



MODESTO
RADIOLOGY
IMAGING

The View

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Osteoporosis

Osteoporosis is a condition when bone mineral is lost and bones become weaker, raising the risk of fracture. While women are at a higher risk for developing osteoporosis, men also suffer from the disease. As the population ages, there are increasing numbers of men and women developing osteoporosis. Estimates suggest one half of the population suffers from osteoporosis or osteopenia. Long term use of corticosteroids, drugs to treat disease such as lupus, asthma and rheumatoid arthritis can play a roll in the development of osteoporosis in younger people. Osteoporosis can result in fractures anywhere in the body. Of major concern are those fractures of the hip and spine. Hip fractures usually need surgery and the risks that go along with hospitalization. Spine fractures can cause loss in height, deformity and prolonged pain.

Signs and symptoms of osteoporosis include loss of height, back pain, curvature of the thoracic spine and fractures with minimal injury. Osteopenia and osteoporosis may be suggested from x-rays taken for other reasons.

According to the National Osteoporosis Foundation (NOF), osteoporosis is largely preventable in most people. Although there is no cure for osteoporosis, there are some treatment options. The NOF recommends five steps to prevent osteoporosis. Although one step will not prevent osteoporosis, all five may benefit the individual. The following is taken from the NOF web site at www.nof.org.

"NOF's Five Steps to Bone Health and Osteoporosis Prevention:

- Get your daily recommended amounts of calcium and vitamin D
- Engage in regular weight-bearing exercise
- Avoid smoking and excessive alcohol
- Talk to your doctor about bone health
- Have a bone density test and take medication when appropriate

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Calcium

Calcium is needed for the heart, muscles and nerves to function properly and for blood to clot. Inadequate calcium is thought to contribute to the development of osteoporosis. National nutrition surveys have shown that many women and young girls consume less than

half the amount of calcium recommended to grow and maintain healthy bones.

Depending on your age, an appropriate calcium intake falls between 1000 and 1300 mg a day. If you have difficulty getting enough calcium from the foods you eat, you may take a calcium supplement to make up the difference.

Vitamin D

Vitamin D is needed for the body to absorb calcium. Without enough vitamin D, you will be unable to absorb calcium from the foods you eat, and your body will have to take calcium from your bones. Vitamin D comes from two sources: through the skin following direct exposure to sunlight and from the diet. Experts recommend a daily intake between 400 and 800 IU per day, which also can be obtained from fortified dairy products, egg yolks, saltwater fish and liver.

Exercise

Exercise is also important to good bone health. If you exercise regularly in childhood and adolescence, you are more likely to reach your peak bone density than those who are inactive. The best exercise for your bones is weight-bearing exercise such as walking, dancing, jogging, stair-climbing, racquet sports and hiking. If you have been sedentary most of your adult life, be sure to check with your healthcare provider before beginning any exercise program.

Medications for Prevention and Treatment

Although there is no cure for osteoporosis, currently bisphosphonates (alendronate and risedronate), calcitonin, estrogens, parathyroid hormone and raloxifene are approved by the US Food and Drug Administration (FDA) for the prevention and/or treatment of osteoporosis.

Bone Mineral Density Tests

A Bone Mineral Density test (BMD) is the only way to diagnose osteoporosis and determine your risk for future fracture. Since osteoporosis can develop undetected for decades until a fracture occurs, early diagnosis is important.

A BMD measures the density of your bones (bone mass) and is necessary to determine whether you need medication to help maintain your bone mass, prevent further bone loss and reduce fracture risk. A

bone mineral density (BMD) test is a special type of test that is accurate, painless and noninvasive."

BMD is most accurately measured using dual-energy x-ray absorptiometry (DEXA). Low-dose x-rays of two distinct energy peaks are passed through the body over the hip and lumbar spine. One peak is absorbed by bone and the other by the soft tissues. Subtracting the amount of x-ray passing through the soft tissues from that passing through the combined soft tissue and bone, gives the density of the bone, which can be used as a measure of the BMD.

The exam is quick and painless. Measurement of BMD in the lumbar spine and hip are made and can be used to assess the risk of future fracture and to monitor therapy.

Modesto Radiology Imaging (MRI) is presently performing DEXA scans in their imaging center.



Darienne Marcetti MSN, CNS, FNP

Darienne received her undergraduate degree in Nursing from the University of San Francisco in 1997. She received her Masters Degree in Nursing and Family Nurse Practitioner certificate from USF in 2000. Before coming to Modesto Interventional Radiology, Darienne worked in a private practice setting in Marin specializing in endocrinology, osteoporosis and diabetes. She also served as a faculty member at USF teaching student nurse practitioner residents.

Darienne is an active member of the American Academy of Nurse Practitioners, American Diabetes Association, and the American Nurses Association.

Darienne will be an integral part of patient care at Modesto Interventional Radiology.

Vertebroplasty as a treatment of pain caused by spinal fractures.

It is estimated that 25 percent of women over the age of 50 will suffer one or more spinal fractures from osteoporosis. Although most fractures due to osteoporosis occur in women, many men also suffer from these fractures. Younger people also suffer from fractures which are most-



ly due to long term use of steroids or other drugs used for treatment of asthma, lupus and rheumatoid arthritis. For those who suffer spinal fracture from osteoporosis, limited activity, pain and complications of narcotic used to treat pain, can have serious consequence.

Vertebral fractures are usually more difficult to treat than fractures of the hip, wrist or other bones which can be treated by surgery. Surgery for spinal fractures is more difficult and dangerous than other bones. Spinal surgery such as fusion has not helped patients with compression fractures, in the past. Consequently, many spinal fractures are not treated by surgery, resulting in persistent pain. Vertebroplasty has been shown to be effective in reducing pain in patients with pain from spinal fractures.

Vertebroplasty is performed on an outpatient basis and takes about 1-2 hours, depending on the number of levels to be done. Vertebroplasty is performed under intravenous sedation, thus avoiding the risks and costs of general anesthesia. A needle is placed into the collapsed vertebral body and bone cement (poly-methylmethacrylate) is injected to prevent further collapse. Some patients have immediate relief of their pain. In most patients, pain relief occurs within 48 hours and many people can resume normal activity immediately following the procedure. Studies have shown that 75-90% of patients treated with vertebroplasty have significant, if not complete, relief of pain.

More information is available at Modesto Interventional Radiology. Additional information is also available at the Society of Interventional Radiology web site www.sir.org.

If you would like to have an electronic copy of this and earlier newsletters, a pdf file can be downloaded from www.ModestoRadiologyImaging.com.

DOCTOR BIO

Stephen K. Liu, M.D.



Undergraduate:
Washington University
St. Louis, MO
1981-1987, B.S., B.S., M.S.

Medical School:
University of Texas Medical Branch
Galveston, TX
1987-1991, M.D.

Internship:
LAC-USC Medical Center
Los Angeles, CA
1991-1992

Residency:
Diagnostic Radiology
Santa Clara Valley Medical Center
San Jose, CA
1993-1997

Fellowship:
Interventional Radiology
Miami Cardiac & Vascular Institute
Miami, FL
1997-1998

Board Certified 1997

UPCOMING EVENTS

The annual Cattle Baron's Ball is being held August 14th at Mapes Ranch.



The annual charity event is being sponsored by the American Cancer Society.

For information and tickets, please call the American Cancer Society at (209) 524-7242.

COVER PHOTO

Photo: J. Fernando Elias, M.D.
Taken on Aug-29-2003 at "Pontal de Sernambetiba Beach", Recreio dos Bandeirantes, Rio de Janeiro. This beach sits at the very end of Barra da Tijuca, in between "Devil's Beach" and "Little Beach" (Prainha - the foremost surfing spot in Rio).

ANNOUNCEMENTS

Modesto Radiology Medical Group is pleased to announce that three new radiologist will join the group this summer:

Ajit Singh Nijjar, MD starting June 28, 2004
Kirk Roland Simon, MD starting July 1, 2004
Iwan Tjhi Wen Tjauw, MD starting July 7, 2004

Retired

We would like to thank R. Craig Fetz, MD for his many years of service to Modesto Radiological Medical Group. Dr. Fetz was a member of Downy Park Radiology prior to the merger with Modesto Radiology. We wish him all the best in his retirement.

LOCATIONS

Modesto Radiology Imaging
1524 McHenry Avenue #100
Modesto, CA 95350
Scheduling: 209.577.4444
Toll Free: 877.870.6700
General Business: 209.577.4444

Modesto Radiology Imaging Associates
1401 Spanos Court Suite 103
Modesto, CA 95355
Scheduling: 209.577.4444
Toll Free: 877.870.6700
General Business: 209.525.3161

Modesto Interventional Radiology
1524 McHenry Ave Suite 340
Modesto, CA 95350
Scheduling: 209.342.3680
Toll Free: 877.870.6700
General Business: 209.577.4444