ERGONOMICS PROGRAM

For Compliance with:
California Code of Regulations,
Title 8 General Industry Safety Orders
Section 5110

OTIS COLLEGE OF ART AND DESIGN

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Purpose

The Ergonomic Program intends to establish compliance with OSHA's Code of Regulations, Title 8 General Industry Safety Orders Section 5110. The primary purpose of this Program is to establish responsibilities and procedures to promote continuous improvement in workplace ergonomic protection and to mitigate the likelihood of workplace musculoskeletal disorders by avoiding ergonomic risk factors. The goal of this program is to address workplace and task factors, while providing training to employees which incorporates information on personal and off work factors to control the incidence of injury. As a result, this Program aims to establish a safe and healthy office environment at Otis College of Art & Design, free from all recognizable hazards.

Ergonomic evaluations shall be performed:

- As a preventative measure to avoid injury
- Upon request of an Otis employee who experienced discomfort or pain because of the workstation set-up; and

Scope

This program applies to all Otis College of Art & Design Staff, faculty, temporary workers, and contracted vendors.

Definitions

Ergonomics: the science that studies the interaction between the worker, the environment, and equipment to maximize safety and productivity while minimizing fatigue.

Cumulative Trauma Disorders (CTDs): CTDs are injuries to the hands, arms, neck or back which occur gradually over time as a result of repeated exertions or awkward postures.

CTDs, including back and repetitive motion upper extremity injuries, are the most frequently occurring types of injuries in the office workplace. The causes of these injures relate to the workplace and task, personal health, and off work factors. Repetitive motion office workplace factors are primarily attributable to **computer video display terminal (VDT)** usage. Computer systems implementation is critical to the professionalism and efficiency of the organization.

Responsibilities

The Program Administrator is the College's designated Safety Officer (Operations Manager) for various tasks related to ergonomics, including:

- Conducting ergonomic evaluations and responding to related requests
- If a task is reported to be associated with a repetitive motion injury (RMI), the Safety Officer will assess the task to determine if the ergonomic risk can be reduced
- The Safety Officer will assess the task to determine if the ergonomic risk can be reduced
- The Safety Officer will also create Ergonomic Evaluation Report that includes any findings, immediate solutions implemented during evaluation, and any recommended equipment for the employee, which is to be ordered by the employee's supervisor or department. The report shall be delivered to both the employee and their supervisor.

In addition, the Safety Officer will provide training on this program upon request or as needed in response to reports of repetitive motion injuries associated with a particular area or task.

Supervisors

Under the Ergonomic Program, supervisors are responsible for several tasks, including:

- Responding to ergonomic evaluation requests or related complaints made by employees.
- They must also implement recommendations based on the ergonomic evaluation and obtain equipment for the employee and workspace as recommended in the assessment report.
- It the Supervisor's responsibility to procure the recommended equipment as specified in the Ergonomic Evaluation report. However, if this is not feasible, they should collaborate with Environmental Health & Safety to identify appropriate alternatives.

Otis College of Art & Design's Environmental Health & Safety Officer is the Operations Manager. You can reach the Operations Manager by phone at ***(310) 846-2609*** *or* via email at ***mahmed@otis.edu.***

Employees

Under the Program, employees are responsible to read and understand the Ergonomics Program received during or after onboarding. Also, employees must apply items from the evaluation report that are applicable to their own workstation.

Requesting an Ergonomic Evaluation

Employees, supervisors, and workers' compensation can all request ergonomic evaluations. If an employee directly makes the request, they should inform their supervisor. The Hierarchy of Controls will be considered during the evaluation process to identify the most effective ways to manage ergonomic risk. This includes, *elimination, substitution, engineering, administrative/ training, PPEs (if applicable).* Lastly, after evaluation a report will be generated and set to both the employee and their supervisor.

Evaluation Process

During the ergonomic evaluation, the Safety Officer will meet the employee at their workplace, where the employee will describe their job duties to the EH & S, officer. The Safety Officer will then complete a questionnaire while interviewing the employee and will assess the employee's workplace to identify any immediate adjustments that can be made, which will be discussed with the employee before any changes are made. Next, the Safety Officer will observe the employee performing their regular job duties to identify further opportunities to manage ergonomic risk, making adjustments as appropriate.

The Safety Officer will then review their recommendations and adjustments with the employee, including any recommended stretches or exercises, and provide training on proper posture and the correct use of office equipment such as chairs and footrests. A report will be sent to both the employee and their supervisor by the Safety Officer.

Training

As part of their on-boarding process, employees shall receive information regarding ergonomics. Additional ergonomics training can be provided on-demand, upon request, or as determined by reports of injuries associated with a particular task.

For any questions related to training and evaluation process please contact the Operations Manager's Office via phone at ***310-846-2609*** or email at ***mahmed@otis.edu***.

Program Evaluation and Review

The program will undergo periodic reviews and updates will be made based on the outcomes of these

reviews.

ERGONOMIC PROGRAM ELEMENTS AND IMPLEMENTATION

Per OSHA recommendations, the Ergonomic Program will include five primary elements.

1. **Work Site Analysis**

    a. Prioritization based on accident and job function analysis

    b. Ergonomics committee formation which is optional for smaller organizations (i.e., Otis College) but valuable for larger locations.

The purpose of conducting a work site analysis is to assess workstations according to established ergonomic design and layout standards outlined in ANSI/HFS 100-1988. Through this evaluation, the goal is to pinpoint ergonomic strains associated with workstations, which may include:

- Repetitive motions
- Maintenance of awkward arm, hand, neck, back, or leg postures
- Forceful exertions
- Frequent pinch grips
- Excessive palm pressure
- Extended reaches
- Wrist or arm rotations
- Frequent bending or twisting motions
- Lighting and glare issues
- Overcrowded conditions
- Noise problems

2. Completion of initial work site evaluations (Phase I)

The program administrator (Safety Officer) will conduct the initial work site analysis. This assessment will focus on identifying the work site furniture and accessory configurations, as well as any associated issues.

3. Completion of individual employee workstation evaluations (Phase II)

In depth analysis of individual workstations will be accomplished by supervisors after appropriate training with an emphasis on proper adjustment for provided furniture and equipment or identification of need for accessory accommodation. Complex problems which cannot be addressed by supervisors will be referred to the Ergonomic Program Administrator for assessment and implementation of corrective action.

4. Self-assessment checklist

Employees will be provided with a self-assessment checklist and postural guide for convenient future referencing. The checklist details good ergonomic workstation and posture criteria.

HAZARD PREVENTION AND CONTROL

Once ergonomic hazards have been identified, prevention and control measures must be developed and implemented. Ergonomic hazards in the workplace can be mitigated by use of effective workstation and task design standards and training.

WORKSTATION DESIGN STANDARDS

Development of short-term plans

Workstation design objectives should be classified into long term and short-term plans. Short term solutions include the proper adjustment of work surfaces and chairs, provision of accessories (lowered or adjustable work surface, palm rests, footrests, hard copy holder, telephone headsets, etc.) as necessary. Individuals with symptoms will receive immediate attention.

Development of long-term plans

Long term plans primarily include the development of purchasing standards. Purchasing standards for

furniture and accessories will assure that good ergonomic criteria are met for future purchases. Furniture and accessories meeting ergonomic criteria (as detailed by ANSI 100- 1988) are not necessarily more expensive and as such this objective is not costly to implement.

As new item selections evolve, they will be evaluated against existing ergonomic design criteria.

Pre-purchase demonstration of new furniture and accessories

New furniture and accessories will be brought in house on a demonstration basis to ascertain that they are complementary to existing configuration and comfortable to use. The labeling of a product as "ergonomically designed" does not guarantee satisfaction and that initial evaluation is important. Various employee groups (including managers, facilities planners, purchasers, and installers) should be polled for their opinion. Products purchased should meet good ergonomic criteria and receive a favorable rating from the employee groups.

Material handling equipment

Material handling needs may be met by the acquisition of appropriate carts and safety step stools or ladders. Once purchased, these items should be inspected on a monthly basis by the area/department supervisor and repaired or replaced if defective.

TASK DESIGN STANDARDS

Task variation

Tasks should be designed with as much variety as possible. When intensive keyboard activity is necessary, an hourly change of task for 5-10 minutes will be built in. This change of task should incorporate the use of other muscle groups.

Minimization of Force

Employees should be encouraged to apply the minimum amount of force necessary to complete a task. Excessive force on the keyboard or other office tools such as staplers or three-hole punchers can injure tendons and nerves.

Stretch Breaks

Frequent short stretch pauses should be recommended to loosen and flex static back, neck, arm, and eye muscles.

TRAINING

Initial Training

All supervisors and employees will be trained in good ergonomic principles as they apply to the job. A management person should be assigned the responsibility of this training. Off working and personal factors will further be covered to encourage recognition of cumulative trauma injuries as a 24 hour a day issue. This training will equip employees with the knowledge necessary to reduce the likelihood of cumulative trauma injuries while maximizing their own comfort.

Facilities management, employees and purchasing agents will receive ergonomics training such that they will have the applied knowledge to incorporate this program into appropriate activities. Furniture and accessory evaluation, selection, and installation will incorporate good ergonomics.

New Employee Training

New employees will receive instruction from their supervisor in "Office Ergonomics" and workstation adjustment at the time of job orientation. This training will be documented in their employee file.

Training Documentation

All training should be documented via employee signature on a training form placed in the employee's personnel file.

Supervisor Enforcement

Supervisors should ensure that employees understand and comply with good ergonomic principles as detailed in the training program. Supervisors should reinforce the benefits of adopting good ergonomics through conversations with employees as determined necessary through observation.

MEDICAL MANAGEMENT

Early Symptom Recognition

Employees will be encouraged to report symptoms of cumulative trauma disorders early to prevent problem incubation. Supervisors should recognize potential cumulative trauma disorders as they arise among employees. Employees who don wrist splints or repeatedly rub or shake hands, neck, or back exhibit signs of potential problems. Employees wearing splints or ace bandages not prescribed by a physician may increase arm or hand stresses through poor selection and fit.

Referral for Medical Attention

If an employee reports symptoms or a supervisor observes a possible issue, the employee will be directed to the human resources manager for a consultation and, if necessary, a recommendation for medical attention. Additionally, the employee's work area will be reassessed for ergonomics and adjusted or improved as needed.

Communication with Injured Employees

To promote positive relationships with employees who are off work due to a workplace injury, their supervisor or human resources manager will make weekly calls to them. The goal of these calls is to emphasize the employee's importance to the team and to inquire about their recovery progress. Maintaining friendly communication is recognized to decrease the likelihood of resentment and prolonged absence or non-return.

Return to Work

When feasible and with approval from the employee's physician, injured employees will be reinstated to work in a meaningful light duty capacity as soon as possible. The treating physician will be informed of any available light duty or alternative assignments.

Upon the injured employee's initial day of returning to work, a meeting will be held with the supervisor and human resources manager to discuss reassignment to the original job or light duty work, as well as any required accommodations. For safety purposes, injured employees will not return to the same work area until an ergonomic assessment has been conducted and any identified hazards have been addressed. Failing to take these precautions could result in further injury

OSHA and Workers' Compensation Record Keeping

First Report of Injury Form

All injured employees must have a First Report of Injury Form completed. When an employee is injured, supervisors will direct them to Human Resources, who will be responsible for filling out the form and forwarding it to the Workers' Compensation insurance carrier. This form must be submitted within 24 hours of the injury being acknowledged.

Work related injuries must be recorded on OSHA 300 log form

As per the Occupational Safety and Health Act, any injuries or illnesses related to work must be documented on the OSHA 300 log. According to OSHA, an injury or illness is deemed work-related when it was either caused by or contributed to by the work environment, or when the workplace aggravated an existing condition to meet OSHA recordkeeping standards.

Many conditions classified as CTDs (Cumulative Trauma Disorders) are recorded on the OSHA 300 log form as

occupational illnesses under the "7f" column, which denotes "disorders associated with repeated trauma." These disorders are caused, aggravated, or triggered by frequent motion, vibration, or pressure.

As per the OSHA Act, all work-related illnesses must be documented, even if the illness is in its early stages. A diagnosis can be made by a physician, registered nurse, or an individual with the necessary training and experience to make such a determination. If the illness is confirmed as work-related, it must be recorded on the OSHA log within six days of detection.

Repetitive Motion Injuries

Repetitive motion injuries are most commonly associated with tendon disorders, particularly in areas where tendons contact bones and ligaments due to repetitive motion and force exertions, often with awkward wrist postures. Pain over the affected tendon area, worsening with movement, is a common symptom, sometimes accompanied by swelling. The healing process can be slow, and the condition may persist or worsen without proper stress relief.

Nerve disorders can occur when nerves are compressed by inflamed tendons, bones, and ligaments, or by sharp tools and surfaces at work. Symptoms typically begin with numbness and tingling but can progress to sharp pain and loss of strength. If left untreated, symptoms can worsen, potentially necessitating surgery. Occasionally, blood vessels may also become trapped, exacerbating the issue.

Common Illnesses Include:

Tendinitis: Tendon inflammation. Without stress relief the tendon may fray or become bumpy and irregular.

Tenosynovitis: Inflammation of the synovial sheath which surrounds the tendon. Excess synovial liquid is produced by and retained within the sheath. Stenosing tenosynovitis occurs when tendon friction results in thickening which inhibits movement.

Trigger Finger: Condition in which the tendon becomes lock in the swollen sheath, resulting in jerky movement. Often related to frequent activation or use of hard tools with sharp edges or triggers.

De Quervain's Disease: Condition arising from friction between wrist and thumb base tendons which causes the sheaths to thicken, restricting movement. Often related to activities involving strong twisting and gripping motions.

Lateral epicondylitis: Inflammation of the finger tendon attachments at the outer side of the elbow. Often related to a forceful movement combining forearm twisting with a bent wrist posture. Also called tennis elbow. Nerve entrapment may occur.

Medial epicondylitis: Same as above with the inflammation occurring on the inside of the elbow. Also called golfer's elbow.

Rotator cuff tendinitis or bursitis: Condition arising from stress on shoulder tendons and bursae which results in

their thickening and restriction of motion. Related to work requiring repetitive elevated elbow and arm positioning.

Carpal tunnel syndrome: Compression of the median nerve from inflamed tendons within the wrist carpal tunnel. Caused or aggravated by tasks involving repetitive motion, force, awkward wrist posture, palm pressure, pinch grips, and wrist rotation.

Thoracic outlet syndrome: Condition in which the blood vessels and nerves become entrapped between the shoulder and upper arm.

Pronator syndrome: Compression of the median nerve under the pronator muscle. Caused by rotation of the forearm to a palms up position.

Cubital tunnel syndrome: Compression of the ulnar nerve at the elbow. Caused by repeated pressure on the elbow.

Back Injuries

The spinal column comprises 33 vertebrae arranged in a vertical column, with discs positioned between each vertebra. These discs are fibrous structures containing a thick liquid substance that acts as a cushion to absorb shock and facilitate the spine's flexible movement

Back pain can be classified as primary or secondary. Primary back pain can result from injury, deterioration, poor posture, or fatigue, and may be exacerbated by work activities such as repetitive lifting, handling of heavy loads, twisting, bending, and over-reaching. Pain associated with primary back pain can be felt at muscle, tendon, ligament, and nerve sites.

Secondary back pain arises when pressure is placed on nerves due to structural misalignment of the spine, such as a herniated or ruptured disc. This can lead to pain that radiates throughout the body, loss of strength, and numbness.

Over a ten-year period, approximately one-third of sedentary workers will experience a primary back pain incident, although only about 10% of them will be accurately diagnosed by their physicians. This disorder develops slowly, and its cause is unknown. Primary back pain usually does not respond well to treatment and may resolve itself within a few days or weeks, but it is likely to recur.

While classified as occupational injuries on the OSHA form 300 log, most back injuries occur over time as a result of cumulative stress. Contributing factors include personal health, job tasks, off-work activities, and posture. Often, the incident that precipitates the injury was just the "straw that broke the camel's back."

Employers used to require pre-employment back x-rays to eliminate individuals prone to back injuries, but this practice is no longer allowed under the Americans with Disabilities Act. Moreover, the value of back x-rays is questionable, as they only detect gross deformities or past surgeries, and research studies have shown no link between performing back x-rays and reducing back injuries.

Causes of CTD

Listed below are currently known and suspected risk factors for CTD in the workplace as well as related preventative measures.

Forearm, hand, or wrist pain arises as a result of tendon inflammation and nerve compression.

Stresses	Possible Solutions
High or low keyboard placement causing bent wrist posture during data entry work. Desktop at 29" – 30" too high for average person accomplishing data entry.	Install adjustable or lowered work surface. Raise chair height. Forearms should be parallel to the floor during data entry work.
Bent wrist posture noted from resting palm on keyboard base during data entry or work surface while using mouse. Arms tired from shoulders supporting upper extremity weight while keying or using mouse.	Provide palm rest to straighten posture. Reevaluate work surface height and posture. Provide forearm support for moderate to heavy mouse use through use of adjustable tray and chair arm or side work surface. Selection of ergonomic mouse.
Steep inclined keyboard angle causing bent wrist.	Adjust keyboard angle legs.
Excessive force used when hitting keys	Adopt lighter touch
Hand and fingers over-extend to reach numeric pad on little finger side and function keys.	Move hand and arm to reach. Avoid bending wrist.
Tight pinch grip on pencil or tools	Adopt lighter grip. Add enlarged grip type holder. Use barrel type open.
Palm pressure from forceful exertion of hand to operate staplers and hole punchers.	Cushion hand contact point or purchase items with cushioning. Adopt lighter touch. Purchase electric device where high use frequency is anticipated.
Center of forearm rests on desk edge or arm twists frequently.	Re-layout or pad desk edge. Reduce twisting motions.
Continuous data entry work	Hourly short-term changes of task or stretch breaks.

Neck and shoulder pain arise from prolonged maintenance of statis posture, particularly in a hunched forward position. Tensed muscles compress blood supply and nerves.

Stresses	Possible Solutions
Monitor too high or low causing neck and head to be awkwardly angles up or down. Forward slumping posture maintained from habit.	Lower monitor height by relocating hard drive. Raise monitor height by placing on a holder, sturdy box or binder. Vision centerline should meet the top of monitor screen or just below. Check and adjust chair height and screen angle. Stretches.
Monitor or hard copy placed at right angle below keyboard.	Re-lay out components such that monitor, keyboard, and hard copy are aligned directly in front of employee.
Neck craning to read hard copy	Acquire hard copy holder and place beside monitor.
Work surface too high	Adjust work surface or chair height such that forearms are parallel to the floor.
Continuous phone use results in bent neck posture	Acquire headsets
Over-reach to grasp work items	Locate work items within easy reach. Re-lay out crowded conditions.

Back pain arises from fatigued and strained muscles holding static or awkward postures as well as over-reaching, bending, twisting, and handling of heavy loads.

Stresses	Possible Solutions
Chair backrest support lacking or unused	Acquisition of lumber support cushion or different chair.
Slumped posture	Adjust work surface, monitor, or chair to straighten posture. Stretches.
Chair too high such that feet are not anchored	Adjust chair height or provide footrest
Pain from carrying loads	Acquisition of transport carts
Pain from over-reaching or over-extending arms	Re-lay out work area. Provide step stool/safety ladders for file and storage areas.
Carrying heavy loads or twisting while lifting	Safe lifting training in applied setting

Eye strain results from long duration visually intense work activities causing fatigue and dryness .

Stresses	Possible Solutions
Continuous data entry causes eye strain	Frequent glances away and long distance to stretch static muscles.
Squinting at screen	Have vision examined. Corrective prescription may be necessary or need to change. Adjust screen sharpness or color. Clean screen.
Employees sits too close or far from screen	Employee may need special VDT focal length prescription.
Contact lens wearers complain of eye dryness	Common low humidity winter problem. May need to apply eye drops or wear glasses.
Glare problems exist	Place mirrors perpendicular to windows. All windows within 20' of monitors should be fitted with blinds. VDT can be moved or screen angle adjusted to minimize glare from lighting.

Leg pain arises from cramped or poor posture due to blood supply and nerves becoming compressed by muscles or furniture.

Stresses	Possible Solutions
Feet do not touch floor and chair seat cuts into leg	Lower chair or provide footrest
Seat plan too short or tilted such that legs hold body on seat	Adjust or change chair
Lack of leg room for computer use	Re-configure the area

Personal Health and Off Work Factors Contributing to CTDs

Certain personal health and experience factors predispose individuals for cumulative trauma disorders. Some of these include:

- Aggressive work methods (too much force)
- Kidney disorders
- Alcoholism
- Oral contraceptive use
- Arthritis
- Pre-existing athletic or motor vehicle injury

- Diabetes and other conditions exhibiting circulatory problems
- Pregnancy
- Hyperthyroidism
- Women during pre-menopausal years (hormonal fluctuations)
- Inexperience (lack of training in best method)
- Small or deformed wrists (bone spurs)

Off work activities and hobbies contain CTD stressors. Some of these include:

- Pinch grips: sewing, needlepoint, knitting, crochet, writing, painting
- Palm pressure: tool use in construction, woodworking, or gardening
- Repetitive motion and bent wrist: guitar and piano playing
- Bent arm posture: sleep position (applicable to 50% of population)
- Combination of stresses: bowling, tennis, golf

This listing does not imply that these activity and hobby factors must be eliminated. When suffering CTD flare ups, individuals are best advised to restrict all stress inducing activities until recovery occurs.

Office Ergonomics Self-Inspection Checklist

Acceptable	**Unacceptable**
☐ Monitor and keyboard aligned in "straight on" position such that twisted posture maintained.	☐ Monitor keyboard at right angles such that twisted will not be maintained.
☐ Neutral wrist posture maintained during data entry. (upper and lower arm at 90-degree angles +/- 10 degrees during data entry).	☐ Neutral wrist posture not maintained during data entry.
☐ Necessary accessories or frequently reached for items located within easy reach. These items include telephone, calculator, dictation equipment, etc.	☐ Hard copy holder at right angles or distance from monitor.
☐ Monitor situated at appropriate height such that centerline of vision meets top of monitor screen.	☐ Monitor too high or low such that bent neck posture maintained.
☐ Monitor placement avoids glare, - Not placed in front of or opposite of window unless adequate blinds. - Positioned such that light sources don't reflect. - Glare screen provided with equipment or non-glare screen provided.	☐ Glare problem exists.

Managing Style

Operator Input

- Seek and act on suggestions on workstation improvements by operators.
- Involve operators in design/redesign process.
- Encourage them to organize and arrange their workstation according to their own needs, but within established company guidelines.

Work Activity Scheduling

- Work/rest schedules should be developed for VDT operators.
- Work schedule should include at least a 15-minute respite from the typing activity from each 2-hour period of continuous VDT work. This does not have to be an official work break, only a break from the typing activity itself.
- Operators should be permitted to take a short discretionary change of task or rest breaks as needed. A short break may last from 1 to 3 minutes. (These breaks and mini breaks are vitally important in alleviating the stresses of VDT work.)

Job Tasks

- Advisable to design jobs so that operators perform a variety of tasks to reduce the buildup of physical and metal stresses of VDT work.
- Non-VDT tasks should be visually less demanding and different in their physical demands on the body from VDT work.

Managing Employees with Symptoms

- Operators with visual or musculoskeletal symptoms should be given consideration by allowing increased discretionary breaks during their recovery.
- Efforts should be made to correct any deficiencies in their workstations and/or to review with them good work practices to minimize physical stresses.

Job Performance Monitoring

- Make sure employees understand how and when their work is being measured and why measurement is necessary
- Give employees access to their records and regular, supportive feedback. Some organizations permit employees to access their records at will through the computer. Others make weekly or monthly totals available. Make sure employees understand how to correct any erroneous records.

- Measure only those items that are essential for meeting organizational goals. For example, if the number of keystrokes per month is the only relevant statistic, do no collect information on the number of breaks.
- Use statistics to spot problems early. Low productivity could indicate need for more training. A sudden drop in productivity could mean a physical or personal problem that a manager could help solve.
- Anticipate individual differences in needs for length and number of breaks of in work speed. Try to establish goals that allow individuals to regulate their workday as much as possible.
- Reward individuals appropriately. Some organizations use incentive pay for work done above a certain level. Others use verbal or promotional awards. But be alert to the occasional employee whose need for such rewards might lead him/her to work for excessive periods without breaks, sitting for long period of time, especially when task is physically repetitious, can cause discomfort or even pain.
- Avoid using statistics to inspire competition. Employees should know how they rate against their goals and against departmental averages. Systems in which individual production scores are circulated or posted on bulletin boards create unnecessary competition and can make employees who are by definition "below average" angry and tense.
- Managers should not "inch up" production standards so that people have to work harder and harder to achieve the same rate of pay. Employees are likely to feel they are working under "sweatshop" conditions.

Vision Examinations

- Operators should have initial vision examinations before or soon after beginning work as a VDT operator.
- Vision exams should be reported every 2 years or sooner if symptoms (such as eye strain, headaches, double vision, or blurring) occurs.
- Vision examinations should be provided by a licensed optometrist or ophthalmologist who is familiar with the visual demands of VDT work.

Basic Office Ergonomics Training Program

- Training should introduce company program, emphasizing the underlying reasons for implementation, and emphasize upper management commitment.
- Program length should run from 60-90 minutes.
- Program includes video or slide presentation as well as live presentation. Inclusion of slides from company location heightens interest.
- Office ergonomics presentation should include the following topics:
    - Good office ergonomics workstation set up principles
        - Work surface height and neutral postures.
        - Chair and monitor positioning and adjustment.
        - Layout issues.

        - Accessory placement, such as palm rests and hard copy holders.
        - Lighting and glare.
        - Noise control.
        - Periodic stretch and change of task benefits.
    - Overview of cumulative trauma stresses and symptoms
    - Potential cumulative trauma effects of VDT work on employee health, safety, and productivity.
    - Early symptom recognition program and reporting chain of command.
    - Information on CTD development contribution of personal health factors and off work activities.
- "Hands on" applied session should be included
- Feedback and ideas should be elicited.
- Program should be repeated every 1-2 years.

New Employees

New employees should be trained I good ergonomic workstation set up and adjustment by the supervisor at the time of job assignment.

Trainer Qualifications

Training should be accomplished by a qualified person who, because of education, training, or experience, has an applied understanding of this topic.

Defining the Problem

Workplace Safety and Wellness programs are important in the prevention of CTD development, but these activities alone are not enough. Once an occupational accident or illness occurs, medical and lost time costs associated with the incident must be contained. Costs can best be controlled by the following:

- Seeking good, prompt medical attention for the employee.
- Using the services of occupational physicians and nurses whenever possible.
- These caregivers are familiar with workplace exposures and will likely provide a more comprehensive and realistic diagnosis. The workers' compensation insurance carrier or third-party administrator should be able to provide physician or clinic suggestions.
- Prompt notification and form submission to the workers' compensation claims carrier or third-party administrator within 24 hours after the injury occurs. Work closely with the claims adjuster.
- Demonstrating concern and interest in the employee and weekly telephone communication to facilitate a good relationship. Lack of communication results in feelings of hostility.
- Return the employee to work as quickly as possible even if this involves a light duty assignment. The college human resource personnel should work with the physician to develop a timeline to return the employee to their former tasks if that is possible.

Steps to Take When a CTD Injury or Illness Occurs

1. Provide good, prompt medical attention preferably with a company selected physician or clinic.
   - In some states the employee has the right to select their own physician. It's important to maintain as good a rapport with the physician as possible.
   - As in the case of carpal tunnel syndrome, condition prognosis should be monitored. Generally, a conservative course of treatment is applied, and surgery utilized as a measure of last resort for severe cases. Some physicians may attempt to rush employees into bilateral (double wrist) surgery when it is not in the best interest.

2. Make sure that you have First Report of Injury Forms on hand such that the forms can be submitted within a 24-hour period following the injury to the insurance company or third-party administrator.

   - Update the insurer with new information as it arises. Complete an OSHA form 200 log entry for the incident.
3. An investigation of the injury should occur, not to assess blame, but to focus on preventative measures to keep it from recurring. This form will be provided to supervisors for completion and reviewed by management. Responsibility for corrective measure implementation will be assigned.
4. Coverage issues may exist in some states which do not consider repetitive motion illnesses as compensable workers' compensation injuries because they did not arise as a result of an accident. Some states consider these illnesses as accidents, some as occupational diseases, and a few not at all. It is sometimes hard to determine a date of injury for a repetitive motion injury, yet that date is crucial because it affects the timely submission of the claim and which salary figure will be used to determine benefits.
5. A light duty alternative should be offered to the physician for the employee in an attempt to return them to work as soon as possible. The physician will decide length of time away from work. It is recommended that a return-to-work date be gained from the physician early on. Where long term lost time is prescribed it may be because the physician is unaware of the potential for light duty assignments and availability of other tasks. The longer an employee is out of work the less likely they are to return to work. A study conducted at Weyerhaeuser determined that there was a 50% likelihood of returning injured employees to work after a six-month absence, 25% after a year, and virtually none after two years. The state of California has adopted an ergonomic standard. A copy of the regulations can be found in the Exhibit at the end of this manual.

Making Return to Work Succeed

1. Light Full-time or part-time light or alternate work duty must not be trivial or artificial, regardless of its duration. The type of work assigned can significantly impact the employee's self-esteem and the department's morale. It is crucial that the work provided is meaningful and beneficial to both the employee and the department.
2. Light or alternate duty tasks should be selected by a supervisor or manager. Tasks for consideration may include:
    - Tasks being done by "overloaded" employees who could now accomplish other pressing tasks.
    - Backlogged tasks with no assignment.
    - Tasks involving the learning of something useful to the department which no one had time to do in the past.
3. Specifically inform the department that these types of assignments exist and are available in an equal opportunity fashion. Further that they are not a result of special treatment. Re- address any hostility that arises from co-workers.
4. The supervisor should monitor the progress as the employee builds up back to the former position. This recovery should not forcibly be hastened at the risk of injuring the employee.
5. An employee out with a job related CTD should not be returned to the same position unless ergonomic changes are made.
6. During the first day back to work after a disability, the employee should meet with the human resources manager and their supervisor to communicate any special needs (rehabilitative soaks, etc.) which the company may not have knowledge of but would certainly wish to facilitate.

Development of Client Purchasing Standards Rationale

Incorporating sound ergonomic design principles into procurement decisions serves as the cornerstone of an effective ergonomics program. Opting for ergonomically appropriate furniture, equipment, and tools can minimize potential risks while optimizing comfort and efficiency. The most extensive implementation of such practices typically arises when a company plans to expand or acquire new furniture or equipment.

Background

The task of making purchasing selections can be assigned to a centralized Purchasing Department. Those who are responsible for making purchasing decisions should receive proper training in applied ergonomics. It is recommended that the department acquire samples of smaller, portable items such as chairs, wrist rests, glare screens, and tools from vendors for testing by individuals in relevant positions. Feedback from such trials should guide purchase decisions. It is important to note that products advertised as being ergonomically designed may not necessarily meet adequate standards or may not be suitable for a specific operation.

Some purchasing decisions makers openly embrace ergonomics while other express resistance. Implementation of

ergonomic principles can help to eliminate endless debate of product selections based on personal preferences.

Implementing product standardization can yield benefits such as volume discounts and streamlined ordering processes. However, resistance may arise from individuals who feel that their past selections are being challenged. The recommended approach is to highlight the advantages of the new ergonomic direction, potential impact of its implementation, and the fact that many companies are facing similar situations.

It is imperative that installers and users receive training to familiarize themselves with the ergonomic changes associated with new products. Failure to do so may result in improper installation or underutilization of the products. Resistance to change is a common human trait, and employees must be made aware of the reasons for the changes and the company's commitment to ergonomic issues. It is recommended that the adjustable features of the products be demonstrated in a "hands-on" manner.

Operational Plan

The various individuals who participate in the appropriate purchasing decisions should be identified and trained. This can only be done after obtaining management commitment to ergonomics. Training should incorporate the benefits of ergonomics and relationship to company goals.

Loss Control support and advice may be necessary for initial or major purchases following initiation of program.

Installers and users should be trained appropriately.

Background on Telecommuting

In a general sense, telecommuting is not a novel concept. Certain occupations have always required employees to work outside their employers' worksites, such as traveling salespeople and outside claims adjusters. With the advent of portable technologies such as laptops and cell phones, workers who are typically office-bound can now conduct business from anywhere, effectively extending their workday to potentially 24 hours.

Currently, telecommuting can be broadly categorized into three forms: working from home, working in a satellite office, and working in a neighborhood work center.

Over the past decade, the telecommuting movement has experienced significant growth, fueled by state and federal air quality regulations aimed at reducing the number of automobiles on the road, corporate downsizing and cost-cutting measures that have made office rentals unaffordable at times, and employees in dual-career households seeking to spend more time with their children. In 1900, four million Americans telecommuted; by 1997, that

number had risen to 11 million, and within the next five years, it is expected that 20 million people will work from home at least part-time. More than half of all large companies currently offer some form of telecommuting, and it is likely that by the end of the decade, virtually all of them will do so.

Early on, and perhaps even now, the most ardent supporters of telecommuting have been employees. For many employees, telecommuting provides a number of deeply appreciated and tax free benefits, including more time with their families, less stress flexibility to accommodate emergency childcare and elderly dependent care, lower personal auto premiums and the opportunity to vie for positions without having to relocate.

Employers are increasingly recognizing the strategic benefits of telecommuting, in addition to the lower real estate costs. This includes reported increases in productivity ranging from 10% to 30%, improved morale and lower health-related costs, reduced absences due to weather and childcare-related issues, the ability to attract highly qualified personnel from anywhere in the world, a more diverse staff, and greater flexibility in disaster recovery efforts. Although research in this field is still in its infancy, early studies suggest that employers can save between $6,000 to $12,000 per year for each employee who telecommutes. Employers support telecommuting because they believe it gives them a competitive edge.

The Law and Telecommuting

The laws surrounding telecommuting are still evolving, as workers compensation laws were originally designed for employees who work on-site where employers have more control. Telecommuting creates a challenge for employers to monitor and manage employee activities. Precedents for telecommuting laws are limited and sometimes contradictory.

However, telecommuters are still protected by federal labor and civil rights laws, including the Fair Labor Standards Act, OSHA regulations, ADA discrimination laws, and FMLA. At the state level, workers compensation laws, job safety laws, and privacy protections also apply to telecommuters.

At the state level, telecommuters are fully protected by workers compensation laws, job safety laws, and privacy safeguards.

Workstation (Home Office or Telecenter) Design/Inspection Guidelines

This guide is intended to help you create, set up, modify, or evaluate your workstation at your alternative worksite. A proper workstation should promote safety, comfort, and enhance your work performance. This guide will introduce you to many of the positive and negative aspects of an office environment. If you have concerns about potential hazards, please contact the Safety and Health Manager at Otis College for assistance. We recommend that you keep

this guide as a reference source.

Working or Walking Surfaces

It is important to ensure that surfaces in the workplace are level and free of tripping, bumping, or slipping hazards. Take note of any torn carpet, electrical or telephone cords in walkways, partition support brackets, wastebaskets, portable heaters, fans, or any other objects placed in walkways. Additionally, be aware of file cabinet drawers and/or bookcase doors that open into an aisle, misarranged furniture, temporary or permanent storage that narrows or obstructs aisles, and doors that open into aisles or narrow halls. These hazards should be addressed promptly to ensure a safe working environment.

Electrical Safety

Electrically powered equipment and appliances pose several safety considerations, primarily related to three hazards: electric shock, burns, and fire.

Grounding: Generally, most homes/buildings are provided with three wire grounded electrical outlets. The owner and/or appropriate officials should check these for correct wiring and adequacy of grounds. You should look for cracked or broken outlets, missing covers which expose the wiring or signs of arcing or burns around the outlet.

The subject of grounding for office type equipment is difficult to cover in this amount of space. As a general rule, if an appliance comes from the manufacturer with a three-prong plug, the ground pin should not be broken off nor should the device be used ungrounded via a two adapters or extension cord. Large appliances such as refrigerators, computers, paper copiers, etc. as well as heating devices such as coffeepots, hot plates, etc. should be grounded. If you have doubts about a particular device, contact Otis College Facilities Management Office.

Electrical Cords: Appliance and equipment cords should be checked for proper connection to the device, frayed or damaged insulation, defective plug, and exposed wires on a regular basis. The use of extension cords in the workplace should be limited and closely controlled. Extension cords are to be used only on a “temporary basis.” If the conditions where they are used calls for “long term use,” then electrical outlets should be moved, added, or otherwise proper corrective action may be necessary.

Try rearranging the furniture or adding additional electrical outlets before using extension cords. When they are used, they should be of the same or larger wire size as the cords being extended and have a compatible connector plug. If an adapter is needed to connect the device to an extension cord, the wrong extension cord is being used.

Electrical Outlets: A major cause of fire is overloaded electrical circuits. This usually occurs through the use of

multiple outlet adapters or extension cords with the multiple outlet connectors. Limit the number of devices connected to any outlet to the number of receptacles provided by the outlet. If additional outlets are needed, a qualified electrician should properly install them.

Electrical Equipment

There is not too much you can inspect on electrical equipment without some special training and testing equipment. You can, however, determine that it is properly connected with a cord which is in good condition, that the device is not generating excessive heat, and that it is operating as intended. After looking it over, ask someone about the equipment.

Does it operate OK? Does it give you a mild electrical shock, etc.?

Fire Protection & Suppression

Fire protection and suppression systems come in various forms, including fire extinguishers, alarm systems, fire hoses and standpipe systems, smoke detectors, sprinkler systems, and heat detectors. It is essential that all of these systems are properly maintained and kept in good working condition to ensure safety.

Fire Alarm Systems: Typically, buildings that are one story or higher are required to have an approved fire alarm/notification system in place. These systems vary in complexity, ranging from simple to elaborate. A basic system, which is commonly found in many workplace buildings, includes an enunciator panel that indicates if the system is functioning properly and identifies the location of wall-mounted pull stations and other alarm devices, such as bells, horns, sirens, and lights.

There are various ways in which a fire alarm system can be triggered, such as through the use of pull stations or smoke and heat detectors. It's important for telecommuters to know how to activate the fire alarm system in the homes or buildings where they work.

Fire alarm system questions that should be asked periodically include:

- Is the system working properly?
- Can the alarm be heard and/or seen by all of the building's occupants?
- Is the alarm tested and inspected regularly?
- Does the alarm notify the local fire and/or police department or a local alarm monitoring company?
- Are all of the building occupants familiar with how the system works and sounds?
- Is there sufficient number of activation devices>
- Do the activation devices work?

- Are the activation devices easily identifiable?

Fire Extinguishers: Are there enough proper types of fire extinguishers and are they properly positioned? Fire extinguishers should be permanently. The location of fire extinguishers must be clearly marked. If the view of an extinguisher is obstructed by partitions, furniture, corners, etc., then a directional arrow fire extinguisher location sign is needed. The access to a fire extinguisher should not exceed 75 feet.

It is necessary to regularly check and inspect all fire extinguishers, with an annual inspection being mandatory. Each extinguisher must have a tag indicating the inspection date, and they should undergo hydrostatic testing everyone to twelve years, which can be identified through a metal tag or decal displaying the last test date.

If the extinguisher is equipped with a gauge, verify that it is "full" by ensuring that the arrow/needle on the gauge points straight up. Additionally, inspect the hose and discharge nozzle for any signs of damage, and ensure that the handle locking pin or wire is intact. If it is not, the extinguisher may have been used and requires refilling.

In the case of any damage to the extinguisher, including surface damage such as dents, or if it has been discharged or tampered with, it must be re-examined by a qualified individual.

Sprinkler Systems: In certain premises, there may be automatic sprinkler protection installed. If your alternative workplace has this feature, it is crucial to inspect the sprinkler heads to ensure that they have not been painted. Painting the sprinkler head can obstruct its functionality and prevent it from working correctly. Furthermore, it is important to limit storage below and around sprinkler heads to a minimum of 18 inches in any direction to allow enough clearance for the water spray. It is strictly prohibited to attach or suspend anything from the sprinkler head. Ideally, the sprinkler system should be linked to the building's fire alarm system so that as soon as a sprinkler head is activated, the appropriate authorities can be notified immediately.

Storage: Prohibit storing items on tall furniture or cabinets to prevent injuries to employees and falling objects. Limit storage to designated areas and maintain a minimum clearance of 18 inches from the ceiling, light fixtures, and electrical equipment. Maintain clearance between stored items and sprinkler heads, and store heavy items on lower shelves. Keep a ladder or approved step stool on hand to safely reach high places.

Heaters: When using portable heaters, take precautions to prevent accidents. Ensure the heating element is guarded against contact, placed away from furniture or other flammable objects, and equipped with a tip-over switch to shut off power if knocked over. Avoid using kerosene heaters in the work area.

Coffee Pots or Similar Items

To avoid fire hazards, keep coffeepots and similar items on noncombustible surfaces away from normal walk areas. Do not place them in unobservable areas like storerooms or closets, as they could smolder and start a fire unnoticed. Turn off all electrical equipment at the end of the day to prevent electrical short-circuits. It is best to avoid using immersion-type water heaters for coffee or teacups.

Radiators

If your work area has radiators instead of modern forced air systems, do not place combustibles or flammable items near them. Also, make sure electrical cords are not draped across them.

Workstations

When designing a workstation consisting of a work surface, chair, VDT equipment, and related items, individual body size should be considered. The chair, work surface height, and access to elements, including the video display section, should be adjusted accordingly. A height-adjustable work surface is preferable, and a good VDT workstation should have adjustable features. To prevent strains and other injuries, sit straight with your neck vertical, and keep your computer screen at arm's length and slightly below eye level. Use pads or devices to support your wrists and keep your arms and wrists straight while using the keyboard.

Video Display Terminals (Monitors)

VDTs or monitors display information on a TV-like screen and their increasing use has raised concerns about potential health effects. Complaints range from excessive fatigue and eyestrain to headaches, stress, and pain in the neck, back, arms, or muscles. Additional concerns include physical discomfort, cumulative disorders, and possible radiation exposure.

Improper lighting, screen glare, poor screen or copy material positioning can cause visual symptoms. To reduce eyestrain, VDT operators can take breaks, do eye exercises, switch tasks or adjust screen brightness. VDT operators are also at risk of developing musculoskeletal and nerve disorders like Carpal Tunnel Syndrome (CTS), caused by repetitive hand movement. CTS can be reduced by limiting VDT activity, maintaining proper posture, and surgery as a last resort.

Desk: The height of the work surface should be comfortable for typical uses (computer work, writing, or reading). Conventional desk surfaces are usually about 29 inches high, which is adequate for many tasks. The height recommended for computing surfaces is approximately 26 inches.

Chair: The chair is probably the most important piece of furniture in your workstation. The seat should be adjustable, and the height (measured from the floor) of the top surface of the seat should be 15 to 21 inches. The

backrest should be adjustable (height and angle) and should provide support for the telecommuter's lower back. Armrest should be substantial enough to provide support, but not so large as to be in the way.

Lighting: The lighting in your workstation can affect comfort, visibility, and performance. Whether you're using natural daylight or artificial lighting, it should be directed toward the side or behind your line of vision, not in front or above it. Bright light sources can bounce off working surfaces and diminish your sense of contrast. Northern daylight is the best light your workstation and for operating a computer

Noise: Depending on your personality and work style, noisy or totally noise-free environments can be distracting and stressful. Some background sound such as music can be beneficial in maintaining a level of productivity and reducing boredom.

EXHIBIT A – CALIFORNIA ERGONOMICS REGULATION

General Industry Safety Orders

Group 15. Occupational Noise

Article 106. Ergonomics

Repetitive Motion Injuries

(a) Scope and application. This section shall apply to a job, process, or operation where a repetitive motion injury (RMI) has occurred to more than one employee under the following conditions:

(1) Work related causation. The repetitive motion injuries (RMIs) were predominantly caused (i.e. 50% or more) by a repetitive job, process, or operation;

(2) Relationship between RMIs at the workplace. The employees incurring the RMIs were performing a job, process, or operation of identical work activity. Identical work activity means that the employees were performing the same repetitive motion task, such as but not limited to word processing, assembly, or loading.

(3) Medical requirements. The RMIs were musculoskeletal injuries that a licensed physician objectively identified and diagnosed; and

(4) Time requirements. The RMIs were reported by the employees to the employer in the last 12 months but not before July 3, 1997.

(b) Program designated to minimize RMIs. Every employer subject to this section shall establish and implement a program designed to minimize RMIs. The program shall include a worksite evaluation, control of exposures which have caused RMIs and training of employees.

(1) Worksite evaluation. Each job, process, or operation of identical work activity covered by this section or a representative number of such jobs, processes, or operations of identical work activities shall be evaluated for exposures which have caused RMIs.

(2) Control of exposures which have caused RMIs. Any exposures that caused RMIs shall, in a

timely manner, be corrected or if not capable of being corrected have the exposures minimized to the extent feasible. The employer shall consider engineering controls, such as work station redesign, adjustable fixtures or tool redesign, and administrative controls, such as job rotation, work pacing or work breaks.

(3) Training. Employees shall be provided training that includes an explanation of:

(A) The employer's program;

(B) The exposures which have been associated with RMIs;

(C) The symptoms and consequences of injuries caused by repetitive motion;

(D) The importance of reporting symptoms and injuries to the employer; and

(E) Methods used by the employer to minimize RMIs.

(c) Satisfaction of an employer's obligation. Measures implemented by an employer under subsection (b)(1), (b)(2), or (b)(3) shall satisfy the employer's obligation under that respective subsection, unless it is shown that a measure known to but not taken by the employer is substantially certain to cause a greater reduction in such injuries and that this alternative measure would not impose additional unreasonable costs.

Note: Authority cited: Sections 142.3 and 6357, Labor Code. Reference: Sections 142.3 and 6357, Labor Code; and Pulaski v. Occupational Safety & Health Stds. Bd. (1999) 75 Cal.App.4th 1315 [90 Cal. Rptr. 2d 54].

Source: https://www.dir.ca.gov/title8/5110.html

Appendix A: Otis College of Art & Design, Workstation Evaluation Report

Name:	**Title:**	**Phone No:**
		Ext:
Dept:	**Location:**	**Email:**
Supervisor:	**Work Schedule:**	**WC Claim/Injury: ☐Yes ☐ No**
Average daily PC use:		
Discomfort reported: ☐Neck ☐Back ☐R/L Shoulder ☐R/L Elbow/Forearm ☐ R/L Wrist/Hand		
Other:		
Subjective Pain Scale: ☐ No Pain ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ Extreme Pain		
Dominant Hand: ☐ Right ☐ Left	**Vision: ☐ Normal ☐ Contacts ☐ Glasses ☐ Progressive**	

A proper workstation combines good worker posture with an appropriately arranged work area. Employees are evaluated at their workstations to ensure appropriate adjustments, reducing the risk of developing a repetitive motion injury (RMI). The BRIEF Survey (Baseline Risk Identification of Ergonomic Factors) is used to evaluate potential ergonomic risk factors for employees. The identified risk factors are assessed based on the degree of posture deviation, force, duration, and frequency.

Evaluator: **Evaluate Date:**

Monitor ☐ N/A	YES	NO	CHANGES MADE & SUGGESTIONS
Monitor directly in-front of user?	☐	☐	☐ Reposition monitor directly in-front of worker.
Viewing distance arm's length away?	☐	☐	☐ Reposition to appropriate distance (18" – 30")
Top of screen slightly below eye level?	☐	☐	Monitor: ☐ Lowered ☐ Raised
Screen free of glare or reflections?	☐	☐	Adjusted:☐ Tilt ☐ Position ☐ Lighting
TELEPHONE	YES	NO	CHANGES MADE & SUGGESTIONS
Phone is used in a neutral position?	☐	☐	☐ Avoid cradling phone ☐ Headset/Speaker phone
Is phone used independent of computer use?	☐	☐	☐ Avoid cradling phone ☐ Headset/Speaker phone
Phone within easy reach?	☐	☐	☐ Phone positioned closer ☐ Phone angle/ elevated
KEYBOARD/MOUSE	YES	NO	CHANGES MADE & SUGGESTIONS
At elbow height and neutral wrist position?	☐	☐	Keyboard: ☐ Raised ☐ Lowered
Wrists straight and level?	☐	☐	☐ Keyboard adjusted ☐ Require an alternative keyboard
No deviation or contact pressure			☐ Mouse adjusted ☐ Require an alternative mouse

Keyboards centered, and within easy reach?	☐	☐	☐ Keyboard repositioned within easy reach
Mouse within easy reach?	☐	☐	☐ Mouse repositioned within easy reach
CHAIR	YES	NO	CHANGES MADE & SUGGESTIONS
Feet flat on floor with knees = or below hips?	☐	☐	Chair height:☐ Increased ☐ Decreased
Back supported/ shoulders relaxed?	☐	☐	Adjusted: ☐ Chair back rest ☐ Chair arms
Seat depth/width OK?	☐	☐	Adjusted: ☐ Seat depth ☐ Arm width
WORKSTATION	YES	NO	CHANGES MADE & SUGGESTIONS
Materials positioned within close reach?	☐	☐	☐ Files, notebooks, etc. repositioned
Leg clearance OK?	☐	☐	☐ Boxes, equipment, repositioned ☐ Chair moved
Lighting OK?	☐	☐	☐ Screen repositioned ☐ Lighting adjusted
Documents positioned properly?	☐	☐	☐ Repositioned to reduce bending/turning of neck

WORK TECHNIQUES/ POSTURE	**YES**	**NO**	**INSTRUCTED IN WORK HABIT/POSTURE CHANGES**
Avoids awkward postures?	☐	☐	☐ Sit against chair back ☐ Avoid twisting
Avoids prolonged static postures?	☐	☐	☐ Change positions frequently ☐ Alternate tasks
Avoids excessive forward reaching?	☐	☐	☐ Reposition most commonly used materials
Avoids awkward wrist/ thump/ finger positions?	☐	☐	☐ Maintain a neutral wrist position when keying
Avoids compression wrists/forearms ?	☐	☐	☐ Avoid leaning on sharp edges or hard surfaces
Avoids excessive force when writing/keying?	☐	☐	☐ Reduce force when keying/writing
Avoids repetitive motions?	☐	☐	☐ Take breaks ☐ Alternate tasks
Avoids eyestrain?	☐	☐	☐ Take a vision break every 20 minutes.

Suggestions

Position monitor at proper eye level directly in front of the user at proper distance	☐
Avoid cradling phone and use headset or speaker.	☐
Position keyboard and mouse at the same level, directly in front of user and at proper distance.	☐
Apply padding to the sharp edge/hard surface to reduce contact pressure	☐
Avoid resting wrists while typing and using mouse, keep wrists straight and use full arm movements	☐
Mouse with full arm movements	☐
Position documents directly in line of monitor when inputting data	☐
Obtain a task chair to reduce strain to back, shoulders and neck.	☐
Alternate leg positioning to increase circulation	☐

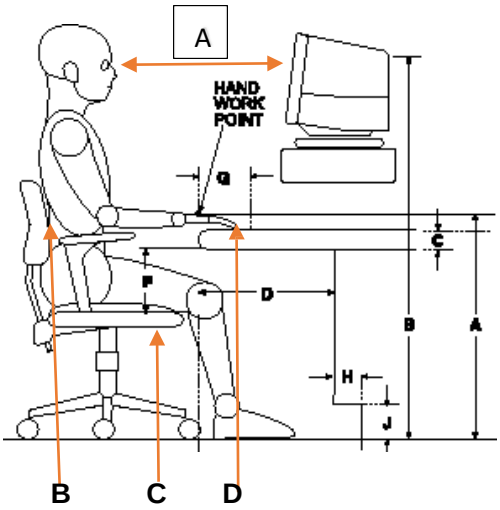
Take micro breaks and vision breaks (every half hour) to reduce stress on the body. ☐

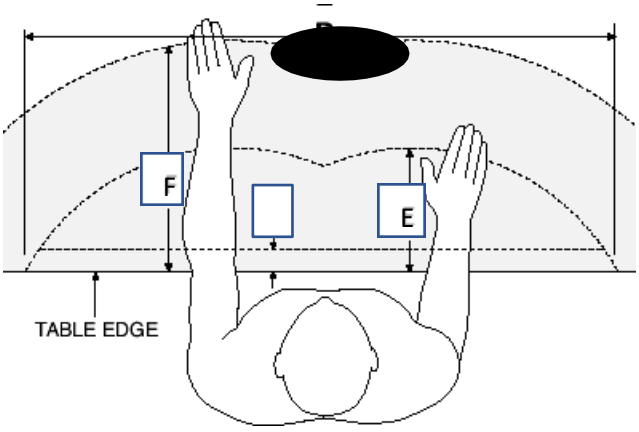
Comments:

APPENDIX B: OFFICE ERGONOMICS

What is Ergonomics?

- Ergonomic generally can be thought of as “fitting the job to the worker.”
- Combines scientific disciplines to match worker capabilities to the task demands.





Workplace Risk Factors

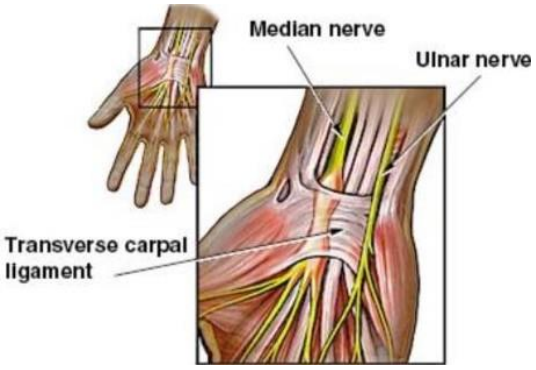
Eye strain	Extended reaching	Restricted clearance
Repetitive motions	Improper lifting	Inadequate seating
Awkward postures	Inappropriate tools	Improper posture
Twisting/bending	Direct contact stress	Physical condition

What are MSDs?

Musculoskeletal Disorders injuries place excessive strain on muscles, tendons, nerves, and intervertebral disks.

MSDs Symptoms

Dull, aching sensation, discomfort with movements, tenderness to the touch, loss of grip/strength, burning sensation, pain, tingling, cramping, stiffness.



Common MSDs

Tendonitis – "Tennis elbow"/ Rotator Cuff

Tenosynovitis

Back Disorders

- Sprains & strains
- Ruptured/slipped disks

Appendix C – Controlling Risk Factors, Recommended Office Stretches & Exercises

Administrative Controls

- Job Rotation
- Training
- Stretch breaks
- Exercise

Stretch Breaks

Eye exercises

Musculoskeletal exercises – upper and lower body

Eye Exercises

- Blinking/Yawning – produces tears to help moisten and lubricate the eyes.
- Expose the eyes to natural light
- Occasionally focus on object at least 20 feet away
- Palming
- Eye movements
- Focus change

Palming

- While seated, brace elbows on the desk and close the desk edge
- Let weight fall forward
- Cup hands over eyes
- Close eyes
- Inhale slowly through nose and hold for 4 seconds
- Continue breathing for 15-20 seconds

Eye Movements

- Close eyes
- Slowly and gently move eyes up to the ceiling, then slowly down to the floor
- Repeat 3 times
- Close eyes
- Slowly and gently move eyes to the left, then slowly to the right
- Repeat 3 times

Focus Change

- Hold one finger a few inches away from the eye
- Focus on the finger
- Slowly move the finger away
- Focus far into the distance and then back to the finger
- Slowly bring the finger back to within a few inches of the eye
- Repeat 3 times

Upper Body Stretches

- Deep breathing
- Cable stretch
- Side bend: Neck stretch
- Diagonal: Neck stretch
- Shoulder shrug
- Executive stretch
- Arm stretch to front
- Handshake
- Hand massage (note performed very gently)
- Finger massage (note performed very gently)
- Wrist stretch

Cable Stretch

- While sitting with your chin in, shoulders relaxed, hands relaxed in lap, and feet flat on the floor, image a cable pulling the head upward.
- Hold for 3 seconds and relax
- Repeat 3 times

Sideband: Neck Stretch

- Tilt head to one side (ear towards shoulder)
- Hold for 15 seconds
- Relax
- Repeat 3 times on each side

Diagonal: Neck Stretch

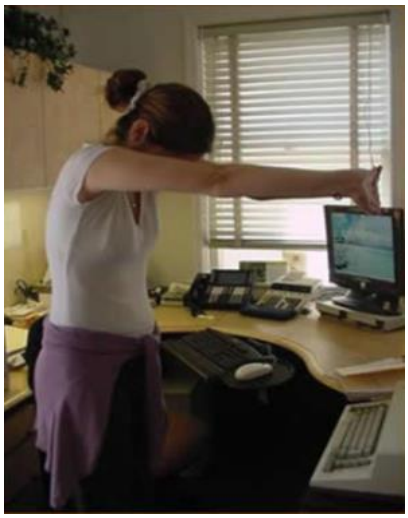
- Turn head slightly and then look down as if looking in your pocket
- Hold for 15 seconds
- Relax
- Repeat 3 times on each side

Shoulder Shrug

- Slowly bring shoulders up to the ear and hold for approximately 3 seconds
- Rotate shoulder back and down
- Repeat 10 times

Executive Stretch

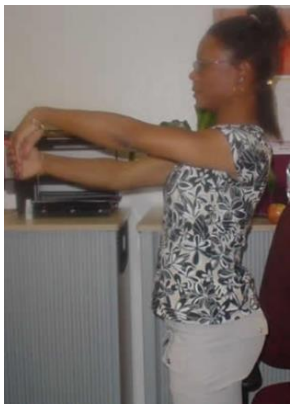
- While sitting, lock hands behind head
- Bring elbows back as far as possible
- Inhale deeply while leaning back and stretching
- Hold for 20 seconds
- Exhale and relax, Repeat



Upper Body Stretch

Handshake

- While sitting, drop arms to the side
- Shake hands downward gently
- Repeat frequently



Wrist Stretch

- Hold arm straight out in front of you
- Pull the hand backwards with the other hand, then pull downward
- Hold for 20 seconds
- Relax

- Repeat 3 times each

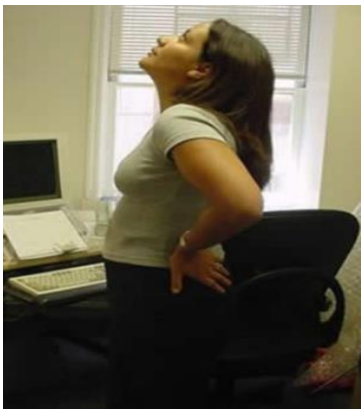
Hand Massage

- Massage the inside and outside of the hand using the thumb and fingers
- Repeat frequently (including before beginning work)

Finger Massage

- Massage fingers of each hand individually, slowly, and gently
- Move toward nail gently
- Massage space between fingers
- Perform daily

Lower Body Stretches



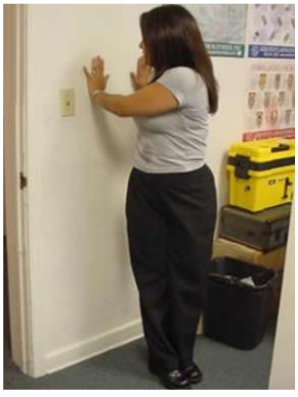
- Back twist
- Trunk rotator
- Lean back (lower back stretch)
- Leg extension
- Hip flexion

Back Twist

- Sit upright in chair and place left arm behind left hip. Twist to the left and hold repeating on the other side.

Trunk Rotator

- Stand with feet together and back to the wall. Stand slightly less than one arms distance from the wall.
- Twist your trunk to the right, while not moving your feet, so that you can place both of your hands on the wall behind you.
- Hold for 5 seconds
- Repeat twisting to the left



Leg Extension

- Sit in chair, abs in
- Extend left leg until level with hip
- Hold for 2 seconds and repeat other side

Hip Flexion

- Sitting in chair, life left foot off the floor a few inches with knee bent.
- Hold 2 seconds and repeat other side.

EXERCISES

Front Raise

- Sit in chair, abs in and space straight
- Hold water bottle in right hand and raise arm up to shoulder level
- Hold 2 seconds and repeat other side

Overheard Press

- Hold water bottle in right hand elbow bent, and extend arm overhead
- Repeat other side

Bicep Curl

- Hold water bottle in right hand and with abs in and spine straight, curl bottle towards shoulder

Abs

- Sit on the edge of chair, arms extending in front
- Keeping back straight, contact the abs and slowly lower torso towards back of chair
- Hold 2-3 seconds and repeat

Curls

- Cross arms over chest and sit up straight
- Contact abs and curl shoulder towards hips, pulling abs in
- Hold for 2 seconds and repeat

Inner Thigh

- Place full water bottle between knees, and keeping abs in, squeeze bottle gently.

Chair Squat

- Periodically while sitting, lift butt off the seat and hover over chair for 2-3 seconds.
- Stand up slowly and repeat

Dips

- Make sure chair is stable and place hands next to hips
- Move hips in front of chair and bend elbows
- Lowering body until elbows are at 90 degrees. Repeat.

Standing Hip Flexion

- Stand with abs in, spine straight
- Lift leg up until level with hip
- Hold for 2 seconds, repeat other side

Leg Lift

- In a same starting position as above, left leg straight out to the side a few inches off the floor
- Hold for 2 seconds, repeat on the other side

Summary

Workplace risk factors

MSDs

Administrative Controls

- **Job rotation**
- **Training**
- **Stretch breaks**
- **Exercise**