn by people who have an unstable stride or posture and by people who tend to fall *down* (with the main impact near the hip) rather than the more typical fall *forward* (with the main impact on the hands or knees).

However, studies have found that up to one-third of people refused to wear hip protectors or wore them for only limited periods.

Is there anything else I can do?

If you are a smoker, now would be a good time to quit. Tobacco is toxic to your bones, putting you at higher risk for low bone mass and osteoporosis. Excessive alcohol intake also may be damaging to your bones, and people who drink heavily tend to have more bone loss and fractures due to poor nutrition and an increased risk of falling.

Where can I go for more information?

NIH Osteoporosis and Related Bone Diseases ~ National Resource Center
2 AMS Circle, Bethesda, MD 20892–3676
Tel: 800–624–BONE (2663) or 202–223–0344
TTY: 202–466–4315
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Reviewed January 2009

For Your Information

This publication contains information about medications used to treat the health condition discussed here. When this fact sheet was printed, we included the most up-to-date (accurate) information available. Occasionally, new information on medication is released.

For updates and for any questions about any medications you are taking, please contact the Food and Drug Administration at 888–INFO–FDA (888–463–6332, a toll-free call) or visit its Web site at www.fda.gov.

For updates and questions about statistics, please contact the Centers for Disease Control and Prevention's National Center for Health Statistics toll free at 800–232–4636 or visit its Web site at www.cdc.gov/nchs.

Recognizing the National Bone and Joint Decade: 2002–2011