

Our Education Mission

The Education Division at HSS is committed to being the source for outstanding initiatives in education, training, research and information for local, national and international communities to prevent and treat musculoskeletal conditions.

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HOSPITAL
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**SPECIAL
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Programs Promoting
Musculoskeletal Health

Osteoarthritis 101: The Basics

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Osteoarthritis is a disorder that affects the lives of 27 million Americans. It triggers pain in the joints that limits mobility and daily activities, potentially turning mundane tasks such as buttoning a shirt or walking the dog into an endurance test. The disease is the nation's number one musculoskeletal disorder. Many impacted by it suffer because they are unaware of the broad range of innovative treatment options available to help them.

There are steps you can take, even starting today, to reduce your risk of developing the condition if you don't have it, and to live with less pain if you do. Incorporating physical activity into your daily routine and adopting healthy eating habits to achieve a healthy weight are excellent first steps. Hospital for Special Surgery offers guidance and treatment to get you on your way.

What Is Osteoarthritis?

In its simplest terms, osteoarthritis involves the breakdown of cartilage in your joints — most commonly in the knees, hips and hands. This spongy tissue normally acts as a shock absorber between the bones in each joint. But over time, and particularly with age or injury, the cartilage breaks down due to normal wear and tear. In early-stage osteoarthritis, the cartilage has started to deteriorate, but the bones are unaffected.

As years pass, the bones lose this protective cushion, and they can rub against each other, causing the pain that characterizes osteoarthritis. This progression marks the later stage of the disease.

Arthritis specialists are increasingly learning that there's more to the story than wear and tear: inflammation appears to play a role as well. Studies have shown that many people with osteoarthritis have inflammatory cells in their joints, especially among those who have suffered an injury (such as a torn meniscus or anterior cruciate ligament in the knee) that puts them at an increased risk for developing osteoarthritis.

Research is demonstrating that in addition to mechanical damage to a joint, an individual's response to that damage may influence the onset of os-



teoarthritis. And if doctors can understand what factors promote arthritis progression, they might be able to intervene earlier — such as by guiding patients to help them lose weight. With more research, we might even be able to define medical approaches that would prevent progression of joint damage.

Who Is at Risk?

While osteoarthritis can affect anyone, there are some risk factors that can increase your chance of developing the condition:

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Reducing Your Risk of Osteoarthritis

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Millions of Americans have osteoarthritis, and its prevalence continues to increase as the population ages. The good news is that there are steps you can take to reduce your risk of developing osteoarthritis. While it's true that you can't change your genes or your age, you can achieve and maintain a healthy weight, build muscle strength, and increase your flexibility...all of which are great ways to help prevent arthritis.

Step 1: What Are You Eating?

Obesity is the leading cause of osteoarthritis. Being overweight puts extraordinary stress on weight-bearing joints, such as the knees and hips. Did you know that for every pound of weight you lose, you can achieve a four-pound reduction in the load you exert on each knee every time you take a step during your daily activities? So if you lose 10 pounds, you reduce the stress on each of your knees by 40 pounds! If you are overweight, losing 5 to 10 percent of your body weight may reduce your risk of developing arthritis.

The best ways to achieve and maintain a healthy weight are to adopt healthy eating habits and to incorporate physical activity into your routine. Aim for a diet high in fruits

and vegetables (five to nine servings a day, of which five or more are from veggies), high in fiber and whole grains, and low in fat.

It's best to be patient. Weight loss is best sustained when the weight is lost gradually. Aim to lose one to two pounds per week. It may have taken you years to accumulate those pounds, so don't be surprised if it takes several months to lose them.

Likewise, don't expect your diet to change overnight. Start by looking at what you are eating now (keeping a food diary is a great way to do this) and identifying areas where you can improve. Little steps along the way will add up to big results over time.

Studies have shown that in populations where the diet contains lots of foods with antioxidants and omega-3 fatty acids, the

prevalence of obesity and osteoarthritis are low. Foods that are high in these nutrients include: berries, fatty fish (including salmon), citrus fruits (such as oranges or grapefruit), and orange and yellow vegetables (for example, peppers).

Here are five things you can do today to start eating healthier:

1 Replace your daily bagel and cream cheese with a whole wheat English muffin with 2 tablespoons of peanut butter.

2 Eat an apple with your breakfast, and plan to add at least one serving of fruits or vegetables at lunch and dinner.

3 Bring your lunch to work instead of buying it. Try turkey and lettuce on whole grain bread with mustard and carrots or celery sticks with hummus on the side.

4 Broil seasoned, skinless chicken for dinner instead of frying skin-covered chicken.

5 Switch to fat-free milk or taper down from whole milk to 2 percent to 1 percent before gradually going to fat-free.



The key to success is to make changes slowly, finding a diet that you can live with and won't abandon. If you are finding it difficult to get started, a registered dietitian can work with you to show you how.

Step 2: Start Moving!

"Moving is the best medicine." That's the theme of a national osteoarthritis awareness campaign launched by the Arthritis Foundation *continued on page 7B*

Athletes: Cross-Train to Reduce Arthritis Risk

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Encouraging people to get moving is a key component of the national osteoarthritis awareness campaign. But certain sports can increase the load on joints, raising the risk of osteoarthritis over time. So how do you get fit while protecting your hips, knees and ankles?

The answer is cross-training. It's good to give your body a rest and switch to other activities from time to time. If you run, for example, take a day off every now and then and do something else, like work out on an elliptical trainer or bike. Also, during the same exercise session, it's best to incorporate numerous small workouts (rather than just one long workout) to target all the major muscle groups. Taking a break from the same repetitive motions that exert a heavy load on your joints reduces stress and gives your joints a chance to rest.

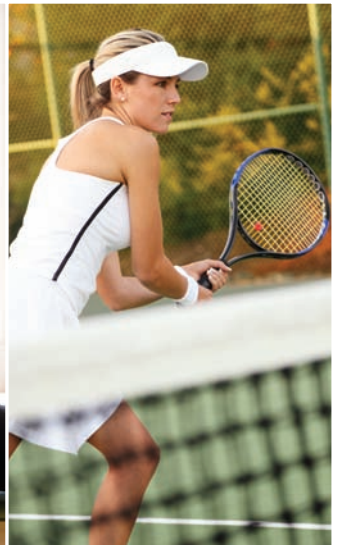
In athletes — both professionals and amateurs — the risk of osteoarthritis rises with certain movements and injuries. For example:

- The risk of osteoarthritis in the knee climbs if you experience an injury to an anterior cruciate ligament (ACL) and/or to the meniscus — even if you have had it surgically repaired. Knees that are unstable due to an injured ACL become more prone to arthritis. When the meniscus becomes damaged or is removed, it increases the stress on the cartilage in the knee and promotes arthritis. Blood in the knee during such an injury also causes pain and swelling.
- Activities that are associated with friction between the bottom of the shoe and the sports surface may also place higher loads on the knee. For example, hard tennis courts, artificial turf and basketball courts can all cause friction on the shoe and exert more stress on the joints. Similarly, running on a synthetic track, dirt or gravel is better for the joints than pounding the pavement.
- Repetitive twisting, such as that in golf or baseball, may exacerbate the load placed on hips, knees and shoulders.

Professional baseball players, for example, place extraordinary stress on their hips when practicing batting, and on their shoulders during pitching.

- Sports that cause repetitive falling during training, such as competitive gymnastics or figure skating, often cause acute injuries that may raise the risk of hip and knee arthritis over time.

If you're active or interested in pursuing an exercise program to reduce your osteoarthritis risk, congratulations! Just follow these tips to stay safe:



- 1 Include weight-training in your regimen.** Strong muscles do a better job of supporting joints than weak muscles. There's no need to pump serious iron: use low weights with a high number of repetitions to get the best results.
- 2 Learn how to land properly.** If you are involved in a sport that requires a lot of jumping, like basketball or volleyball, learn how to land so pressure is placed more evenly on the knees, reducing the risk of injury.

- 3 Be sure to stretch gently before exercising** to keep muscles, tendons and ligaments supple. You can stretch afterward as well.
- 4 Replace athletic shoes** when they lose their ability to provide adequate support and shock absorption, which is usually after a few hundred miles of wear or when you see an uneven wear pattern.
- 5 Incorporate no-impact activities** (such as swimming or cycling) or low-impact routines (such as walking or in-line skating) into your exercise regimen.
- 6 After returning from a break, ease back into sports.** There's a reason professional athletes have preseason

training: it takes time for the body to adjust to heightened physical activity. If you ski, be sure to do some pre-conditioning to get ready to take on the mountain, including incorporating some light weight training to gain strength, and some moderate stretching before you get on the lifts to enhance flexibility.

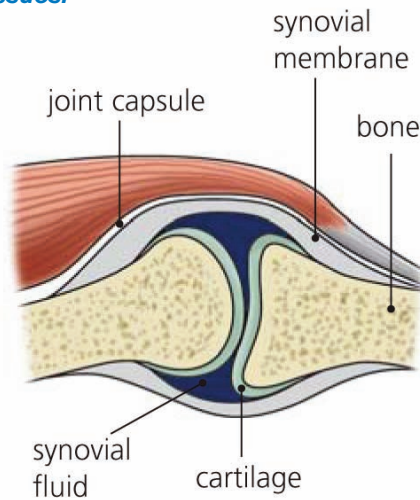
With a little planning and variety, you can pursue the sports you love while being kind to your joints. ■

continued from page 1

- **Being obese:** Obesity is the leading cause of osteoarthritis development and makes pain worse in those who already have the disorder. The increased stress on your joints increases wear and tear. In addition, the proteins produced by fat cells might contribute to the development of inflammation in the joints. Losing just 10 pounds not only helps ease osteoarthritis pain, but can also help slow the rate of cartilage degeneration.
- **Being over age 65:** The inevitable changes in tissue that accompany the aging process promote the development of arthritis. Symptoms may begin in the 40's and 50's.
- **Prior musculoskeletal injury:** Any kind of injury to the bones, joints, and tendons can raise your risk of osteoarthritis. Young athletes who sustain a sports injury may develop osteoarthritis earlier as adults. People who have been injured need to have regular check-ups and X-rays to keep a watchful eye on their joints. (See page 3 for more information about athletes and osteoarthritis.)
- **Being female:** About twice as many women as men suffer from osteoarthritis. While it is not completely clear why there is this disparity, there are some theories that exist. For more about osteoarthritis in women, see page 6.
- **Family history:** If you have family members with osteoarthritis, you might, too; however, research to study genetic factors related to osteoarthritis risk has not yet identified specific mutations

A Healthy Joint

In a healthy joint, the ends of bones are covered with smooth cartilage and the capsule encloses the joint, which is encased in muscles and connective tissues.



that commonly predispose individuals to the disease.

You can assess your risk of osteoarthritis using the online Risk Assessment Tool located at www.fightarthritis.org, in the "Resources" section. This web site, created by the Arthritis Foundation, also provides guidance on how you can manage your arthritis risk.

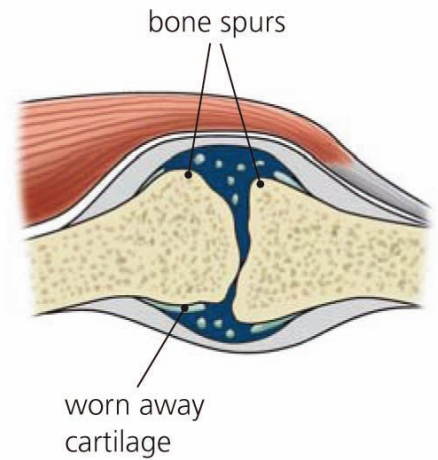
What Are the Symptoms?

By far the most common symptom of osteoarthritis is recurring joint pain. This pain may present in the following ways:

- **Pain when you move the joint.** The same joint hurts, especially during weight-bearing activities, and lessens when you stop moving. Some people

A Joint with Osteoarthritis

With osteoarthritis, the cartilage starts to break down and damage to the bone occurs. The result can be a painful joint and loss of mobility and function.



also hear a crackling sound that occurs when the joint moves.

- **Pain and stiffness may be worse at certain times of day.** Some people experience their worst joint pain when they first wake up, while others experience more discomfort at the end of the day.
- **Limited range of motion.** As osteoarthritis progresses, the affected joints may lose their range of motion. Inflammation and swelling may develop, causing more pain.

Osteoarthritis symptoms may also differ depending on which joints are affected. People with arthritis in the hips may feel pain in the groin, inner thigh and buttock, which may extend to the knee and cause limping.

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Osteoarthritis through the years	30	40	50	60	70	80	90
<p>This chart provides a glimpse at the development of arthritis over time and risk factors, symptoms, and treatment related to its progression.</p>	<p>Low Risk Active – Normal Body Mass Index No joint discomfort</p>		<p>Moderate Risk Overweight – Inactive – Knee Injury</p>		<p>High Risk Persistent and severe pain and disability</p>		
	<p>The best approach to keeping osteoarthritis at bay is to stay active, participate in regular exercise, and practice good nutrition to maintain a healthy weight.</p>		<p>Joint pain, stiffness and limitation of activities</p>		<p>If the arthritis has progressed to a point where daily living and/or recreational activities can no longer be performed without pain and walking is extremely difficult, joint replacement surgery may be the best option.</p>		
			<p>Treatment includes medications, joint injections, regular exercise and weight loss.</p>				

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Knee arthritis may cause pain and a grating or a catching feeling with movement. Osteoarthritis in the fingers can cause pain, redness and swelling in the joints which make it difficult to pick things up. Some people with arthritis in the fingers develop bony growth spurs in the joints at the middle or ends of the fingers.

Joint pain can be caused by a number of diseases. If you have experienced any of these symptoms, it is important to see a doctor to determine what is causing your symptoms, so you can take measures to start managing them as early as possible.

Osteoarthritis is the nation's number one musculoskeletal disorder.

Making the Diagnosis

If you have joint pain, your doctor will do a series of examinations to determine the cause. The first is a physical examination to look for any swelling and to assess your level of pain, range of motion and muscle

strength. If your pain is in your knees or hips, your doctor may also look at how it is affecting your walking (gait). It is important to tell your doctor about your medical history, such as prior injuries, and the nature of your pain.

X-rays can help visualize what is happening inside a joint, particularly if any wear-and-tear of the bone has begun. They can also be used to show cartilage deterioration, because the bones of a joint will move closer together when this happens. Magnetic resonance imaging (MRI) is very helpful for demonstrating bone and soft-tissue changes in arthritis at an earlier stage, while computed tomography (CT) scanning is valuable for assessing early bony changes, including bone spurs.

In some patients with suspected osteoarthritis, ultrasound is useful for imaging cysts. Your doctor may also do blood tests or withdraw some synovial fluid from a joint for analysis to rule out other causes of joint pain and to confirm a diagnosis of osteoarthritis.

What You Can Do

If you are at risk for developing osteoarthritis or are diagnosed with this condition, your

doctor will discuss ways you can reduce your risk or slow its progression. By far the most effective and tangible way is to achieve and maintain a healthy weight, as well as strengthen your joints and maintain flexibility. See page 2 to learn how.

The management of osteoarthritis may require a team approach, bringing together your primary care physician, a rheumatologist (joint specialist), sports medicine doctor, physiatrist (rehabilitation medicine specialist), orthopedic surgeon, dietitian and/or physical therapist as needed.

Your health care team may recommend anti-inflammatory drugs such as ibuprofen or naproxen to manage your symptoms, or prescription drugs such as celecoxib. Some patients benefit from joint injections or mechanical adjustments that shift the pressure being put on a joint, such as custom orthotics to be worn in your shoes to relieve hip or knee pain.

If, despite these measures, joint damage and pain in the knees or hips become so severe that they significantly interfere with your daily activities, your health care team may recommend joint replacement to get you back to your normal routine as quickly and comfortably as possible. ■



Your doctor will discuss ways you can reduce your risk of arthritis or slow its progression. The most effective and tangible way is to achieve and maintain a healthy weight, as well as strengthen your joints and maintain flexibility.

When It Comes to Arthritis, It's Ladies First

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Osteoarthritis is not an equal-opportunity disorder: It appears to favor women. Among people with osteoarthritis, there are twice as many women as men, especially for those with arthritis in the knees and hands. Symptoms typically begin to appear in women in their 40's and 50's, and the disparity becomes even greater after age 55, after women enter menopause.

What could account for these differences? There are a number of theories. By far the most important risk factor for osteoarthritis in women, as in men, is obesity. Women who go through menopause often gain weight, and the increased stress on the joints may explain the rise in osteoarthritis seen among women after age 55. By the time a woman reaches 65, she is twice as likely as a man to experience osteoarthritis symptoms.

Another possible explanation is anatomical: women's hips are wider than men's. The angle formed by the hip bones being wider than the knees puts more stress on the outside of the knees. This "knock-kneed" position, even if slight, can put stress on the outside of the knees, causing osteoarthritis over time in some women.

Women are also more likely to develop a condition called "patellofemoral syndrome," in which the kneecap (patella) does not glide smoothly over the joint and rubs against the lower part of the thighbone (femur). This misalignment may be exacerbated by hyperextended knees in women who wear high heels. The recurrent rubbing of the kneecap on the thighbone causes wear and tear that can progress to arthritis and cause pain in the front of the knee.

The increased prevalence of osteoarthritis in women has also triggered studies to

determine the role of hormones. While the roles of hormones such as estrogen and progesterone in osteoarthritis are unclear, research has shown that hormone replacement therapy (HRT) may have a protective effect. The 1997 Chingford Study in London, for example, found that among more than 1,000 women, those who used HRT

school and college sports over the last couple of decades means more females are experiencing sports injuries, particularly tears to the anterior cruciate ligament (ACL) of the knee. This injury on its own places an individual at an increased risk of osteoarthritis, even if it is surgically repaired. Any instability in the knee generates wear and tear over time.

We could actually see an increase in osteoarthritis in women in the coming years as girls with ACL injuries grow up. One 2004 study found that among female soccer players who had sustained ACL injuries, more



experienced less osteoarthritis of the knee (as seen on X-rays) and slightly less in the hands. Research exploring the influence of hormones on osteoarthritis is continuing.

Other investigators have studied the role of a hormone called relaxin, which is increased during pregnancy and makes joints more lax, causing potential instability. Elevated relaxin has been proposed as a possible explanation for the increased prevalence of osteoarthritis of the hands seen in women compared with men. Studies are continuing to analyze this relationship.

Another theory relates to sports injuries. The increase in girls participating in high

than half developed X-ray signs of osteoarthritis in the following 12 years.

So ladies, take precautions now to reduce your risk of developing osteoarthritis (see page 2 to learn how) and to manage it well if you already have it, including:

- Achieving and maintaining a healthy weight
- Incorporating exercise into your daily activities
- Staying strong and flexible to reduce your risk of injury
- Seeing your doctor to determine the best course of therapy if you are experiencing arthritis symptoms. ■

HSS Leads in Advancing the National Arthritis Agenda

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Designated Institutional Officer, GME

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Associate Research Professor of Social Work in Medicine, Weill Cornell Medical College

There's good reason to make osteoarthritis a national health priority: Its association with aging means it is expected to rise in prevalence, as increasing numbers of baby boomers reach their 60's. It is expected to affect some 67 million adults in America by 2030 and is already the leading cause of disability, keeping otherwise healthy people from living more productive lives.

Osteoarthritis (OA) currently costs our nation more than \$128 billion in direct medical costs (such as joint replacement surgery and other medical care) and indirect costs (including missed work days and disability payments). According to the U.S. Centers for Disease Control and Prevention (CDC), that figure could soar even higher as more people affected by the disease become unable to care for themselves or work.

This is precisely why, in early 2010, the Arthritis Foundation and the Ad Council teamed up to launch a national osteoarthritis campaign. Called "Moving Is the Best Medicine," the initiative was created to raise awareness of OA, increase public health education, and advocate for more funding for groundbreaking research for a disease that some people just don't take seriously enough. The national campaign brings together the Arthritis Foundation with government organizations that are supporting and conducting osteoarthritis research, such as the National Institutes of Health (NIH) and the CDC.

The National Agenda

Many of the messages of the campaign focus on what you can do to reduce your risk of arthritis or ease its symptoms if you already have it — from embarking on an exercise program to adopting a healthy diet to achieve a healthy weight. As its first year comes to a close, the campaign has benchmarked its success, with increased awareness of OA nationwide promoted on billboards, in TV and radio public service announcements and in news stories.

The aim of the campaign's second phase is "Arthritis Pain Is Unacceptable," with the goal to drive home the seriousness of arthritis. It will urge people with joint pain to see a rheumatologist to assess the cause of their symptoms and to secure the most appropriate treatment. In addition, the OA advocates are asking Congress to increase research funding by 12 percent to the NIH, to support Department of Defense arthritis research programs with \$8 million, and to support the CDC's arthritis research efforts with an additional \$10 million.

HSS: Leading in the Cause

Hospital for Special Surgery is a leader in clinical care and research in arthritis and is continuing its efforts to promote the OA na-

tional agenda. HSS' multidisciplinary Osteoarthritis Steering Council has directed several initiatives, including:

- **HSS Osteoarthritis Summit: Frontiers in OA Research, Prevention and Care (June 17-18, 2011).** This conference will bring together at HSS for the first time a comprehensive multidisciplinary group of world-renowned scientists, physicians and industry representatives from the United States, Canada and Europe to discuss all aspects of osteoarthritis and to develop a consensus document on future directions for research, prevention and treatment. The proceedings of the meeting will be published in the *HSS Journal* (the *Musculoskeletal Journal of Hospital for Special Surgery*, which publishes peer-reviewed articles that contribute to the advancement of the knowledge of musculoskeletal diseases).

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Programs and Resources

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- **State of the Science in the Prevention & Management of Osteoarthritis (July 14-15, 2011).** This conference is designed for nurses who are often the first point of contact for patients. This will be a consensus workshop of experts from around the country. Partnering with the *American Journal of Nursing*, the meeting will result in a special issue of the journal, reaching over 10,000 nurses to educate them about OA and their role in helping patients with the disease.
- **Ongoing evidence-based community wellness and early intervention programs,** from t'ai chi, yoga and Pilates to our annual Osteoarthritis Seminar and Arthritis Foundation Lifestyle Management Program. See chart at right for more information.
- **Partnering with community organizations to promote early intervention and teach community-based groups about osteoarthritis.** One example is a key partnership with the Retired Teachers Association of the United Federation of Teachers on Osteoarthritis Prevention.

As part of our Community Service Plan (a strategic plan required of all New York State hospitals), health professionals are assessing the needs of our communities, with a major emphasis on OA and other musculoskeletal diseases. Most recently, we launched our OA web site with updated information. Check it out at www.hss.edu/osteoarthritis.

Osteoarthritis is an enormous socioeconomic burden on our society. As consumers and patients, there are steps we can all take to lessen that burden for individuals, communities and the nation as a whole.

For more information, visit www.hss.edu/osteoarthritis or www.fightarthritis.org. ■

Hospital for Special Surgery offers the following classes to help you gain endurance, strength and flexibility and reduce your osteoarthritis risk:

Better Balance for Older Adults: Unique exercises selected for individuals who would like to increase their balance control and decrease the risk of falls.

Exercises for Older Adults with Osteoarthritis: Exercise for osteoarthritis has been shown to strengthen the muscular support around the affected joints while preventing the joints from "freezing up," improving and maintaining joint mobility.

Osteoarthritis Seminar: A full day program bringing together clinical experts to discuss osteoarthritis management through nutrition, exercise, pain management and treatment options.

Gentle Yoga: The slow, controlled physical movement of yoga can provide pain relief, relax stiff muscles, ease sore joints and help build strength.

Pilates: A series of specific movements designed to strengthen the powerhouse muscles of the abdomen, back and waist.

Yogalates: A popular form of exercise that blends the best of yoga and Pilates.

T'ai Chi Chih: Simple, rhythmic movements that provide benefits such as improved balance, strength, flexibility and maintenance of bone mass.

Dance for Fitness and Fun: Studies have shown that dance maintains cardiovascular fitness, enhances emotional well-being, strengthens weight-bearing bones, and slows loss of bone mass.

For more information on the schedule, location and cost of these classes, visit www.hss.edu/pped or call 212.774.2793.

Integrative Care Center (ICC): The ICC, located in mid-Manhattan and affiliated with Hospital for Special Surgery, offers movement and exercise group classes such as OsteoFitness, Back to Basics, therapeutic yoga, Pilates and T'ai Chi Chih®. Please visit www.hss.edu/ic for more information on Winter/Spring 2011 class offerings or call 212.224.7900.

Other resources:

Arthritis Foundation: www.arthritis.org

Arthritis Foundation and Ad Council: www.fightarthritis.org

Arthritis Today magazine: www.arthritistoday.org

National Institute of Arthritis and Musculoskeletal and Skin Diseases: www.niams.nih.gov

U.S. Centers for Disease Control and Prevention: www.cdc.gov/arthritis/basics/osteoarthritis.htm



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tion and the Ad Council, and supported by Hospital for Special Surgery. It's aptly named: Regular physical activity is essential to both prevent and manage osteoarthritis, and for good reason:

- Regular exercise helps facilitate weight loss, especially if you're following a healthy diet.
- Exercises to strengthen muscles generate more support for your joints.
- Gentle stretching exercises keep joints flexible and increase range of motion, reducing the risk of injury.

Aim for 30 to 45 minutes of exercise at least three times a week — ideally a combination of cardiovascular, strengthening and stretching exercises. Before embarking on any new exercise program, be sure to check with your doctor to determine what types of exercise are best for you, and any special precautions you may need to take.

Here are some ideas to get you started:

- **Walking:** This is the easiest exercise and can be done just about anywhere. Be sure to wear comfortable, supportive shoes. If you live in a city, you can leisurely walk its parks. For those who live near malls, many malls open their doors early so people can come in and walk in a comfortable environment. Mall-walking groups also provide a social ele-

ment for people who don't have family close by or others with whom to exercise.

- **Aquatics:** Look for a water aerobics class. Exercising in water reduces stress on the joints and is not associated with a risk of falling.
- **Get on a recumbent bike:** These bicycles enable you to cycle in a comfortable position and help increase your endurance, flexibility and leg strength—all in one exercise.
- **Take a class in gentle yoga, dance, or t'ai chi:** These exercises have toning, flexibility and relaxation benefits. Plus there's the added advantage of the "shared energy" in these classes as you bend and move with your classmates.
- **Take the stairs:** Not all exercise requires a formal workout. Take the stairs instead of the elevator; get off the subway or bus one stop earlier and walk the rest of the way; or park a little farther out at the mall to burn a few extra calories and get your heart pumping.

Step 3: Be Careful!

Joints that have been injured have a greater risk of developing osteoarthritis over time. So as you move to a more active lifestyle, take these precautions to reduce your risk of injury:

- **Warm up and cool down.** Be sure to stretch gently both before and after any exercise program.

Weight loss is best sustained when the weight is lost gradually. Aim to lose one to two pounds per week. It may have taken you years to accumulate those pounds, so don't be surprised if it take several months to lose them. Likewise, don't expect your diet to change overnight. Start by looking at what you are eating now (keeping a food diary is a great way to do this) and identifying areas where you can improve. Little steps along the way will add up to big results over time.

- **Lift weights.** Incorporate resistance exercises, such as gentle weight training, into your exercise routine to strengthen the muscles around your joints. The extra support will reduce your risk of injury.
- **Watch your step.** Take simple precautions to prevent falls, like watching your step if you're walking when it's rainy or icy outside.

Above all, find an exercise program that works for you. The more you like it, the easier it will be to stick with it!

For information on nutritional guidance provided by Hospital for Special Surgery, contact the Department of Food and Nutrition Services at 212.606.1293. For information on exercise classes, see page 7A. ■

HOSPITAL FOR SPECIAL SURGERY



Specialists in Mobility

Education & Academic Affairs

*Programs Promoting
Musculoskeletal Health*

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HSS Health Link

For more information visit
www.hss.edu or to make
an appointment call our
Physician Referral Service
at 800.796.0486.

**Public and Patient
Education Department**
212.606.1057
www.hss.edu/pped

Research Division
212.774.7123
www.hss.edu/research
www.hss.edu/osteoarthritis-research
www.hss.edu/clinical-trials

Additional resources:

Arthritis Foundation
www.fightarthritis.org

MedlinePlus
www.medlineplus.gov

**National Institutes
of Health**
www.nih.gov
www.clinicaltrials.gov

**New York State
Osteoporosis Prevention
& Education Program**
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Community Service Plan 2010-12: Advancing the Prevention Agenda for Public Health

The 2010-12 Community Service Plan provides a concise overview of Hospital for Special Surgery's initiatives that help improve the health, mobility, and quality of life for the communities it serves. Visit www.hss.edu/community for more information and to download a copy of the hospital's plan.

Specific outreach goals for osteoarthritis (OA) awareness and intervention are:

- Increase public awareness of OA as a priority health concern
- Educate the public about the spectrum of treatment options for OA
- Help people with OA to increase their knowledge of the disease
- Offer people with OA strategies for disease management
- Implement OA lifestyle and behavior management programs.