Spring 2016

Icahn School of Medicine at Mount Sinai

OCCUPATIONAL HealthWATCH

Division of **Occupational & Environmental** Medicine

Ergonomics and Musculoskeletal Disorders

Musculoskeletal disorders (MSDs) are a common source of injury in the workplace. These disorders result from strain on the muscles, tendons, and soft tissue and can often affect the nerves.

One common class of musculoskeletal disorders is repetitive strain injuries (RSIs), also known as cumulative trauma disorders (CTDs). These conditions are caused by repetitive use of parts of the body while performing work or recreational activities that involve repetitive motions, forceful exertions, contact stress, vibration, or ongoing awkward positions. Examples of activities that can cause RSIs are computer use, carpentry, material handling, or even recreational activities such as playing tennis, text messaging, or painting.

Individuals may experience symptoms such as throbbing, twinges, tingling, and fatigue that can gradually worsen over time. Individuals often ignore discomfort, hoping it will go away. Early diagnosis and intervention can diminish or eliminate RSIs most quickly. Physicians with expertise in evaluating and diagnosing work-related injuries can recommend treatments to help patients get better. Ergonomics assessments and other therapeutic interventions may be part of their recommendations.

An ergonomic assessment includes a survey of one's workstation set up, work tools, work habits, and job tasks. The assessment includes recommendations for change and education on healthy work habits, thus supporting sustained workplace wellness. With these interventions, RSIs can be prevented, managed, and healed effectively.

Common Repetitive Strain Injuries

Carpal tunnel syndrome (CTS) is caused by the compression or irritation of the median nerve that is found in the wrist area. Patients with CTS often complain of numbness in their first three fingers, a banded feeling around the wrist, and/or weakness of the hand.

Trigger finger occurs as a result of inflammation of the tendon sheaths causing the finger to get stuck while performing activities.

Epicondylitis, a type of tendinitis, is found at the elbow where the muscles of the tendons meet. Often referred to as "tennis elbow" or "golfer's elbow," it can present at first with twinges and a burning sensation.

Carpal tunnel syndrome

Trigger finger

Epicondylitis

Message from the Director

Roberto Lucchini, MD
Director
Division of Occupational and Environmental Medicine

Professor
Department of Preventive Medicine
Icahn School of Medicine at Mount Sinai

The Division of Occupational and Environmental Medicine is growing, from the number of our staff and faculty to the services we offer. As a part of our "Working Healthy" initiative, we are expanding programs aimed at improving worker health and are delighted to announce the rollout of our new injury prevention and ergonomics services.

Ergonomics is becoming especially important with the increase in technology use in the home and workplace. It is estimated that Americans spend on average seven to nine hours each day in front of a screen, whether it be a computer, tablet, or smartphone. Use of internet, email, and cell phones has increased efficiency and productivity, but can lead to poor posture and other work habits that are risk factors for musculoskeletal disorders. These disorders are the leading type of injury in the United States and affect the joints, ligaments, muscles, tendons, and nerves. Computer usage without proper ergonomic set up can lead to pain in the neck, back, and arms. Applying ergonomic principles helps make the workstation a more comfortable fit for the worker.

Meet the Ergonomist

Arlette Loeser, MA, OTR, CDMS, CIE/P

Arlette Loeser returned to Mount Sinai in 2014 to develop the Injury Prevention and Ergonomics program at the Selikoff Centers for Occupational Health. She has more than 20 years of experience in implementation of clinical and programmatic initiatives, including programs dedicated to assistive technologies and safe patient handling.

As an ergonomics expert for small to large companies, Ms. Loeser has advised in structuring and implementing return-to-work programs and educational forums for ongoing ergonomic intervention for injured workers in the office, educational, manufacturing, and health care arenas. She has worked with individuals from varied professional backgrounds including IT, journalists, musicians, photographers, security and postal workers, health care professionals, and material handlers in manufacturing.

Injury Preventi

Ergonomics is the study of designing work environments, tasks, and equipment to fit the human body. Ergonomic intervention in the workplace can identify factors that reduce the risks of developing work-related MSDs and other injuries. Essential components of an ergonomics initiative are teaching workers how to optimize their workstation set up, how to use equipment properly, and the appropriate strategies and exercises that can help improve body posture. At the Selikoff Centers for Occupational Health, we can help prevent physical discomfort and injuries by making recommendations for improvements in the work environment and in personal work habits.

Total Worker Health™

CDC/NIOSH Designated TWH Clinical Center of Excellence

WORKING HEALTHY

protect · prevent · promote

Chronic disease is the leading cause of death and disability in the United States, and there is a growing body of research looking at the connection between chronic diseases and occupational injuries and illnesses. Studies have shown that the presence of various chronic diseases is associated with up to a 25% increased risk of occupational injury. The workplace also can contribute to risk factors for chronic disease, as well as the potential psychological and economic strain associated with these conditions.

Developing occupational safety and health protection programs that recognize this connection is fundamental. Many chronic diseases are preventable and manageable through early detection, lifestyle change, and treatment. Altering diet, exercise habits, tobacco use, and stress management can play a significant role in reducing the risks for cardiovascular disease, cancer, diabetes, anxiety, depression, and obesity. Programs that address hazards in the work environment, and at the same time support healthy living, can reduce work-related injuries and illnesses, advancing the overall health of the entire workforce.

In 2014, the Mount Sinai Selikoff Centers for Occupational Health became the first in the nation designated as Total Worker Health™ Clinical Centers of Excellence by the National Institute for Occupational Safety and Health (NIOSH). Total Worker Health is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.

Mount Sinai's Working Healthy initiative follows the Total Worker Health model, helping employers, unions, and other stakeholders address health protection and health promotion under the same umbrella. Interventions are customized based on identified need in the work environment and specific population, providing for a health and safety program that offers a robust platform for supporting a healthier working community.

on & Ergonomics at Mount Sinai

Workplace Screening

We evaluate work environments and provide recommendations to employers to reduce the risk of future injury. This approach can help prioritize problem areas and establish an action plan.

Workstation Assessment

We survey a person's individual workstation for potential correctable risk factors, providing guidance and education to reduce and prevent discomfort and injury.

Ergonomics 101

Our certified ergonomist leads seminars about injury prevention, educating attendees in how to set up a workstation properly and to prevent injuries. A comprehensive Q&A segment allows listeners to gain practical information that they can apply in their daily routine.

Return-to-Work/Post-Medical Leave

Our experts help employers ensure a smooth transition back to the workplace for employees returning from injury-related medical leave by providing recommendations for change, including worksite accommodation and employee education.

Space Planning

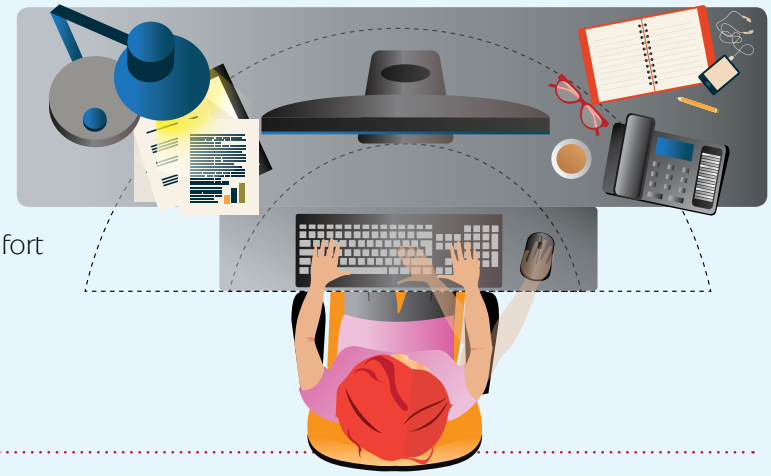
We assist employers and their facility planners with space design and furniture/equipment procurement for optimal comfort and productivity.

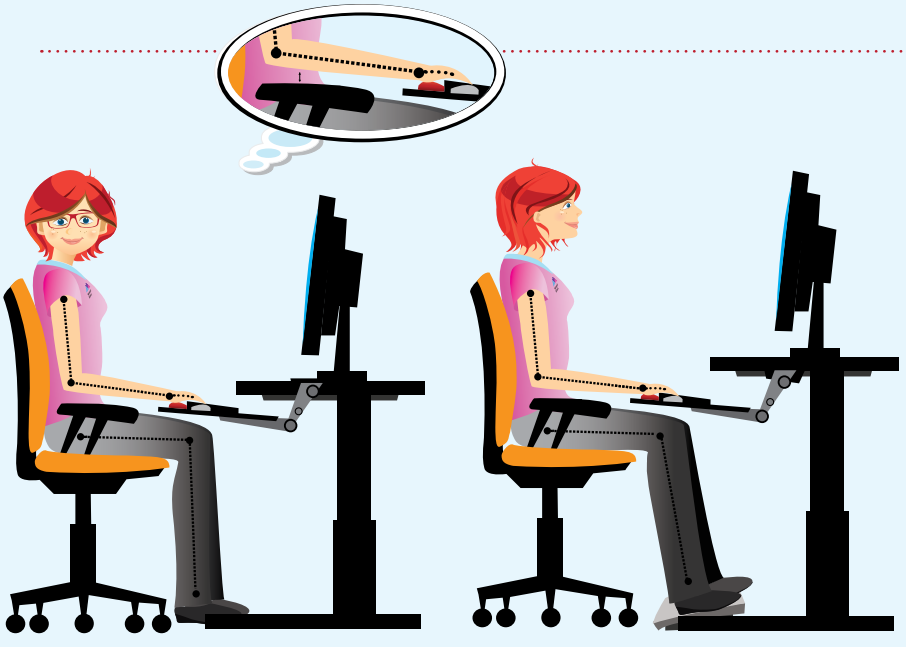
COMPUTER WORKSTATION

Use these ergonomic tips to reduce your risk for injuries such as tendinitis, carpal tunnel syndrome, and back strain. If you have recurring discomfort that you think may be work related, let your employer know and obtain a medical evaluation from a physician who specializes in work-related health conditions. Your employer also may request a consultation with an ergonomist to help you set up your workstation, eliminate discomfort, and educate you about healthy work habits.

SETTING UP YOUR WORKSTATION

- Personalize your set-up so it works for your body
- Position work items according to frequency of use
- Place objects in your reach zone
- If you move, set up your new workstation for your comfort



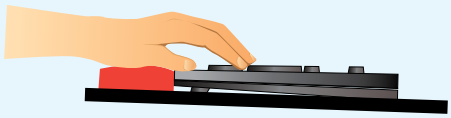


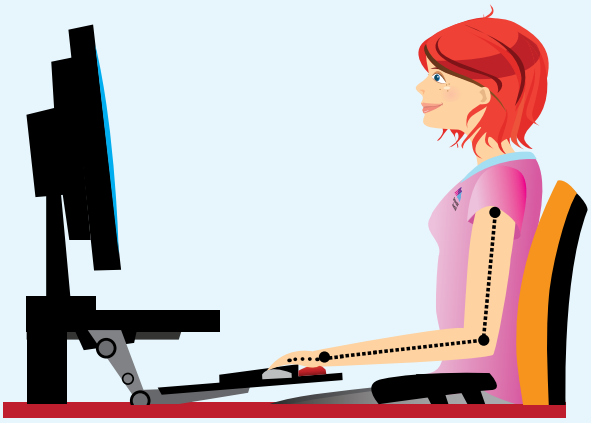
CHAIR

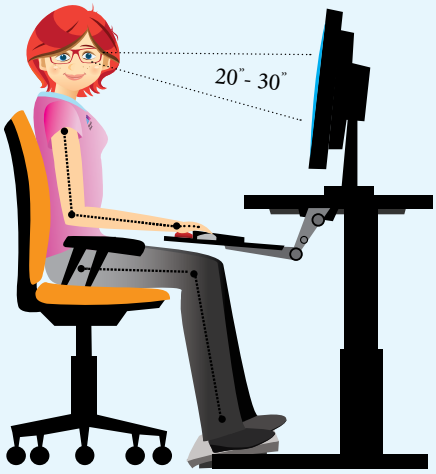
- Rest your feet on the floor or a footrest
- Seat height should allow elbows to be at keyboard height
- There should be a 1"-2" space between seat cushion and knees
- Chair back should support your lower back, with curve of backrest at lumbar spine
- Lower armrests so you can move your arms freely and not lean on the armrests while typing or using a mouse

KEYBOARD AND MOUSE

- Set keyboard and mouse at same height, at elbow level
- Ideal arm position is 95-100 degrees at the elbow
- Wrist angles should be flat and in line with the forearms
- Use a padded (but not soft) palm rest to guide your wrist position





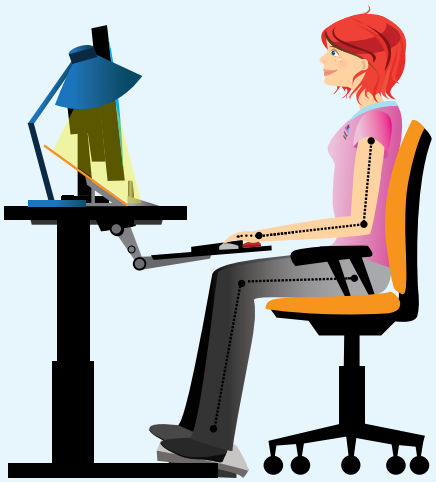


MONITOR

- Your eyes should be level with area on the screen where you are working
- Adjust monitor to accommodate for bi/tri focals or progressive lenses
- Eye distance should be 20"-30" depending on your visual needs
- Don't light up the monitor with task lighting as it can create eye strain
- Adjust monitor brightness for lighting in area
- For dual monitors, keep primary monitor in front of you with your occasional-use display angled aside
- Have your eyes checked annually
- Enlarge font size to avoid leaning forward to see better

DOCUMENT/FILE PLACEMENT

- Place paperwork on an angled surface, such as a binder or slant board
- For intense data work, use a document holder close to the display
- Task lighting should be focused on documents



HEALTHY WORK HABITS

- Multitask when you can
- Avoid computer binges
- Stand up and move
- Stretch your arms and hands
- Blink often and take your eyes off your screen intermittently
- Check your posture
- Don't ignore discomfort — it is a warning sign!

WTC HealthWATCH

Reauthorization of the James Zadroga 9/11 Health and Compensation Act

In December 2015, President Obama signed into law a bill reauthorizing the James Zadroga 9/11 Health and Compensation Act, which includes an extension of the World Trade Center Health Program for 75 years. While the renewal includes changes to some aspects of the Program, medical monitoring and treatment benefits will not be significantly affected.

Mount Sinai is proud to continue to provide critically important health care and monitoring services for workers and volunteers who responded to the WTC disaster nearly 15 years ago. This extension will allow us to continue to effectively treat the serious health conditions experienced by responders as a result of their service. Recent studies, including those authored by Mount Sinai researchers, have documented the persistence of physical and mental health problems, including PTSD, upper and lower respiratory disease, gastrointestinal disease, and cancers.

We would like to say a sincere "thank you" to the 9/11 responders, survivors, labor representatives, and community leaders who fought so hard for the Zadroga Act and its recent reauthorization. We are especially grateful for the efforts of U.S. Senators Kirsten Gillibrand (D-NY) and Charles Schumer (D-NY), as well as U.S. Representatives Carolyn Maloney (D-NY), Jerrold Nadler (D-NY), and Peter King (R-NY), along with other members of Congress who supported the critical reauthorization of the James Zadroga 9/11 Health and Compensation Act.

We encourage all responders to complete an annual medical monitoring visit. With every visit, we become better able to predict, diagnose, and treat the health problems experienced by so many across the country. Your commitment to your own health allows our program to continue to improve, increasing our ability to meet the changing health needs of the entire responder population. To schedule an appointment, please call 888.702.0630.

Michael A. Crane, MD, WTC Health Program Medical Director, encourages all responders to complete an annual medical monitoring visit.

Renovations at the Selikoff Centers for Occupational Health

Symposium Commemorating Life and Work of Dr. Irving J. Selikoff

On October 16, 2015, U.S. Representative Carolyn Maloney (D-NY); Dr. David Michaels, Assistant Secretary of Labor for Occupational Safety and Health and Director of OSHA; and Dr. John Howard, Director of NIOSH, joined faculty from the Icahn School of Medicine at Mount Sinai to dedicate the newly renovated Manhattan clinical center for the Selikoff Centers for Occupational Health. The redesigned and renovated space has been coupled with a new patient care process aimed to enhance the patient experience. Renovations include reconfigured layouts to improve flow, a new patient waiting area, and new state-of-the-art equipment. This clinical center is located in the Annenberg Building, 3rd Floor, 1468 Madison Avenue. Other clinical centers are located in Staten Island, Monroe, and Yonkers.

(From left: Madelynn Azar-Cavanagh, MD, MPH; Roberto Lucchini, MD; John Howard, MD, MPH, JD, LLM; Dennis Charney, MD; Hon. Carolyn Maloney, Philip Landrigan, MD, MSc; Michael Crane, MD, MPH; David Michaels, PhD, MPH; and Robert Wright, MD, PhD.

A symposium celebrating the 100th anniversary of the birth of Irving J. Selikoff, MD, for whom the Centers are named, also was held that day. The symposium examined the lasting impact of Dr. Selikoff's legacy on occupational health and safety in the United States. Representative Maloney presented a congressional record paying tribute to Dr. Selikoff. She is also an author of the James Zadroga 9/11 Health and Compensation Act that provides for monitoring and treatment services for 9/11-related health conditions. The Zadroga Act was reauthorized by Congress in December 2015. The Selikoff Centers are World Trade Center Health Program Clinical Centers of Excellence.

Irving J. Selikoff, MD (January 15, 1915 – May 20, 1992), considered the father of occupational medicine, is remembered for his seminal research on asbestos-related illness, his tireless advocacy for worker safety and health protections, and his contributions to the establishment of federal asbestos regulations. He is also credited for

co-discovering a treatment for tuberculosis earlier in his career. Dr. Selikoff joined the Mount Sinai Hospital in 1941, where he established the nation's first hospital division of environmental and occupational medicine and developed clinical programs that cared for thousands of workers impacted by occupational diseases. During the span of a 50-year career until his death in 1992, he taught two generations of physicians, published more than 380 scientific works, and publicized the health risks associated with toxins found in everyday work environments. The symposium covered topics from Dr. Selikoff's role in the current understanding of asbestos and worker's health protection to the state of asbestos and other occupational hazards in the world today. These talks touched upon different perspectives from epidemiological research to perception of disease to health and safety law.

Speakers included: Albert Miller, MD, Director of the Pulmonary Function Laboratory, Albert Einstein College of Medicine; Steven Markowitz, MD, DrPH, Barry Commoner Center for Health and the Environment, Queens College and Graduate Center, City University of New York; David K. Rosner, PhD, MPH, Ronald H. Lauterstein Professor of Sociomedical Sciences and Professor of History, Graduate School of Arts and Sciences, Columbia University Mailman School of Public Health; Paul D. Blanc, MD, MSPH, Professor of Medicine and Endowed Chair, Occupational and Environmental Medicine, University of California San Francisco; Neil T. Leifer, Esq., Neil T Leifer, LLC, Auburndale, MA; and Barry I. Castleman, ScD, Author of *Asbestos: Medical and Legal Aspects.*

In conjunction with the symposium, an exhibit by photographer Earl Dotter titled "Badges: A Memorial Tribute to Asbestos Workers" was on display. This exhibit highlighted workers exposed to asbestos in the mining, manufacturing, and product installation industries.

Photographer Earl Dotter with his exhibit "Badges: A Memorial Tribute to Asbestos Workers"

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Icahn School of Medicine at Mount Sinai
Division of Occupational and Environmental Medicine
One Gustave L. Levy Place, Box 1057
New York, NY 10029

http://icahn.mssm.edu/DOEM

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OCCUPATIONAL HealthWATCH

Safe Patient Handling in New York State

Health care workers continue to face a wide range of occupational hazards, such as needle stick injuries, exposure to blood, disease, and chemicals, workplace violence, and stress. They are at especially high risk for musculoskeletal disorders (MSDs). According to the U.S. Bureau of Labor, the incidence rate for MSDs among health care workers is nearly double of that in private industry. The source of nearly all MSDs is patient handling.[1] Patient handling involves assisting patients with repositioning and moving from one surface to another during the course of their hospital experience. Patient handling is a job that is most often conducted by nurses, aides, support staff, and EMS workers.

In 2014, the New York legislature passed a Safe Patient Handling Law that requires health care facilities to establish safe patient handling programs by January 1, 2017. In response, the Mount Sinai Selikoff Centers for Occupational Health organized a "Solutions in Safe Patient Handling" conference in 2015, bringing together 140 health care professionals from 40 facilities throughout the region to discuss the latest evidence-based research, best practices, and practical solutions from around the country. Safe patient handing experts at the Selikoff Centers continue to provide guidance to safe patient handling committees at different health care facilities seeking to set up their own programs.

Safe patient handling interventions can decrease the rate of injury in workers, as well as improve the quality of care for patients. A comprehensive safe patient handling program promotes a strong culture of safety, identifies risks and hazards, incorporates appropriate patient handling equipment and necessary training, and educates both patients and workers on safety.

[1] *Mount Sinai Selikoff Centers for Occupational Health, NYC and Lower Hudson Valley Occupational Health Needs Assessment, September 2015.*