FORE Front

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EXERCISE: A Prevention Alternative

By CHRISTINE M. SNOW, PH.D., FACSM Oregon State University
Director, Bone Research Laboratory (BRL) – *Exclusive for FORE Front*

In light of the recent findings from the Women's Health Initiative, millions of women are searching for alternatives to hormone replacement therapy. EXERCISE may be part of the answer. Exercise not only builds bone but also prevents falls. Since falls cause more than 90% of hip and 50% of spine fractures, preventing a fall will often prevent a fracture. Exercise can both strengthen bones and prevent falls. The best news about exercise is that there are many benefits. A commitment to exercise improves how you feel about yourself and the world around you. Here is one woman's story.

In 1995, Barbara Black, then 75 years old, discovered she was one of millions of Americans with osteoporosis and so she became a part of a research study at Oregon State University to build bone and prevent falls. Five years later, at 80 years old, she had gained 15% in bone density. She had reversed her osteoporosis. Better yet, the program improved her balance, strength, and mobility. Barbara continues the program (her 8th year) and says, "Exercise has made my whole life better and it's only 3 hours a week. My muscles are strong enough so that if I trip, I can catch myself. I'm not stiff in the morning and my back pain is completely gone."

An Exercise Program for osteoporosis and fracture prevention.

We have learned much about the importance of weight-bearing exercise for bone health. Weight-bearing exercise is any activity that requires you to be on your feet, bearing your weight. Moreover, the best exercise for building bone and preventing bone loss needs to be different from what you do during your daily activities – exercise that "surprises" or "overloads" your bones.

Specifically, research has shown that the best bone-strengthening activities are ones that build muscle strength and power and also provide impact. Impact exercises, including simple jumps on the floor, are particularly effective for building bone density in the hip. Muscle-strengthening exercises, including the chair raise, are effective at both the hip and the spine. If you are already engaged in

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INSIDE

In memory of
Alta Diamond
1905 – 2002

Thank you Alta for the many ways you guided us. We will always be grateful.

Alta Diamond

A Visionary Leader of FORE 1905 – 2002

FORE's vision is that one day osteoporosis will not be a health problem. Our grandmothers will not break their hips should they trip and fall, men will know how treatments like steroids weaken their bones and take measures to combat it, our children will get enough calcium and exercise to build a good reserve of bone for their lives. There are many layers in understanding our bones, and education is the key to creating knowledge and change.

Alta Diamond realized that not enough was being done to educate the public or medical professionals about osteoporosis. She was determined to see that change. As an individual with osteoporosis herself, she was well known for boldly exclaiming to both friends and strangers alike, "I have osteoporosis and you should get tested too!"

Alta had great interest in many medical concerns, and we are grateful that she embraced the mission to eliminate osteoporosis. At that time, Alta was just approaching her 80th year. She was instrumental in taking us from a small treatment center at the then Providence Hospital to what is now a nationally unique, community-based research and education center for osteoporosis. She was proud of our work and happy to see FORE growing.

Alta Diamond touched many lives in Oakland, including many of us here at FORE. Her spunk and graciousness are legend in Oakland. She died last month at the age of 97, yet will continue to inspire us to reach more people and teach them what is known about osteoporosis.

Thank you Alta!

Kathleen

Kathleen M. Cody
Executive Director

EXERCISE: A Prevention Alternative

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walking, jogging or other aerobic activity, adding resistance exercise is important because muscle building requires specific overload not accomplished by many aerobic programs.

What research-based exercise prescriptions are available?

The research conducted at Oregon State University with the program, "Better Bones & Balance," shows that resistance exercise that includes some moderate impact can add bone and help reduce falls. This program, the same one that Barbara Black still performs, is adaptable to any age and ability. The core exercises include some that mimic daily activities - like the chair raise (*see page 4 for chair raise exercise description*), and some that are different - like side lunges. Since falling to the side increases the chance of a hip fracture, the side lunge will strengthen the muscles that help prevent a side fall.

More than 100 women have been exercising with this program for between 1 and 8 years. Many have osteoporosis; some have knee and hip replacements, arthritis, or back pain. The program has proven to be safe and effective for all participants. For more information or to receive the research-based exercise video, contact Bones & Balance, Inc., 301 SW 4th St. Suite 160, Corvallis, OR 97333; (888) 431-9455 between 8 am and 5 pm (PST); Info@BonesandBalance.com Or visit our website at: www.bonesandbalance.com

Be sure to check with your physician before starting an exercise program. If you are suffering from severe osteoporosis and fractures, it is important to be monitored regularly by a physician and/or physical therapist.

Christine M. Snow, Ph.D., FACSM, is Professor of Exercise and Sport Science, and Director of the Bone Research Laboratory (BRL) at Oregon State University. As founder and director of the BRL, she supervises research to define exercise strategies for promoting bone health across the life span. Agencies that fund her work include the National Institutes of Health, the John C. Erkkila Foundation, the AARP-Andrus Foundation and Merck & Co. ■

DIANNE FEINSTEIN
CALIFORNIA

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WASHINGTON, DC 20510-0504
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Dear Friends,

My staff recently met with FORE's Director, Ms. Kathleen Cody, to learn more about what the Foundation is doing to create an awareness and understanding of Osteoporosis—a devastating disease affecting 44 million Americans. The toll of Osteoporosis is staggering and can be seen all around us: grandparents in wheelchairs, the all too familiar stooped posture from broken bones in the back, a fracture victim too afraid to leave the house for fear of falling.

Significant advances at the federal level have been made through the efforts of the National Institutes of Health (NIH). As such, I am working to increase NIH funding to fight diseases like Osteoporosis. We spent $20.3 billion dollars on NIH research this year alone. I hope to fund at least a 14% increase in NIH spending for next year. I am hopeful that organizations like FORE on the front lines of fighting disease will benefit as we fund research.

Notable efforts in 2002 by NIH to fight Osteoporosis include:

- The Federal Working Group on Bone Diseases provides a forum for sharing information among NIH institutes on Osteoporosis and other diseases.
- The Study of Osteoporotic Fractures (SOF), supported by the National Institute on Aging (NIA) and involving more than 9,000 Caucasian women 65 years or older, described risk factors for hip, wrist, and spine fractures. The study demonstrated that bone mineral density predicts hip and other types of fractures.
- The NIH Women's Health Initiative supports the largest study of Osteoporosis and fractures ever conducted. This study will determine the usefulness of calcium and vitamin D supplements, and may lead to new public health initiatives.
- A seven-center grant is funding research on the cause and pathology of Osteoporosis in men.
- "Camp Calcium," is an innovative program for adolescent girls which helps girls optimize the amount of calcium in their diets to later reduce rates of Osteoporosis.

On the whole, significant advances in preventing and treating Osteoporosis are available today, as the direct result of NIH research. At a local level, FORE stretches federally funded research dollars by utilizing NIH research in the San Francisco Bay Area. Specifically, FORE is doing the following:

1.) Educating the public about NIH funded advances in the causes, treatment and prevention of Osteoporosis;

2.) Sponsoring education for the health care community;

3.) Offering low-cost bone density screenings; and

4.) Conducting important research on the diagnosis and treatment of Osteoporosis.

I urge you to join me in supporting FORE's invaluable work by making a gift to help continue raising awareness and reducing the tragic consequences of Osteoporosis.

Sincerely,

Dianne Feinstein
United States Senator

Bone Density Screening at Your Workplace

FORE offers bone density screening – available at your company's location – anywhere in northern and central California – as far as Sacramento, Santa Rosa, and San Jose.

The Test

The test given is a painless, low dose, 7-minute x-ray of the forearm. The results can tell you if you have any signs of osteoporosis.

What Happens at your Office

Our licensed radiology technicians bring state-of-the-art portable bone scanners to your site and test employees for a full day – from 9:00am to 4:00pm. We can test up to 60 people in one day. Your employees receive an educational packet and full results of the test.

A Beneficial Service for Employees

Most insurance companies do not pay for bone density testing until members are either 50 years old or postmenopausal, and the test through x-ray centers can be very expensive. The results of bone density screening allow your employees to evaluate their fracture risk and potentially avoid costly and time-consuming injuries.

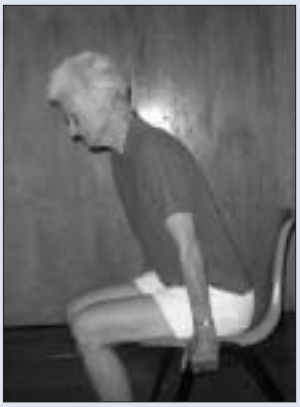
You or your Employees Can Pay the Low Cost of the Exam

Some companies elect to underwrite a portion or the whole cost of the service while other companies make the service available but ask their employees to pay. The choice is yours. Either way, there is benefit to your employees, and they will appreciate this important service.

For more information, please contact Dee Steinberg at 510-832-2663x13 or email her at dee@fore.org ■

THE CHAIR RAISE

A Test for lower extremity weakness*:* Getting into and out of a chair easily and quickly, without using your arms, builds strength and power in legs and hips. Use your arms to get up from a chair. If it takes you more than a full second to stand or to sit, you need to work on building your strength and power.



Test for balance*:* Being able to stand with the heel of one foot touching the toes of your other foot (tandem stance), without holding on to anything for a full second or more, means you have good balance. If you can walk heel to toe (tandem walk) for 10 feet without mistakes, you have excellent balance.

THE EXERCISE:

Beginner: Use your arms, stand up from a chair, pause, then sit down in a slow controlled manner. **Reps**: 15 (perform 5, rest 30 sec, 5 more, rest, 5 more)

Intermediate: Same as beginner, but cross your arms over your chest. **Reps**: 30 (perform 10, rest 30 sec, 10 more, rest, 10 more)

Advanced: Same as intermediate but put your arms out in front of you. Even more advanced, wear a weighted vest or belt. **Reps**: 45 (perform 15, rest 30 sec, 15 more, rest, 15 more)

Tips*:* Be sure your knees are over your toes as you stand and sit. Your knees should never come together at an angle. Slow descent is important to build strength necessary to recover from a trip or stumble. Find a partner to help with form or use a mirror to watch yourself. Use a straight-backed (not overstuffed) chair.

For local exercise programs, contact Osteolife at FORE 510-832-2663x41.

WHAT'S NEW AT FORE

- Osteoporosis: Guidelines for the Physician
  Comprehensive clinical information on the diagnosis, treatment, and prevention of osteoporosis.
  Purchase price $25.00
- What You Should Know about Osteoporosis
  Detailed information about osteoporosis for the consumer.
  Purchase price $10.00
- *New* and *Improved* FORE Web site
  Up-to-date information about FORE and Osteoporosis. Please visit us on line: www.fore.org

For more information or to purchase a booklet, please call 510-832-2663.

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300 27th Street
Suite 103
Oakland, CA 94612
510-832-2663
Fax: 510-208-7174
www.fore.org

Editor: Reed Evans
Contributors:
Kathleen Cody, *Executive Director*
Risa Kagan, MD
Elliott N. Schwartz, MD
Dee Steinberg
Christine M. Snow, Ph.D.

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ASK THE DOCTOR

RISA KAGAN, MD CO-MEDICAL DIRECTOR

Q WHAT DO THE RESULTS OF THE WOMEN'S HEALTH INITIATIVE MEAN FOR ME?

Over the past few weeks many of my patients have consulted with me since the termination of the Hormone Replacement Therapy (HRT) arm of the Women's Health Initiative (WHI). Each patient has asked for evaluation and advice on whether to continue HRT. Many patients have chosen todiscontinue therapy and have asked for advice on how to proceed.

The expectation for the WHI study of over 16,000 healthy post-menopausal women ages 50 to 79 years old was that we would finally have data on the possible benefits of HRT in preventing heart disease. We already knew that HRT was beneficial for menopausal symptoms and had a positive effect on bone density.

Mid-way through the study, researchers found a 26% increased incidence of breast cancer in women taking HRT. This 26% increase represented an additional 8 cases per 10,000 per year over the placebo group. Because of this increased risk, the estrogen/progesterone (Prempro) arm of the study was terminated while the estrogen alone (Premarin) arm was continued (and is still ongoing).

This increased risk did not justify continuing the study, given the fact that HRT did not help prevent or reverse heart disease in healthy women. Per 10,000 women, there were 7 more heart attacks, 8 more strokes, and 8 more blood clots that went to the lungs. The increased risk of heart attacks occurred primarily in the first 12-18 months of therapy. However, HRT does show a benefit in reducing hip fractures (5 fewer cases) and colorectal cancer (6 fewer cases). The slight increase in breast cancer that occurred by the fourth year of the study suggests that HRT may promote the growth of an existing cancer rather than causing breast cancer. Unfortunately, since the study was terminated, this question remains unanswered.

There is no simple answer as to whether HRT should be an option for women as they transition through menopause. Each woman and her health care provider should make an individualized decision based on her own medical history, family history, and quality of life issues.

We still do not know conclusively how to proceed. The use of HRT as a preventive regimen for younger, healthy post-menopausal women requires more study.

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Seeking Women Who Have Reached Menopause

You, your mother, or other women you know may be eligible for a Foundation for Osteoporosis Research & Education study that addresses pressing health concerns for all women such as:

- menopause
- osteoporosis
- hormone replacement therapy

Help the fight against diseases and health problems that affect women worldwide by participating in one of our studies. Eligible participants may receive at no cost:

- free examinations
- compensation for time & travel
- our quarterly newsletter

All study related procedures and exams are performed under the supervision of FORE's co-medical directors Risa Kagan, MD and Elliott N. Schwartz, MD. To find out more, please call the Research Department 510-832-2663 x 55 or contact us via e mail: Studies@fore.org

Foundation for Osteoporosis Research and Education

300 27th Street
Suite 103
Oakland, CA 94612

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FALL/WINTER PROVIDER & PUBLIC EVENT CALENDAR

OCTOBER

4-6 Bone Densitometry Limited License School
FORE Offices, Oakland, CA
A three-day school to receive cutting- edge osteoporosis education and quality instruction. Upon completion of this course, students are eligible to apply for a state limited license.

20 World Osteoporosis Day The International Osteoporosis Foundation coordinates this day. The WOD 2002 message is, "Invest in your bones: Prevent the first fracture." For a full schedule of worldwide events, go to: www.osteofound.org

30 Oakland Library Lecture and Screening
Oakland, California
Oakland Library 4-6 p.m.
Osteoporosis Screening and Lecture – Open to the Public

NOVEMBER

1 Center of Excellence
8:30-5:00 Wente Vineyard
Livermore, California
A medical educational seminar covering osteoporosis basics, prevention and treatment options, and new research. CME credit will be given.

15-16 Volunteer Speaker's Bureau Training for FORE
FORE Offices, Oakland, CA
Two one-day training courses at FORE's offices for professionals interested in giving talks to the public about Osteoporosis.

DECEMBER

4 Northern California Bone and Mineral Club presents *"Estrogen, Bone, the WHI, What's Next?"* by Lawrence Riggs, MD and Steven Cummings, MD
CME credit will be given.
6:30 – 9:00 PM San Francisco, CA

JANUARY

10 -11 Bone Densitometry Limited License School
(See October for information)

MARCH

TBA Northern California Bone and Mineral Club
Speaker and Topic, TBA

FOR ALL EVENTS, CALL 510-832-2663 x14 OR www.fore.org TO REGISTER.

ASK THE DOCTOR

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HRT is effective in reducing the symptoms of menopause - such as hot flashes, mood swings, sleep disorders, and sexual dysfunction. I encourage women to discuss these symptoms with their health care providers.

The HRT issue is complex and requires a thorough understanding of both the risks and benefits of any drug regimen. In addition, women should be careful about changing to alternative therapies that may also lack definitive evidence. I hope you will obtain and analyze as much information as possible before making your own decision about HRT. ■