Geriatric Fracture Program Update

Synthes Geriatric Fracture Program

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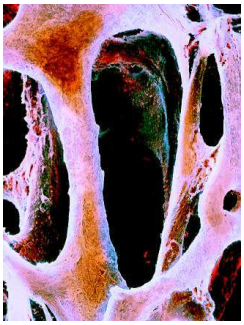
Osteoporosis Information



What is Osteoporosis?

According to the National Osteoporosis Foundation (NOF), osteoporosis is a debilitating disease of the bone that leads to an increased risk of fracture. Osteoporosis is defined by the World Health Organization (WHO) in an individual (most commonly women) whose bone mineral density is 2.5 standard deviations below peak bone mass. It is recommended that women, especially those over the age of 65, have routine bone density screenings by undergoing either a DEXA or QCT scan. Although osteoporosis is most common in postmenopausal women, it can also develop in elderly men

Source:

http://en.wikipedia.org/wiki/Osteoporosis

How Does Osteoporosis Affect You?

According to the 2004 Surgeon General's Report on Bone Health and Osteoporosis, ten million people in the United States have osteoporosis, and they predict that by the year 2020 fifty percent of all Americans over the age of 50 will have weak bones unless we make changes to our diet and lifestyle. Individuals with weak bones are at a higher risk of fractures.

Fragility fracture patients are not the only ones who suffer. The cost of fragility fractures affects our country as a whole. It costs an estimated $18 billion a year to treat fragility fractures in the United States. Each year 1.5 million older adults in the US suffer Fractures due to weak bones. An Elderly person with a broken hip is four times

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Inside this issue:

News:

- Geriatric Orthopaedic Trauma Summit, October 9-11, 2008. University of Minnesota, St. Paul, Minnesota, Visit www.synthesgfp.com to learn more.
- Congratulations to Methodist Hospital , in Brooklyn, NY, for fully implementing the Geriatric Fracture Program!

Osteoporosis Care Clinics

After an individual experiences a fragility fracture, the likelihood that they will experience a second fracture is greatly increased. One way for physicians to reduce an individual's secondary fracture risk is to ensure that they receive proper follow-up care for osteoporosis. Despite the known importance of follow-up care, "fewer than 20% of Orthopaedic Surgeons recommend a follow-up appointment for osteoporosis after a fragility fracture". (Bone Health and Osteoporosis, A Report from the Surgeon General, 2004).

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Bone Density Testing

Bone density tests use special x-rays to measure the bone mineral content in a specific bone segment. Physicians use bone density tests to determine if individuals have, or are at risk of osteoporosis.

The U.S. Preventative Services Task Force recommends routine bone density screening for:

-All females age 65 years or older

-All females age 60 who are at increased risk of osteoporosis

It is more important to know that bone density tests are not the same as bone scans. Bone scans require an injection beforehand and are used to detect fractures, cancer, infections, and other bone abnormalities.

Bone density tests are quick, easy, and painless. They are usually conducted on bones that are most likely to break due to osteoporosis, i.e. the lumbar vertebrae (lower region of the spine), the neck of the femur (hip bone), and the bones of your wrist and forearm. There are various types of bone density scanners, there are central devices, which are large machines you can lie down on, these larger devices are used in hospitals and osteoporosis clinics. There are also smaller, portable machines which measure bone density of the periphery of your skeleton (i.e. your finger, wrist or heel). They can be found in your doctors office or your local pharmacy.

There are two main types of central devices:

1) **DEXA Scan:** Dual Energy X-ray absorptiometry: DEXA scans measure bone density in the hip or spine. They offer very precise results and is the preferred test for diagnosing osteoporosis.

What to expect during a DEXA Scan:

During the test you lie down on a padded platform for a few minutes while an imager (a mechanical arm-like device) passes over your body. The tests takes approximately five to ten minutes to complete. The test does emit a very small amount of radiation, through the exposure is about one-tenth the amount emitted during a chest x-ray.

2) **QCT Scan:** Quantitative CT Scan. A QCT scan uses a Computerized Tomography (CT) scanner combined with computer software to determine an individual's bone density. The QCT scan is most commonly used to measure the bone density of the spine. QCT scans not only provide very detailed 3-D images, but can also show the effects of aging and diseases other than osteoporosis on your bones. QCT scans emit more radiation than DEXA scans do; but it is still a relatively small amount. One advantage of using a QCT is that if your office already has a CT scanner, all you have to do is purchase the computer software to use it as a QCT.

What to expect during a QCT Scan: During the test you lie on a moveable table that is guided into a large tube-like area where the images are taken. The scan takes approximately 10 minutes.

T-Scores: The results of your bone density test are reported in T-scores. T-scores are your bone density compared with that of a healthy young adult of your sex. Your T-score is the number of units your bone density is above or below the standard.

Interpreting T-Scores: Above –1: Your bone density is considered normal Between –1 and –2.5: Your score is a sign of osteopenia– a condition in which your bone density is below normal and may lead to osteoporosis. Below –2.5: Your bone density indicates that you have osteoporosis.

Not all health insurance plans cover bone density tests; however the average cost for one is between $150.00 and $200.00.

Medicare does pay for bone density testing if you fall into any of the following categories

- If you have primary hyperparathyroidism
- If you have certain spinal abonormalities that might indicate a fracture
- If you're on long-term corticosteroid therapy, such as predisnone
- If your doctors want to assess your response to ostoporosis medications

Source: *Bone Density Test: Measure Your Risk of Osteoporosis*, The MayoClinic website, http://www.mayoclinic.com/health/bone-density-tests/WO00024

Bone Densitometer Manufacturers: To Learn more about bone densitometer equipment, visit the website of the two top bone densitometer manufactureres, GE Healthcare and Hologic. You will also find the web addresses for two re-manufacturer/distributors of used bone densitometers: Amber Diagnostics and The Bone Densitometer Equipment Placement Program. On these sites you will find detailed information about various bone densitometers and read testimonials from customers who have actually used these products:

1.GE Healthcare: http://www.gehealthcare.com/usen/bone_densitrometry/bdenistrometry.html

2. Hologic: http://hologic.com/wh/indexoa.htm

3.Bone Densitometer Equipment Placement Program: http://bonedensitometry.com/list.htm

4. Amber Diagnostics: http://www.amberusa.com

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Bone Density Testing, *continued from page 2*

Computer Software Manufactures for QCT scans:

1. Mindways Software, Inc.: http://www.qct.com

Mindways Software, Inc. has developed the QCT PRO Bone Investigational Toolkit which allows individuals to turn their CT scanners into QCT scanners which can measure bone density and provide 3-D images. QCT PRO is a Windows-based application that can analyze data from any whole-body CT scanner. BIT analysis results are stored in the QCT PRO database . The contents of the QCT PRO database can be imported into applications such as Microsoft Excel to enable further data processing and analysis.

Source: Mindways Software, Inc. website: http://www.qct.com

Osteoporosis Information, *continued from page 1*

more likely to die within three months. One in five will end up in a nursing home within a year of suffering a hip fracture.

How Can you Prevent Osteoporosis?

You can improve your bone health as an older adult, but you must start now. Outlined below are guidelines you can follow to decrease your risk of osteoporosis:

· Get enough calcium and vitamin D in your diet (1,000 - 1,200 mg of calcium/day for adults and 400 IU/day for adults)

· Reduce hazards in your home (especially important for older adults who are at a higher risk of falling and breaking bones).

· Maintain an healthy weight

· Don't smoke

· Limit alcohol use

· Osteoporosis Screenings (especially important for adults age 65 and older)

Source: 2004 Surgeon General Report on Bone Health and Osteoporosis

Osteoporosis Care Clinics, *continued from page 1*

During the last few years the importance of osteoporosis care has been emphasized by many medical Communities, and as a result Osteoporosis Care Clinics have been implemented at hospitals, universities, and physical therapy clinics across the country. Despite the vast number of clinics available, many doctors and patients still do not know that they exist. As a result, fracture patients do not always receive the follow up care they need. It is important for physicians and hospital staff to educate themselves about the Osteoporosis Care Clinics available in their communities so that they are able to explain the importance of follow-up care not only to their patient but to their patient's PCP, who will then refer them to these treatment facilities upon discharge from the hospital.

Below you will find a list of some of the osteoporosis care clinics available in the United States, along with a link to their websites. Please take the time to review these sites, and familiarize yourselves with the clinics available in your community.

1. Cedars-Sinai Hospital: Osteoporosis and Metabolic Bone Disorder Program; Los Angeles California

http://www.cedars-sinai.edu/8704.html

2. Georgetown University Hospital Division of Endocrinology: Osteoporosis and Metabolic Bone Disease Clinic; Washington, D.C.

http://medicine.georgetown.edu/endocronology/cs_osteoporosis.htm

3. Loyoal University Health System: Osteoporosis and Metabolic Bone Disease Center; Chicago, Illinois

http://www.luhs.org/programs/osteo.htm

4. Northwestern University: The Fracture, Osteoporosis, and Metabolic Bone Disease Program; Chicago, Illinois

http://feinberg.northwestern.edu/nuosteo/content/faculty/html

5. The Cleveland Clinic: Center for Osteoporosis and Metabolic Bone Disease; Cleveland, Ohio

http://www.clevelandclinic.org/arthritis/osteo/default.htm

6. University of Alabama (UAB): Center for Metabolic Bone Disease; Birmingham, Alabama

http://cmbd.path.uab.edu/home.html

7. University of Alabama (UAB): Tone Your Bones Virtual Clinic

http://www/toneyourbones.org

8. University of Washington: Metabolic Bone Disease Clinic; Seattle, Washington

http://www.orthop.washington.edy.uw/tabID_3426/Default.aspx

9. University of Utah: Build-A-Bone Osteoporosis Education/Prevention Program; Salt Lake City, Utah

http://healthcare.utah.edu/orthopaedics/specialties/buildabone/index.html

10. University of Wisconsin: Osteoporosis Clinic; Madison, Wisconsin

http://www.uwhealth.org/diabetes/osteoporosis/10744

11. US Bone and Joint Decade: Fit to a "T" Program; Locations Nationwide

http://www.usbjd.org/projects/fit2aT_op.cfm