Risk Management & Insurance

Ergonomics Program

Ergonomics Handbook
ENVIRONMENTAL HEALTH SERVICES
RISK MANAGEMENT & INSURANCE
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MISSION:
"Environmental Health Services is a professional multidisciplinary team. We promote environmental, occupational health, and safety services through education, consultation, monitoring and planning in response to present and future needs of CSU. To support the State Board of Agriculture policies, we will foster the partnership among the university, the community, and government entities."

SERVICES:
- Bio Safety
- Radiation Control
- Health & Safety
- Workers’ Compensation
- Ergonomics
- Hazardous Waste
- Loss Control
- Public Health
WHAT IS ERGONOMICS?
According to Occupational Safety and Health Administration (OSHA), ergonomics is the study of work. More specifically, it is the science of designing the job to fit the worker, instead of physically forcing the worker to fit the job.

This is achieved through workstation and job site evaluations. Adjusting tasks, tools, and office equipment to better fit the worker can prevent injuries such as MSDs and reduce stress on the body.

WHAT ARE MSDs?:
Musculoskeletal Disorders, or MSD’s, are one of the most common types of injury resulting from work-related stress. They may also be known by other names such as Repetitive Stress Injuries (RSI) or Cumulative Trauma Disorders (CTD). MSDs are injuries in the muscles, tendons, and other tissues in specific parts of the body. They often occur as a result of:

- Repeated movements throughout the day
- Sitting/standing in a stationary position for a long period of time
- Lifting heavy/awkward items
- Using excessive force
- Being exposed to excessive vibration
WHY DO WE USE ERGONOMICS?
To reduce the physical stress of the working environment
To increase the safety and comfort of the employee
To increase productivity
To prevent work-related injuries

WHO NEEDS ERGONOMICS?
Ergonomic principles can be applied to just about anyone anywhere. Those who are especially at risk are:

- Frequent computer users
- Manufacturing and data entry workers
- Programmers
- Secretarial workers
- Painters
- Carpenters
- Construction and Custodial workers

These jobs require a lot of repetitive movement and/or putting the body in awkward and stressful positions. All of which cause a tremendous amount of stress on the body that should be avoided.
Ergonomics in the workplace is necessary in preventing repetitive motion injuries. It is also important to keep employees safe, comfortable, and productive throughout the workday. Ergonomic evaluations of work station areas are available free of charge to all CSU employees. Sessions are conducted on a one-on-one basis as well as in a presentation format for departments and offices.

**HOW DO I OBTAIN INFORMATION ABOUT ERGONIMCS?**

Ergonomic information on campus is available free of charge to all CSU employees. You may set-up an appointment for an ergonomic evaluation of your workstation/job site by contacting the Environmental Health Services Department at 491-6745. We are also happy to answer any related questions you might have—just give us a call.

**WHAT WILL OCCUR IF I SIGN UP FOR A WORK STATION EVALUATION?**

1. **Make an appointment**
   
   Call 1-6745 to schedule an appointment.

2. **Fill out workstation checklist**
   
   After you make an appointment with an ergonomic specialist you will receive a workstation checklist (currently via email). This checklist is to be completed by you before your appointment. It asks questions about your current working environment and any pain that you are currently experiencing. The ergonomic specialist will use this checklist to evaluate the conditions you are working in.
3. **Appointment with the Specialist**  
Through reference of your completed checklist and observation of you working in your work environment, suggestions and/or changes will be made if needed to improve both comfort and productivity. Some changes will be made immediately, while others may require obtaining new office equipment.

4. **Loaning of Ergonomic Equipment**  
Many times after assessing a workstation, new office equipment is needed in order to make the workstation more comfortable for the worker. If this is the case, EHS has an ergonomic loan closet with ergonomic equipment. We loan out specific equipment to those who need it on a temporary basis. Employees are able to use this equipment and are also provided with pricing information if they decide to order the product.

5. **Ergonomic Evaluation Write-up**  
As a result of your ergonomic evaluation you will receive a detailed write-up that will include; what was discussed, what changes/recommendations were made and a list of what, if any, equipment you have on loan. Attached to the write-up will be office stretching exercises that you can do at your workstation and a list of 25 ergonomic tips to remind you of the correct ergonomic principles that were discussed during your evaluation.
EXACTLY WHAT IS EVALUATED DURING A WORKSTATION EVALUATION?

There are certain factors that are commonly evaluated during an evaluation, although everyone is different and therefore everyone has different needs at their specific workstation. This being said, some factors are more closely evaluated than others depending on which symptoms the employee is experiencing.

COMMON FACTORS EVALUATED

- Eye Discomfort
- Lighting/Glare
- Chair
- Body Positioning
- Keyboard/Mouse
- Computer Monitor
- Copy Holders
- Wrist Rests
- Computer Area Arrangement
- Telephone Usage
WHAT IS THE CORRECT WAY TO SET UP MY COMPUTER WORKSTATION EQUIPMENT?
As mentioned earlier, everyone has different needs, but the following recommendations are the most common. By applying these suggestions, the body should be in a more relaxed, comfortable, and neutral posture. A neutral position allows proper blood flow throughout the body, decreasing possibility of developing injuries such as MSDs.

POSTURE:

✓ Head should be in an upright position when viewing computer screen
✓ Shoulders should be in a relaxed position when hands are placed on the keyboard
✓ Arms should be close by your side, and in a comfortable position when using your mouse
✓ Elbows should have a 90-100 degree angle when both typing and mousing

KEYBOARD/MOUSE:

✓ Home row keys should be positioned directly in the center of your trunk
✓ Keyboard height and slope should be easily adjustable
✓ Mouse should be within close reach and at the same level as your keyboard
✓ The legs on the back of your keyboard should be down
CHAIR:

✓ Height of the chair should be adjusted so your feet are positioned flat on the floor or on a footrest
✓ Hips should be as far back in the chair as possible so your back is touching the chair back
✓ Knees should be at right angles and thighs should be horizontal to the floor
✓ Your chair should provide support for the lower lumbar curve of the back
✓ The front edge of the seat should be about 2-4” from the back of your knees
✓ Arm rests should allow your arms to rest comfortably

MONITOR:

✓ The top of the computer viewing screen should be slightly below eye level
✓ The monitor should be at a slight angle ~ 35 degrees, so you can view it without raising or lowering your chin
✓ You should be sitting directly in front of your computer screen
✓ The monitor should be approximately an arm’s length reach away from you (18-30 inches)
✓ Any source documents should be placed on a stand in between your monitor and keyboard, or at eye level to the side of the monitor
LIGHTING:

- There should be sufficient light for you to complete reading tasks without straining your eyes
- Avoid glare from windows and light on the monitor screen by making sure monitor is at a 90-degree angle to the problematic light source

WORK TECHNIQUES:

- Keep fingers and wrists in a neutral or straight alignment while typing
- Avoid wrists that are bent to either side or bent up or down
- Hit the keyboard keys with as light a force as possible
- Avoid grasping the mouse in your hand- hold it loosely with fingers relaxed
- Take brief 1-2 minute breaks intermittently throughout the day
- Do not cradle the telephone between your neck and ear when talking or listening to others
HOW CAN I SET UP MY OWN WORKSTATION TO BE MORE ERGONOMICALLY FRIENDLY?

- The idea behind ergonomics is to make the work adjust to the worker instead of making the worker adjust to the demands of the work. By applying an ergonomic approach to setting up your workstation you can achieve more neutral positioning in all areas of your body. This will provide adequate blood flow throughout the body, increasing comfort and productivity.

- Look through the following WORKSTATION CHECK LIST and set up your workstation accordingly. When you are finished, the answer to all of the questions should be “YES”.

**POSTURE**

Is your head in an upright position when you view documents or your computer screen?  

Are your shoulders in a relaxed position when you place your hands on the keyboard?  

Are your arms close by your sides in a relaxed and comfortable position when you use the keyboard or pointer?  

Are your elbows bent at a 90-100 degree angle when you use the keyboard or mouse?  

**KEYBOARD/POINTING DEVICE**

Are the home row keys on your keyboard positioned directly in center front of your trunk?  

Are the keyboard height and slope both easily adjusted?  

Is your pointing device within close reach?
And at the same level as your keyboard?  
Do you have an ergonomic contoured keyboard?  
Are the legs on the back of your keyboard down?  
If applicable, are the legs on the front of your keyboard up?  

**CHAIR**  
Is the height of your chair adjusted so that your feet are positioned flat on the floor or on a footrest?  
Are your hips as far back in the chair as possible so that your back is touching the chair back?  
Are your knees bent at right angles?  
Are your thighs horizontal to the floor?  
Does the chair support the lower lumbar curve of the back?  
Is the chair backrest height adjusted to provide maximum support for your back?  
Does the chair have a seat pan depth so the front edge of seat is about 2 - 4" from the backs of knees?  
If you have armrests, do they allow you to rest your arms comfortably?  

**MONITOR**  
Is the top of the screen slightly below eye level?
<table>
<thead>
<tr>
<th>YES NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your computer screen at a proper tilt and height to allow you to view it without raising or lowering your chin? [ ] [ ]</td>
</tr>
<tr>
<td>Do you wear bifocals or trifocals? [ ] [ ]</td>
</tr>
<tr>
<td>Are you sitting directly in front of your computer screen? [ ] [ ]</td>
</tr>
<tr>
<td>Is the computer screen at approximately arm’s length reach away from you (18-30 inches)? [ ] [ ]</td>
</tr>
<tr>
<td>Are your source documents positioned on a stand placed between the monitor and keyboard or at eye level and to the side of your monitor? [ ] [ ]</td>
</tr>
<tr>
<td>LIGHTING</td>
</tr>
<tr>
<td>Is there sufficient light for you to complete reading tasks without straining your eyes? [ ] [ ]</td>
</tr>
<tr>
<td>Is there sufficient lighting without glare on the screen from windows, lights, and surfaces? [ ] [ ]</td>
</tr>
<tr>
<td>WORK TECHNIQUES</td>
</tr>
<tr>
<td>Are fingers and wrists in a neutral or straight alignment when typing (not turning side to side or going up and down)? [ ] [ ]</td>
</tr>
<tr>
<td>Are you hitting the keyboard keys with as light a force as possible when keying? [ ] [ ]</td>
</tr>
<tr>
<td>Are you holding the mouse loosely with your hand and fingers in a relaxed position when moving the pointer around the screen? [ ] [ ]</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Are you avoiding awkward postures such as an extended finger or thumb when keying or using the pointer?</td>
</tr>
<tr>
<td>Do you take a brief 1-2 minute break from keying or mousing every 30-45 minutes?</td>
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<tr>
<td>Do you take stretch breaks intermittently throughout the day?</td>
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<tr>
<td>Do you avoid cradling the telephone between your head and shoulder when talking or listening to others?</td>
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<tr>
<td>Do you know how to adjust your chair, keyboard tray and other workstation accessories?</td>
</tr>
<tr>
<td>Are you aware of how to report ergonomic problems and obtain help for information on ergonomics?</td>
</tr>
</tbody>
</table>

**IF YOU HAVE ANY QUESTIONS OR COMMENTS PLEASE CONTACT:**

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Hands and Wrists (1)

- Place your hands palm-to-palm in front of you
- Move hands downward, keeping your palms together, until you feel a mild stretch
- Keep elbows up and even and hold 5-8 seconds

Hands and Wrists (2)

- Separate and straighten your fingers until the tension of a stretch is felt and hold 10 seconds
- Relax, then bend fingers at the knuckles and hold 10 seconds
- Repeat the first stretch once more
Back (1)

- Lean forward to stretch, keep your head down and your neck relaxed
- Hold 10 - 20 seconds
- Use your hands to push yourself upright

Back (2)

- Stand with hands on your hips
- Gently turn your torso at the waist and look over your shoulder until you feel the stretch
- Hold 8 - 10 seconds and repeat on other side
- Keep your knees slightly flexed & do not hold your breath
Shoulders and Arms (1)

· Interlace your fingers behind your back, palms facing your back

· Slowly turn your elbows inward while straightening your arms until a stretch is felt

· Lift your breast bone slightly upward as you stretch, and hold for 10 seconds

Shoulders and Arms (2)

· Hold your left arm just above your elbow with your right hand

· As you look over your left shoulder, gently pull your elbow toward the opposite shoulder until a stretch is felt

· Hold 10-15 seconds
Ergonomics Program

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