Healthy Back – Healthy IU!

Week Two

Office Ergonomics

Presented by:
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Training Objectives

• Understanding Ergonomics
• Signs and Risk Factors of Musculoskeletal Disorders
• Proper Ergonomic Workstation Setup
• IUEHS Resources
• Exercises and Stretches
Introduction to Ergonomics
Ergonomics

The study of work

• Science of fitting the workstation and tools to the employee

• Repetitive trauma injuries, such as carpal tunnel syndrome, account for approximately 60% of all occupational illnesses
Ergonomic Risk Factors

- Repetition
- Forceful exertions
- Awkward postures
- Holding a position without movement
- Localized contact pressure
Musculoskeletal Disorders (MSDs) are injuries to soft tissues

- Muscles
- Nerves
- Tendons
- Ligaments
- Cartilage
- Joints
- Blood Vessels
- Spinal Discs
Common MSDs

• Muscles Strains
• Low Back Pain
• Carpal Tunnel Syndrome
• Epicondylitis
• Tendinitis
• Tenosynovitis
• De Quervain’s Disease
• Trigger Finger
Common MSD Symptoms

• Painful Joints
• Pain, tingling or numbness in hands or feet
• Shooting or stabbing pains in arms and legs
• Swelling or inflammation
• Burning Sensation
• Pain in wrists, shoulders, forearms, knees
• Fingers or toes turning white
• Back or neck pain
• Stiffness
Signs of an Ergonomic Injury

- Less strength for gripping
- Less range of motion
- Loss of muscle function
- Inability to do everyday tasks

* Do not wait until it is too late. Seek a medical evaluation from your campus medical provider or request an ergonomic evaluation of your workstation from EHS if you suspect your symptoms or discomfort are work-related.
Primary Prevention: Workstation Setup
Ergonomic Workstation Setup

- Overview of a Workstation Setup
- Chair basics
- Desk Setup:
  - Keyboard setup
  - Mouse positioning
  - Monitor positioning
- Phone
- Workstation Layout
- Work Practices
Overview: Proper Workstation Setup

![Diagram of proper workstation setup]

- Monitor Roughly Arm’s Length Away
- Minimal Bend at Wrists
- Front of Seat Not Pressing On Back Of Thighs
- Feet Resting on Footrest or Flat on Ground
- Back Slightly Reclined
- Elbows Close To Body
- Backrest Supporting Lower Back
- Adjustable Swivel Levers

Familiarize Yourself with Your Chair

Adjustable Headrest
- Grasp the headrest and move it up or down to adjust the height to meet your preferred level of comfort.

Adjustable Lumbar
- For additional back support, grab both handles and slide up or down. Position the lumbar to fit comfortably into the curve of your lower back.

Lower back firmness
- Turn the knob forward to increase firmness. Turn the knob backward to decrease firmness.

Seat height
- To raise the chair, lift your body weight and pull lever up. To lower the chair, stay seated and pull lever up.

Back stop
- Set recline angle by rotating the paddles to any of the five positions. When the paddle is horizontal, the back will allow you to fully recline.

Height / Width / Pivot / Depth Adjustable arms
- Lift button under arm caps to adjust height. To adjust arm cap position, grab arm cap and slide or pivot in any direction. Your elbows should stay close to your sides and your wrists straight.

Upper back force
- Turn the knob forward to increase tension. Turn the knob backward to decrease tension.

Seat depth
- Lift lever and foot, slide seat forward or back, and release lever to lock. With your back against the chair, you should have 2” - 3” of space between the back of your knees and the seat edge.

*Optional features (may not be included in your chair)
<table>
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<tr>
<th>Chair Demo</th>
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| **Chair Height** | ✓ Feet flat on the ground  
|                  | ✓ Thighs parallel to the ground |
| **Seat Pan Depth** | ✓ Sit back fully  
|                  | ✓ Keep 2-3 inches between back of knee and edge of chair |
| **Seat Pan Width** | ✓ Sides of seat visible while sitting  
|                  | ✓ Contoured seats do not put pressure on hips/thighs |
| **Lumbar Support** | ✓ Adjust to fit the natural inward curve of the lumbar area  
|                  | (usually 1-2” above beltline)  
|                  | ✓ Adjust firmness level according to preference |
| **Backrest Tension** | ✓ Tight enough to provide stable support  
|                  | ✓ Loose enough to allow natural movement throughout the day |
| **Arm Rests** | ✓ Height supports relaxed position of the shoulders and arms  
|               | ✓ Width keeps elbows right in line with the shoulders and close to the sides of the body |

### Keyboards

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<tr>
<th>Location</th>
<th>✓ While sitting, your hands can reach the keyboard without leaning forward or overreaching.</th>
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</table>
| Alignment| ✓ Keyboard is directly in front of you.  
✓ Keyboard is aligned with the monitor. |
| Height   | ✓ Allows your elbows to rest comfortably by your sides at a 90-degree angle.  
✓ Keeps wrists in a straight line with your forearms  
✓ May need to adjust chair height.  
✓ Use a footrest if feet come off the ground. |
| Keyboard Trays | ✓ Adjust to the correct height using prompts above.  
✓ Keyboard is level or in a downward tilt. |
| Palm Rest | ✓ Use a soft palm rest to minimize contact pressure with hard surfaces on the desk. |

## Mouse

| Positioning | ✓ Mouse is at the same level (height) as the keyboard.  
|            | ✓ Mouse is located close to your keyboard. |
| Fit         | ✓ Fits your hand comfortably.  
|            | ✓ Keeps your fingers relaxed and slightly curved. |
| Palm Support| ✓ Palm rest or mouse pad is used to reduce contact pressure of your wrist on a hard surface. |

|                | ✓ Monitor is positioned directly in front of you.  
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<tr>
<td></td>
<td>✓ Monitor placement is square with the keyboard.</td>
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</table>
| Position       | ✓ Primary screen is centered on the midline of your body.  
|                | ✓ Dual screens placed on either side of your midline.  
|                | ✓ Multiple screens are placed in such a way that allows you to view each one of them comfortably.  |
| Alignment      | ✓ Text is readable without needing to hunch forward.  
|                | ✓ Recommended distance is about an arm length away.  |
| Screen Distance| ✓ Top 1/3 of the monitor screen is at eye level. (This minimizes neck strain while working.)  
|                | ✓ If you wear bifocal, trifocal or progressive lenses, lower the monitor to avoid tiling your head back while working.  |
| Screen Height  | ✓ Screen is free from any sources of reflected or veiling glare.  |
| Screen Glare   | ✓ You can comfortably read text on your computer screen.  
| Reading Comfort| ✓ Increase screen text size as needed.  |
| Document Holder| ✓ To reduce neck movement, use a document holder to help you scan between documents and the screen comfortably.  |

Dual Monitors

If both monitors are used equally, where the two monitors meet should be directly in front of you.

If one monitor is used as the primary monitor, position it directly in front of you.
Laptop Ergonomics

Courtesy of www.ergo.human.cornell.edu
## Phone

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<tr>
<th>Position</th>
<th>✓ Positioned close to your workstation to avoid extended reaching while dialing and/or answering calls.</th>
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<tr>
<td>Headset</td>
<td>✓ When using a phone for extended periods of time, use a headset.</td>
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# Workstation Layout

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<tr>
<th>Zone</th>
<th>Description</th>
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| **Green Zone** | ✓ Primary work zone.  
✓ Place frequently used objects close to you in the green zone. |
| **Yellow Zone** | ✓ Secondary work zone.  
✓ Place objects that are used less often in the midrange area. |
| **Red Zone** | ✓ Tertiary work zone.  
✓ Seldom used objects can be placed in the red zone (storage).  
✓ Move items from the red zone to the green or yellow zone when you need to handle them. |
| **Storage** | ✓ Store infrequently used items in storage areas such as overhead shelves, filing cabinets and desk drawers.  
✓ Avoid storing items under your desk, which can take up leg space. |

Work Practices

**Rotate Job Tasks**
- Alternate job tasks throughout your work day.
- This will help reduce fatigue as you engage different sets of muscles throughout the day.

**Breaks**
- Take periodic breaks to rest and re-energize.
- Every 20-30 minutes of computer use, take a 30-60 second microbreak at to rest your eyes.
- Use your breaks as an opportunity to get up and stretch.

**Other Work Areas**
- Apply these ergonomic principles to other work areas, such as when telecommuting, studying, using a laptop or working at a standing workstation.

Ergonomic Products

Protect.IU.edu
IUEHS Resources
Workstation Evaluations

- IUEHS is currently unable to perform in-person ergonomic assessments at temporary or remote workstations due to limited resources and in response to COVID-19 recommendations.

- IUEHS has created a number of ergonomic training and support tools that may be used online. When performing a self-assessment, workstation modifications may be necessary.

- Due to limited University resources for supporting two workstations, the decision and approval to purchase additional ergonomic equipment with University funds for remote or temporary workstations is up to the supervising department.

- Movement of existing furniture to a remote workstation is also at the discretion of the supervising department.
Workstation Evaluations

To support the increased number of employees temporarily working off campus, IUEHS recommends that employees with ergonomic concerns complete the following:

• Complete the Office Ergonomics Training: https://protect.iu.edu/environmental-health/training/online%20/index.html


• Review workstation exercises at: https://psia360.iu.edu/sites/ehsdocs/?id=151, and

• Use the self-assessment checklist as a guide to evaluate and adjust their workstation (available upon request).
Proactive Workstation Evaluations

If additional assistance is needed, please contact:
• ehs@iupui.edu for IUPUI;
• iuehs@indiana.edu for IUB; or
• regehs@iu.edu for Regional Campuses.
Ordering Ergonomic Products & Chairs

Log into Buy.IU & select “Furniture Purchase Procedures”

For ordering details: Open “IU – Catalog”
Select “Ergonomic Products” or “Task Chair” tab

Forward ordering information to your departments purchasing contact
**Additional Support**

If discomfort continues or worsens after making adjustments and consulting with IUEHS, it is recommended that employees:

- Make an appointment to be evaluated by the Workers’ Compensation authorized medical provider for their respective campus ([https://hr.iu.edu/workers/med_providers.html](https://hr.iu.edu/workers/med_providers.html)).
- Inform their supervisor so the “Employer Notification for Treatment Form” can be completed prior to making an appointment with Workers’ Compensation. The form may be found at: [http://www.iu.edu/~uhrs/workers/index.html](http://www.iu.edu/~uhrs/workers/index.html).

If a specific condition, circumstance, or disability necessitates special furniture or equipment, IUEHS recommends contacting the appropriate office for assistance in pursuing these items. These offices may then request additional assistance from IUEHS as necessary.

- The Office of Equal Opportunity (OEO) for IUPUI
- The respective Human Resources office for the regional campus;
- Staff at IUB: contact the Human Resources ADA Accommodations Specialist; and
- Faculty at IUB: Office of the Vice Provost for Faculty and Academic Affairs for Faculty.
Exercises
Important Reminders

• Take a few minutes each day to stretch and strengthen your muscles.
  • Helps prevent injuries, and
  • Provides the flexibility needed to assume many different postures.

• Complete all stretches gently and without bouncing to prevent injury.

• Gradually increase your level of exercises.
  • Be sure not to overdo exercises initially.

• Do NOT exercise if you are in pain – Consult your medical provider.
Exercise

- Slowly and gently pull down on the fingers of one hand with the fingers of the other, to stretch your wrist in the direction opposite from that of mousing.
- Hold for a count of 25.
- Now do the other wrist.
Exercise

• Use the strength of one arm to slowly and gently pull the other shoulder toward the midpoint of your torso.
• Hold for a count of 25.
• Now do the other arm.
• This helps relax your shoulders, arms, and mid-back.
Exercise

• Put your arms out in front of you, put the back of your wrists together, and slowly and gently stretch your hands away from each other.
• Hold for a count of 25.
• This helps stretch and relax your forearm and elbow muscles.
Exercise

• With one thumb, slowly and gently pull the other thumb away from the other fingers, to stretch and relax your hand muscles.
• Hold for a count of 25.
• Switch thumbs and repeat.
Exercises for Hands

1. Pretend to play an imaginary piano. Now turn your hands over and pretend to play an imaginary upside-down piano. This helps release tension in your fingers.

2. Keep your ring finger and pinky together, but separate your middle finger from your ring finger. Repeat this motion five or ten times. This also helps release tension in your fingers.

3. Same idea, different fingers: keep your middle and ring fingers together, and separate your pinky and index finger from them. (This is harder.) Repeat this motion five or ten times. This also helps release tension in your fingers.
Exercises for the Neck

1. Slowly and gently roll your head forward. Hold for three seconds. Repeat three times.
2. Slowly and gently pull your head straight back, keeping your face level. Hold for three seconds. Repeat three times.
3. Slowly and gently look to the left as far as you can. Hold for three seconds. Repeat three times.
   • Do the same while looking to the right.
4. Slowly and gently tilt your head to the left as far as you can. Keep your shoulder down, but try to reach it with your ear. Hold for three seconds. Repeat three times.
   • Repeat, this time tilting to the right.
Thanks!

https://healthy.iu.edu/campus-programs-services/university/move-more/workstation-movements.html