Repetitive Strain Injuries Are Not Inevitable

Rhea Hirshman
Contributing Writer

It happens to plumbers and tennis players, to lab technicians and students, to musicians and office workers: The movements they use in everyday work or in frequent recreational activities begin to feel uncomfortable and even painful. If the symptoms go untreated, the movements may eventually become virtually impossible to perform and a return to normal activity can require a long process of rehabilitation.

All these people, while they may receive different specific diagnoses, are experiencing cumulative trauma disorders, also called repetitive strain injuries. According to Dorothy van Rhijn, MD, chief of the Employee Health Department at Yale University Health Services, repetitive strain injury is a category of “...strain and inflammation which results from improper positioning between you and your environment.” Nerves, muscles and ligaments in the hands, wrists and arms are most commonly affected. While our hands, wrists and arms have evolved as wonders of precision work, the muscle

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A five-part series on Diabetes will be held on Wednesdays in April and May. All programs are in room 405 at YHP from 5:15-6:30. More information: 203-432-0093.

April 14 What is Diabetes?
April 21 The Role of Testing
April 28 Managing Diabetes with Nutrition
May 5 Exercise, Medication and Lifestyle
May 12 Dealing with Real Life Situations

For more, turn to Calendar listings on page 8

While most of us are delighted by the arrival of the warmer weather, allergy sufferers may not be. About 20% of the US population has some allergy symptoms such as itchy, runny eyes and nose, nasal congestion and sneezing in response to pollen, dust mites or animal allergens. In individuals with allergies, the immune system recognizes otherwise benign substances as potentially harmful

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Orthopedics Department Provides High-Tech Care and Hands-On Service

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For YHP patients with orthopedic problems, care begins, not in the Orthopedics Department but with an initial diagnosis and often treatment by the primary care clinician or in the Urgent Care Department. If a referral to Orthopedics is appropriate — all patients are seen by referral only — a team reviews every referral to determine when the patient should be seen and by whom. “We’ll decide that largely by which part of the musculoskeletal system is involved,” notes Melanie McCloskey, RN, MSN, CNA, the nurse manager for all surgical specialties, including Orthopedics. “All of our surgeons are affiliated with Yale School of Medicine and are here on a consulting basis. Each has areas of expertise such as neck or shoulder or knee problems, hand problems and so on.” Long-term chronic problems or non-surgical problems will usually be monitored by the orthopedic PA.

If a patient does need orthopedic surgery, the procedure is likely to be considerably less invasive than in previous years, due primarily to advances in arthroscopic surgery. According to Moreson Kaplan, MD, the department’s chief, “Virtually every bone and joint can be approached arthroscopically,” although the technique is most often used on the shoulder and knee. The arthroscope is a slender instrument which is introduced into the joint through a small incision. It lights and magnifies the view inside the joint and also permits the orthopedist to cut and sew and cauterize. The patient winds up with a tiny incision, is likely able to start physical therapy almost immediately, and can often return to normal activity within days or weeks.

Another change in the field, McCloskey notes, has been a movement away from surgery immediately after trauma. “We used to take ski structure in the upper extremities was not made for constant repetitive movement.

The most common forms of repetitive stress injury in a university setting are related to computer use. Computer technology has provided many benefits. But, according to Michael Goulet, RPT, MPH, head of YHP’s Physical Therapy Department, these injuries are a byproduct of our increased productivity. “Are people typing more nowadays? Not necessarily. But we used to have to stop typing to push the carriage return or to crank in the paper. Now we have a machine that does almost everything while we sit in one place and do the same motion over and over.”

Prevention of these injuries requires application of sound ergonomic principles. “Ergonomics” means the study of the relationship between people and their environments, especially in the workplace. It is important both to create a healthy workplace and to take common-sense steps to use that workplace safely. As Goulet points out, “Having a bad computer setup doesn’t mean you will develop these problems if you’re at the keyboard only an hour a day. The length of time also matters....”

He also notes that there is no such thing as the perfect work station. What is essential is that the work station be properly adjusted for the individual. Some basics: Sit up straight. Your feet should be on the floor or on a footstool that allows the top portion of the leg to be at a 90 degree angle to the floor. Wrists should be straight or bent slightly down. The monitor should be at or a little below eye level. Documents should be on a holder of the same height as the computer screen.

The most important principle? “Take breaks!” van Rhijn emphasizes. “Every ten or fifteen minutes, shake out your hands. Stretch. Refocus your eyes away from the computer screen.” Goulet sees the laptop through the eyes of a physical therapist. He says, “You have only two decisions with a laptop — is my neck going to bother me or are my wrist and arm going to bother me?” He recommends spending not more than 45 minutes out of each hour with a laptop, with 15 minutes of break time.

Michele Wetmore, RN, CCRN  
and Moreson Kaplan, MD

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Many health conditions related to ergonomic problems result from repetitive motions; these syndromes are sometimes referred to as “cumulative trauma disorders.” As people at Yale and elsewhere spend more time at computer keyboards, computer work station ergonomics has become a particular concern. At YHP, we have gained quite a bit of experience in treating medical problems resulting from repetitive injury, but we have also identified the need for prevention. A year ago we convened representatives from the Office of Environmental Health and Safety, Human Resource Services, Information Technology Services and Project X to collaborate with our health care providers in developing education and prevention programs to help members of the Yale community avoid ergonomic problems. While computer work stations are not the only cause of ergonomic problems, the Yale University Joint Ergonomics Committee decided that this area was a good place to start.

People who spend minimal time at the keyboard are not at risk for musculoskeletal problems. For those who spend hours each day at computer work stations, three risk factors are significant: awkward positions, long duration of work without breaks and certain repetitive motions. Injuries can be minimized by working at a properly outfitted work station, including appropriate work surfaces, adjustable seating, monitor stands, adjustable keyboard/mouse trays and foot stools. However, even state-of-the-art equipment will have no value if not used correctly. People can adapt work habits to minimize risk of injury by taking breaks, and doing simple stretching and strengthening exercises.

The committee identified a need for education and training to prevent injuries. We have developed a curriculum for computer training in the University. A collaborative service, provided by Yale Health Plan and the Office of Environmental Health and Safety, goes out to work sites to assess ergonomic problems and suggest solutions. We are also developing online catalogs as well as convenient showrooms for ergonomically correct office equipment.

While we continue to devote clinical resources to treatment of problems, they are easier to prevent than to remedy. The Yale University Joint Ergonomics Committee is an example of our university-wide focus on prevention. To learn more about work station ergonomics and resources on campus, look at our Web site, and watch for ergonomic training opportunities around campus.

Van Rhijn also notes that certain medical conditions can make individuals more prone to repetitive strain injuries. Carpal tunnel syndrome, the painful squeezing of the median nerve in the wrist, can be aggravated by pregnancy (because of the general swelling that occurs) or by the neurological effects of thyroid problems. The inflammatory nature of connective tissue diseases such as rheumatoid arthritis and lupus can also increase repetitive strain problems, as can diabetes, due to its effects on the peripheral nerves in the arms and legs.

Treatments for these injuries include stretching and/or strengthening exercises, ultrasound, cortisone delivered topically through an electric current, and bracing. In extreme situations, surgery may be warranted. Rest by itself will not make the problem go away. Goulet says, “Rest can be useful, but that won’t change the underlying cause.... All these problems build up over time. If the problem is related to the way you do your job, it’s not going to go away by itself.”

“The aim of treatment,” says van Rhijn, “is to get you back to doing what you did before, only smarter.” But, given that many of these problems are preventable, Goulet and van Rhijn concur, “The best treatment here is prevention.”
The Outpatient Referral Process
YHP Claims Department: 203-432-0250

By answering your questions, this column will help you get the most out of your YHP membership.

Send your questions to:
Member Services Q & A,
Yale Health Plan,
17 Hillhouse Ave.,
P.O. Box 208237
New Haven, CT 06520-8237.
We’ll get them answered by someone “in the know.”

While many specialty services are available at YHP, you may also be referred for services outside the YHP building. Your referring clinician will provide you with an outpatient referral form — a communication tool for the patient, the referring clinician, the claims staff and the specialist. Prior authorization for coverage of referral services must be obtained from the YHP Claims Department (see steps below).

Q. Who gives me the referral? What do I do when I get it?
A. Usually the referral will come from your YHP primary care clinician. If your clinician has referred you to an in-house specialist, that specialist can also refer you outside of YHP. Referrals can also be made through the Urgent Care Department. Once your clinician writes the referral, the process is as follows: (1) Take the form to the Claims Department, where the referral will be entered into our system and a coverage determination will be made. (2) Go to your appointment and take the form with you. (3) Make sure that the person who checks you in for your appointment records all the information correctly and keeps a copy of the form.

Q. What does the referral cover?
A. It covers only the specific services that your YHP clinician has requested on that form and that the Claims Department has authorized. Services may include consultation, treatment and testing.

Q. What if the outside clinician wants to see me again or wants to order tests?
A. If the outside clinician wants you to have additional consultations, treatments, or testing, that clinician must contact the referring YHP clinician to have a new referral generated. It is a good idea for you to check with your clinician or with the Claims Department to see that the contact has been made and that the proper paperwork is in place before you proceed with additional appointments.

Q. Is there a time limit on referrals?
A. Yes. So that your clinician can monitor your progress, a referral is usually issued for a 4-month period. Also, if additional appointments are required past the 4 months or you need additional services within that period, you must get another referral.
New Dermatology Chief
Looks At, and Beyond,
The Surface

“M

edicine and science have always been part of my life,” says Suguru Imaeda, MD, who became chief of YHP’s Dermatology Department in October. But, until his fourth year in medical school, he had little contact with the study of dermatology and not much interest in the field, even though his father was a dermatologist.

“When I did an elective in my fourth year,” he says, “I realized that the skin is a window to the inside of the body and that dermatology is a lot more than just eczema and acne.”

Born in Venezuela and raised there during his early years, Imaeda spent his later childhood and adolescence in New Jersey, attended Johns Hopkins University as an undergraduate and received his medical degree from Albert Einstein School of Medicine. After interning at Yale-New Haven Hospital, he stayed on to do his residency in dermatology and then joined the dermatology faculty. He also pursued his research interest in cutaneous T-cell lymphoma, a cancer of the immune system which initially manifests only on the skin.

“Usually the dermatologist makes the initial diagnosis of this disease,” Imaeda notes. “A lot of internal disorders manifest with skin signs and sometimes you can make the initial diagnosis of an internal problem just by seeing what’s on the skin.” The visual nature of dermatology appeals to him. “You don’t need special tests, you don’t need CAT scans to do a diagnosis. After you decide what you think the problem might be, you might need other tests, but the skin is there for you to see.”

Imaeda says that dermatology “encompasses many different fields. You need to know internal medicine, you need to do some minor skin surgery, you need to be acquainted with immunology.” And although most dermatologic disorders are not life-threatening, Imaeda says that he can make a significant impact on his patients’ lives: “Because we live in such an appearance-conscious society, a lot of skin problems are genuinely troublesome.”

In fact, Imaeda laughs, “If you’re a dermatologist and you’re at a party, pretty soon you find out that everyone has a skin problem.” He adds, “But the other side of that is that, as a dermatologist, I can help a large number of people.”

Orthopedics Department
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injuries and practically operate on them right there in the ski lodge. Now the thinking is to let the swelling go down and to do watchful waiting, maybe including some strengthening work.” Diagnostic tools like MRIs and CAT scans are useful in treatment decisions, and the outcome can be better when the patient has time to prepare physically and emotionally. McCloskey adds, “The importance of getting patients up and moving and doing rehabilitation more quickly after surgery has also been proven.”

Whatever kind of surgery is needed, the department sees to it that care is as seamless as possible. “We coordinate everything,” says Michele Wetmore, RN, CCRN. “If tests are required, we schedule them. We’ll arrange the surgery and book preoperative and post-operative consultations. We’ll make the arrangements for physical therapy.” Preparing patients also means letting them know what to expect before, during, and after surgery; discussing how much time they will have to be away from work and coordinating prescriptions for medication and equipment. “Because we’re talking about movement,” she says, “orthopedic surgery can involve a lot of education.”

Kaplan, McCloskey and Wetmore talk with particular pride about the department’s hand clinic, which Kaplan calls “amazing and unique,” in part because of the close cooperation among all members of the staff and the direct communication about each case between the hand surgeon and the physical therapist, who is also a hand specialist. “It’s extremely rare,” he says, “for a physical therapist to have the opportunity to work directly with the hand surgeon so that she knows exactly what is needed both pre-and post-operatively. The fact that this happens here is a tremendous advantage.”
BOOK REVIEW

The American Dietetic Association’s Complete Food and Nutrition Guide
by Rogerta Larson Duyff
Chronimed Publishing, 1996

This book provides a comprehensive look at a variety of nutrition topics of particular interest to today’s consumer, from fiber to fluids, from artificial sweeteners to supermarket smarts. Based on current knowledge and practice, this book provides “nutrition check-ups,” kitchen nutrition tips, charts and graphs, and many tips for eating and living healthfully. A useful addition to any bookshelf.

The Healthy Weigh: A Practical Food Guide
The American Dietetic Association, 1991
We all know that obesity is a risk factor for many health problems. We also know that, for many people, going on a “diet” doesn’t produce the desired results, particularly if they return to old eating and lifestyle habits. This booklet will help you determine a realistic and healthy weight goal, and guide you toward achieving that goal through physical activity and healthy eating—not “dieting.” A week’s worth of sample menus, for both 1500 calorie and 1800 calorie meals, is provided. Well worth the $8.95 price tag.

COVERAGE MANDATED FOR RECONSTRUCTIVE BREAST SURGERY

The Women’s Health and Cancer Rights Act of 1998 was signed into law on October 21, 1998. This law passed by Congress requires all health plans to cover reconstructive surgery following mastectomy. Yale Health Plan covers these procedures. The law also mandates that we provide you with this notice. Your health plan is required to provide benefits for:

- reconstruction of the affected breast
- surgery and reconstruction of the other breast to produce symmetrical appearance
- prostheses and the treatment of physical complications in all stages of the mastectomy, including lymphedemas

The benefits available under this mandate are subject to the same terms and conditions as are all other benefits under your coverage.

If you have any questions, please call the YHP Claims Department at 203-432-0250.

SCHEDULE SPORTS AND CAMP PHYSICALS EARLY

Spring is coming and many children will need a physical exam to participate in sports or to attend summer camp.

The YHP Pediatric Department asks that you schedule physical exams early before the busier months of May and June. If you need an appointment, please call the YHP Pediatric Department at (203) 432-0206.
and reacts to them. That immune response is similar to a reaction to a cold virus, except that it usually lasts for an entire pollen season, four weeks or more, rather than the week typical of the common cold.

In the northeast, there are well defined allergy seasons. From when the trees start to bud until the leaves are out, the major allergen is tree pollen. This can be seen as yellow dust on cars. About mid-May, the grasses begin to pollinate. Grass pollenation can last all summer, but it peaks in the first part of June and then decreases. The notorious ragweed pollen season begins in mid-August. Contrary to popular belief, this season ends, regardless of the weather, at the end of September, when the plant goes to seed. Mold spores and dust mites are present most of the year, but tend to be highest from mid-September into October.

While there are no cures for allergy, you can take preventive measures. During the peaks of allergy seasons, spend more time indoors in centrally filtered buildings that have well-maintained ventilation systems. Avoid having pets in the home. If you have a dust allergy, cover pillows and mattresses with plastic. Avoiding or decreasing allergen exposure is effective not only in reducing immediate symptoms, but in reducing an individual’s sensitivity over time.

The good news is that there has been a substantial improvement in medications for allergy. Most over the counter (OTC) antihistamines are effective for mild to moderate symptoms, but will cause drowsiness in about 30% of those who take them. Newer non-sedating, equivalently effective but more expensive antihistamines are available by prescription. Almost equally effective is the antihistamines is a nasal spray, cromolyn sodium or Intal that is now available OTC. Several prescription intranasal steroids are also effective in preventing nasal symptoms. In a small minority of individuals whose symptoms cannot be adequately controlled through these measures, a program of desensitization shots is an option.

**National Pediatrics Group Recommends Childhood Hepatitis B Vaccination**

The American Academy of Pediatrics strongly recommends including hepatitis B in the list of diseases against which children routinely receive vaccinations. Each year in the United States an estimated 200,000 people are newly infected with hepatitis B virus (HBV), of whom more than 11,000 are hospitalized and 20,000 remain chronically infected. An estimated 1.25 million people in the United States have chronic HBV infection, and 4,000 to 5,000 people die each year from hepatitis B-related chronic liver disease or liver cancer.

National Nutrition Month in March is sponsored annually by the National Center for Nutrition and Dietetics of The American Dietetic Association and its foundation. This year’s theme is *Take a Fresh Look at Nutrition*. Some ideas:

**Eating healthfully can be quick, easy and tasty.**

Healthful eating does not have to be complicated or time-consuming. Some quick meals: baked potato with vegetarian chili and a salad; bean burritos; English muffin or pita bread pizzas; stir-fry veggies over rice; and vegetarian burgers with salad.

**Refresh your eating habits.**

Try a new food each time you grocery shop or dine out. Or try eating a familiar food prepared in a different way.

Hepatitis B infection is acquired by exposure to blood or body fluids from an infected person. It is about 100 times easier to transmit than is HIV, the virus that causes AIDS. Hepatitis B virus, or serum hepatitis virus, can cause serious disease, especially if it is acquired during infancy or childhood. However, children may not show signs of infection until years later when they develop liver failure and/or cancer.

HBV can be passed from mother to infant at the time of birth. Children living in the same household with an HBV carrier are at risk, especially during the first five years of life. There is no cure for hepatitis B infection — prevention is the best option. Given the frequency and severity of hepatitis B infection, the benefit of vaccination far outweighs the small potential for risk.
Early Pregnancy Class
Held in room 405 on the 2nd Wednesday of each month from 10:30–11:30 for YHP members. To register, call the Ob/Gyn Department at 203-432-0222 or stop by the appointment desk. We encourage you to bring a supportive person.

Weight Watchers at Work
Mondays, 12:15–1:00 in room 405. You can join any time. For information, call 203-432-1892.

Blood Pressure Screenings
Tuesdays from 10:00–11:00 in room 406. Open to the Yale community free of charge, by referral or on a walk-in basis. For info, call 203-432-6853.

Health Risk Assessments
Health risk assessment questionnaires are offered to the entire Yale community free of charge on the first Wednesday and Thursday of the month from 2:00–3:00 in room 406. For more information, call 203-432-6853.

Post-partum Reunion Classes
Held on the 3rd Friday of each month in room 405 from 10:00–11:30. Please bring your new babies to this great support network for all new moms! Conducted by Wendy Madore, RNC. Call the Obstetrics/Gynecology Department (203-432-0222) to register.

Adult CPR Classes
Adult CPR classes are held monthly. For information, call 203-432-1892.

Yale Health Plan Cancer Support Group
Life Options is a support group for adult YHP members who have been diagnosed with cancer, regardless of type of cancer or stage of disease. The group meets weekly with a facilitator. There are three 15-week programs each year. Group members can enroll in consecutive series of meetings. Funded partially by the Edith S. Hallo Fund and by a small weekly fee charged to each participant. To enroll or for more information, contact the facilitator, Mona Felts, MSW, at 203-432-0290.