Fighting Osteoporosis
by Judith Andariese, RN, Director
Osteoporosis Prevention Center

The huge bone factory we know as the human skeleton serves many wonderful and incredible functions. There is always something going on there, since bone is living tissue, constantly remodeling itself.

Some cells remove old bone (resorption), while others build new bone (formation). As we get older, bone loss outpaces bone formation. Some people lose bone mass more rapidly than others for reasons that scientists do not yet fully understand.

Osteoporosis results when this decrease in bone mineral density is significant. It is a disease of global proportions, affecting more than 200 million people worldwide—over 20 million women and 5 million men in the United States alone.

Who Is At Risk?
Osteoporosis, which literally means "porous bones," has been called the "silent" disease, because the loss of bone tissue progresses gradually (often without pain or symptoms) before a fracture occurs.

But fractures do occur—a million and a half each year, usually of the spine, hip or wrist. White and Asian women have twice as many fractures as African-American women. Hispanic women are also at significant risk.

Having risk factors does not mean you will develop the disease or have a fracture, but if you have a number of the following characteristics, you should discuss testing your bone mineral levels with your doctor:

<table>
<thead>
<tr>
<th>Major Risk Factors</th>
<th>Other Risk Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low body weight</td>
<td>Being female</td>
</tr>
<tr>
<td>(less than 127 lbs.)</td>
<td>Early menopause</td>
</tr>
<tr>
<td>Corticosteroid medications/Chemotherapy</td>
<td>Inadequate calcium intake</td>
</tr>
<tr>
<td>Personal or family history of low-trauma fractures</td>
<td>Family history of osteoporosis</td>
</tr>
<tr>
<td>Smoking</td>
<td>Absence of menses (except for pregnancy)</td>
</tr>
<tr>
<td></td>
<td>Excessive alcohol consumption</td>
</tr>
</tbody>
</table>
From the Studio

The class is very good and helpful in getting me to move areas of my body and stretch muscles and joints.

- Josie M. Piper, Yoga-lates participant

New York State Osteoporosis Prevention and Education Program (NYSO PEP)

Osteoporosis education is the key to helping individuals achieve healthy, strong bones for a lifetime. In 1997, Governor George Pataki signed the Osteoporosis Education Bill. This bill established the New York State Osteoporosis Prevention and Education Program (NYSOPEP) within the New York State Department of Health. This educational initiative makes it possible for all New Yorkers (the general public and healthcare professionals) to learn about the prevention, diagnosis and treatment of osteoporosis.

NYSOPEP provides education about the causes of osteoporosis, the value of prevention and early detection and options for treatment. NYSOPEP information is accurate, current and research-based. Hospital for Special Surgery was selected as a NYSOPEP Regional Center to provide osteoporosis education as a service to the citizens of New York.

For more information, contact: 212.606.1057 or go to: www.NYSOPEP.org

Fighting Osteoporosis continued

Your ‘Bone Bank’

They call it a ‘pediatric disease with geriatric consequences’ because the groundwork for healthy bones, or for eventual osteoporosis, is laid in childhood. The best prevention strategy is to start acquiring peak bone mineral levels early. Vigorous exercise and adequate intake of calcium are most important.

Think of bone as a bank account, where you are making ‘deposits’ and ‘withdrawals.’ In childhood, bone is being added faster than it is being removed. As a result, bones become larger, heavier and denser. In adolescence and early adulthood (11-24 years), bone formation occurs rapidly until peak bone mass is reached.

After 35 years of age, ‘withdrawals’ slowly begin to exceed ‘deposits.’

Remember—the stronger your ‘bank account,’ the longer it takes to draw it down. For women, ‘withdrawals’ become much more frequent after menopause. By age 65, loss rate slows down and both women and men seem to lose bone mass at the same rate.

Healthy Measures

Midlife presents an ongoing opportunity to maintain healthy bones. In later life, those with osteoporosis can take measures to prevent further bone loss and fractures, including optimal daily consumption of calcium and vitamin D, plus frequent weight-bearing exercise. For post-menopausal women, especially those at high risk, several medical treatments are available to stem bone turnover. While recent studies have outlined increased health risks, estrogen has historically been an effective therapy for bone loss.

Calcium and vitamin D are the key ingredients for preventing excessive bone loss and maintaining healthy bones. They should be taken throughout life. Vitamin D, essential for the absorption of calcium, can be obtained in most multivitamin preparations, since it is not readily available from dietary sources other than milk or food products fortified with vitamin D. Sunshine is a primary source of vitamin D.
Arthritis is a common problem. As many as 70 million Americans (1 in 3 adults) are affected. A common misconception is that arthritis is an ‘old person’s disease.’ In fact, arthritis can affect people at any age. There are over 100 different types of arthritis. Some forms, such as osteoarthritis, are more common as we age, whereas inflammatory types of arthritis can affect people at any age.

The most common type of arthritis is known as degenerative joint disease (DJD) or osteoarthritis. This type of arthritis occurs as a result of a wearing down of cartilage, which can result from many years of use as we age or as a result of previous injury to the joint. As the normally smooth surface of the cartilage is destroyed, the joint becomes more painful to move, and the range of motion may diminish. Osteoarthritis usually involves one or more large weight-bearing joints, such as a hip or a knee. With this type of arthritis, pain is usually made worse with activity and is better with rest. It is common for symptoms to be worse at the end of the day. Things that may increase the risk of developing this type of arthritis include obesity, a history of injury in the past and genetic factors, such as whether your relatives developed the problem. Osteoarthritis may become gradually worse over time, as cartilage continues to thin. Osteoarthritis is treated with medications such as Tylenol and anti-inflammatory drugs, such as Ibuprofen, to relieve pain. Physical therapy can help to strengthen muscles, which can help the joint work better. Staying active is very important. Often, in advanced cases, surgery to replace the problem joint is needed.

Inflammatory arthritis can affect people at any age, but can often be diagnosed as early as age 20 or 30. It is more common in women and much less common than osteoarthritis. Inflammatory arthritis includes problems like rheumatoid arthritis and lupus, just to name a few. Arthritis caused by inflammation usually involves many joints throughout the body at the same time and is caused by a problem with the immune system becoming overactive, resulting in joint inflammation. It is usually worse after periods of rest or disease inactivity, particularly in the morning. Swelling, redness and warmth may be present in the affected joints. Other areas in the body can be affected by the inflammation as well, including the skin and internal organs, such as the lungs and heart.

Inflammatory arthritis is usually treated with a combination of medications to relieve swelling and pain and others which regulate the immune system, such as steroids or immunosuppressive drugs.

The natural history of inflammatory joint problems is one of alternating periods of ‘flare’ of symptoms and periods of inactivity. Achieving a balance between periods of rest, to prevent flare of symptoms, and activity, to prevent loss of function, is essential. One thing is for certain-no matter what type of arthritis you have, with proper treatment and ongoing care from a doctor knowledgeable in the treatment of joint problems, staying functional and keeping pain under control is definitely possible!

Dance: Arthritis Exercise the Fun Way!

In addition to strengthening exercises like weight training and aerobic/endurance exercises such as bicycle riding, people with arthritis should incorporate range-of-motion exercises like dancing into their regular fitness routine to help maintain normal joint movement and relieve stiffness. The benefits of dancing as a form of physical activity can not be overstated. A personal fitness program that includes dancing not only helps maintain cardiovascular fitness, but also helps maintain or increase flexibility and enhances mental and emotional well being. From ballroom dancing to modern dance, a couple of hours of your favorite type of dance can burn calories equal to a comparable mile run.

Dancing is a fun, healthy alternative for remaining limber and flexible in later years. Remember-always consult your physician before beginning any personal fitness program.
Coping with the stress of everyday life is challenging enough. When these daily challenges are complicated by the impact of having a rheumatic disease, people experience a range of emotions. Initial shock and disbelief, anger, fear, sadness and isolation are common reactions.

At first, you may ask, "Why me?" as you face the unknowns of cause and cure. The unpredictability of what lies ahead is frightening. Your symptoms may have ups and downs with little or no warning. It is common for people to have anxiety and increased stress with so many unanswered questions.

You may need to consider changes in your lifestyle such as how, when, where and even if you continue working. You may need help with your role as a parent or partner. If you look well, family and friends may have trouble understanding how you are feeling and coping with your limitations. You may find yourself constantly trying to explain why some days bring pain, fatigue and weakness, and others do not. All of these changes can impact tremendously on a person’s emotional well being. A sense of loss and anger over ‘the way things used to be’ is a natural part of the grieving process.

Rheumatic disease also creates a new identity for a person. Associating yourself with labels like ‘rheumatology patient’ or ‘chronically ill’ can affect your self-esteem. The person you once were seems to be overshadowed by this new label, and in an effort to avoid dealing with the reactions of others, you may begin to isolate yourself. The following tips may be helpful in coping:

- Your thoughts influence how you feel about yourself. Continually making unrealistic demands on yourself, ‘all or nothing’ thinking and too many ‘shoulds,’ can contribute to stress. When gloomy feelings last for long periods of time without relief and interfere with daily life, it may be useful to seek professional help.

- Take ownership over your disease by becoming a partner with your doctor and actively participating in your treatment plan. Find a way to talk with your doctor that enhances your comfort with your care.

- Be assertive with others about your needs and wants without blaming them for your illness. Those close to you may have some of the same or different emotions and reactions to the changes your illness has brought.

- Find ways to maintain meaning in your life through activities that are important to you.

- Consider joining a support group, program or community which can offer validation, encouragement and information.

The emotional impact of rheumatic disease can depend on the severity of your illness, the level of support from your friends, family, and work environment, as well as your individual coping style, as you experience the many feelings that accompany chronic illness.

Infusion Therapy at Hospital for Special Surgery
by Linda Leff, RN, Coordinator, Infusion Therapy Unit

The Infusion Therapy Unit at Hospital for Special Surgery opened in July of 1994. The unit was designed to administer intravenous medication (IV into the vein) on an outpatient basis. The population served by this service are individuals with rheumatology-related problems and bone disorders.

The Infusion Unit is open Monday through Friday, and scheduling is flexible to meet individual needs.

The nurse-to-patient relationships developed in the Infusion Unit help provide patients with counseling, teaching and reassurance, and the patient-to-patient relationships provide an informal support network.

For further information, please call: 212.606.1736.
Often, researchers are involved with experiments that seem irrelevant to patients. A patient might think, “What do experiments with mice or isolated cells have to do with my treatment?” In recent years, there has been a push to ensure that laboratory research is translatable and applicable to clinical practice—the proverbial ‘from laboratory bench to bedside’ philosophy.

Hospital for Special Surgery (HSS) is at the forefront of this movement. In one particular example, observations on mouse models of pregnancy loss have become the basis for a new and exciting multi-center study looking at pregnancy loss in patients with Systematic Lupus Erythematosus (SLE) and anti-phospholipid antibodies syndrome (APS). Senior Scientist, Jane Salmon, MD was awarded a $5.7 million NIH grant to lead the study. SLE is a chronic, autoimmune disease affecting a number of the body’s internal organs, including the heart, lungs and kidneys. APS is an autoimmune disorder characterized by clinical symptoms like arterial or venous thrombosis and recurrent pregnancy loss. Problems in pregnancy can occur in patients with SLE and APS, and it is not known why they happen or how they can be prevented. Through this study, physicians at HSS will try to find out whether increased amounts of certain proteins in the blood that can injure healthy organs can be used to predict whether or not a patient will have a healthy pregnancy. The study evolved from observations showing that elevated levels of these proteins cause fetal loss in mice. If this hypothesis turns out to be true in humans also, then simple blood tests may be used to predict complications in pregnant patients with SLE and APS. Confirming this hypothesis may lead to better treatments for pregnancy loss in those patients.

Though some patients wonder about the validity of participating in research studies, feedback from patients who have participated in research at HSS indicates that most patients agreed on the importance of research study participation. Overall, patients felt that by participating in research, not only did they learn more about their condition, but they also contributed to better understanding by rheumatologists of their conditions, which in turn enables the development of better treatments. Patients also felt comfort in knowing that they were an essential part of a community of pro-active people working toward an eventual treatment and improved health not only for themselves, but others living with rheumatic illness.

HSS Support and Education Programs

HSS has a variety of support and education programs dedicated to meeting the needs of individuals facing the daily challenges of rheumatic illness. Call the numbers listed below for further information about these programs.

Charla de Lupus/ Lupus Chat 1.866.812.4494 toll free
LANtern (Lupus Asian Network) 866.505.2253 toll free
LupusLine 866.375.1427 toll free
Myositis Support Group 212.774.7623
Scleroderma Support Group 212.606.1057
Living with RA Support Group 212.774.2539
SLE Workshop 212.774.7654
The Education Division’s Public and Patient Education Department provides information to the general public and patients through a variety of health education programs. Professionals provide practical information to help prevent or manage health problems related to different types of arthritis or orthopaedic problems. Programs are held at the hospital as well as in the community. The department is dedicated to providing education today, so that everyone can have a healthier tomorrow.

Vice President, Education and Academic Affairs
Laura Robbins, DSW

Assistant Director, Public and Patient Education Department, Newsletter Editor
Chandler Wilson, MPA, CFMMS

Layout Illustration
JBRH Advertising David Rosenzweig

HealthConnection is published biannually by the Public and Patient Education Department at Hospital for Special Surgery as a service to the general public and patients. For further information regarding material contained in this newsletter or inquiries on how to obtain additional copies contact:

Public and Patient Education Department
tel: 212.606.1057  fax: 212.734.3833
e-mail: education@hss.edu

All rights reserved. © 2004 Hospital for Special Surgery

Printed on recycled paper