

Basic Office Ergonomics

Otis College of Art and Design
Health and Safety Training Series

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Ergonomics: What and Why?

- Ergonomics is the science of arranging and adjusting the work environment to the employee to minimize the risk of injury.
- Ideally, ergonomics makes the job:
 - **Safer** by preventing injury & illness
 - **Easier** by adjusting job to the worker
 - **More pleasant** by reducing physical and mental stress
 - **And...**saves money
- The goal of ergonomics is to identify and reduce risk factors in order to minimize the risk of injury or discomfort by setting up workstations that fit individual needs to space with respect to tasks performed daily

Common ergonomic problems?

Most ergonomic problems are as a result of:

- Forceful / sustained exertions
- Repetitive motions
- Awkward postures
- Contact / compression stress
- Environmental factors

All the above are possible risk factors present in the office environment and have been associated with a high incidence of ergonomic injuries.

Forceful and Sustained Exertions

Forceful exertions include:

- Forceful keying
- Excessive mouse grip
- Excessive pinch grip with writing
- Stapling

Sustained exertions include:

- Fixed posture due to the nature of the task
- Elevated shoulders due to height of keyboard, mouse, tabletop, and/or armrests
- Muscles support the hands while fingers operate keys/mouse
- Prolonged sitting in one position
- Inappropriate seating



Repetitive Motion in the Office Environment

- Data entry and repetitive keying
- Repetitive movement of a mouse
- Stapling
- Handwriting
- Filing

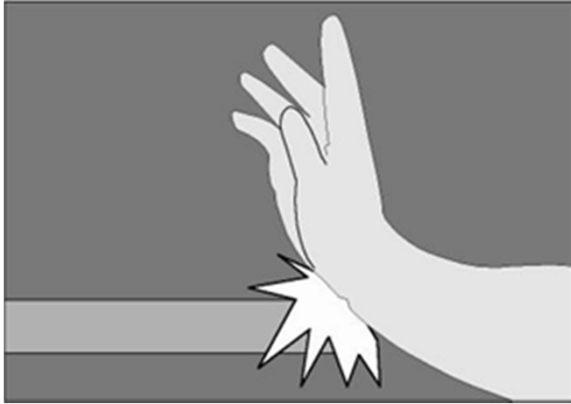


Awkward Postures in Office Environment

- Keeping telephone receiver in crook of the neck
- Neck extension to view the computer screen
- Keying or moving a mouse using wrists not in neutral position
- Inappropriate height of work surface
- Poor sitting posture
- Extended reaches



Minimize Contact and Compression Stress



- Optimum goal is to distribute the contact area over more surface area of the body while performing a task
- Avoid using your forearms to brace against tabletop while typing!
- Direct pressure can be reduced by:
 - Padding sharp edges of tables
 - Using arm rests
 - Using anti-fatigue mats or cushioned insoles

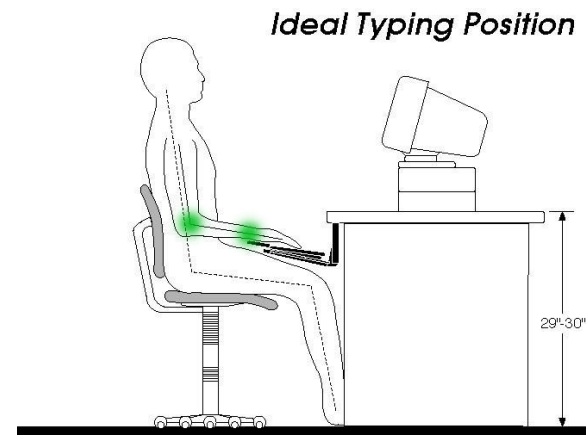
Good Ergonomic Practices for Office

- Keep everything within easy reach
- Work at proper heights
- Maintain good posture and be aware of your strength limitations
- Minimize direct pressure and excessive forces when completing a task
- Ensure comfortable work environment
- Understand the task and facilitate task variety to allow for greater movements

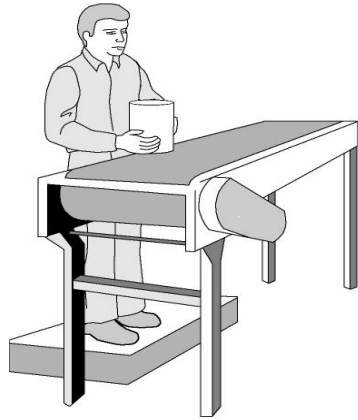


Neutral Body Positioning for Typing

- Body, neck and spine relaxed
- Shoulders relaxed
- Arms loose at side
- Elbows close to the body
- Wrists neutral
- Work at elbow height
- Adjust work height to fit the task
- Keep the mouse on the same height as the keyboard



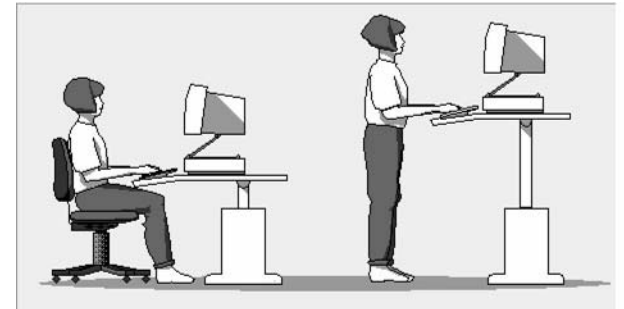
Maintaining Good Posture



- Maintain a natural curve of the spine.
- Keep head and neck straight.
- Keep arms and elbows in close.
- Maintain straight wrist positions.
- Avoid twisting motions and static or sustained postures.
- Use a power grip instead of a pinch grip when force is required.
- Use proper lifting techniques:
 - Keep loads close to the body
 - Maintain a good base of support
 - Lift with your legs

Establish a Good Workplace Environment

- Lighting should be adequate, but not excessive.
- Avoid glares, shadows & poor contrast.
- Many office-related headaches are caused by:
 - Dry eyes
 - Monitor glare
 - Tired/strained eye muscles
- Facilitate task variety by doing the following:
 - Alternating body postures
 - Combining tasks
 - Rotate activities to involve different muscle groups



Ergonomic Injuries are Preventable!

- Repetitive motion injuries and illness can affect a variety of bodily systems, including muscles, tendons, and joints, and include:
 - Carpal Tunnel Syndrome
 - Epicondylitis (tennis elbow)
 - Tendonitis
- Early symptoms commonly affect the neck, back, shoulders, wrists and fingers, and include numbing sensation, tingling, spasms, and prolonged dull pain.
- Report any pain or discomfort as soon as it becomes noticeable! Early detection and intervention can prevent serious and long-lasting health consequences.
- Prevention through recognizing risk factors in a workstations - advise your manager or supervisor if you need to have an ergonomic evaluation conducted by Environmental Health & Safety.

Additional Tips for Ergonomic Safety

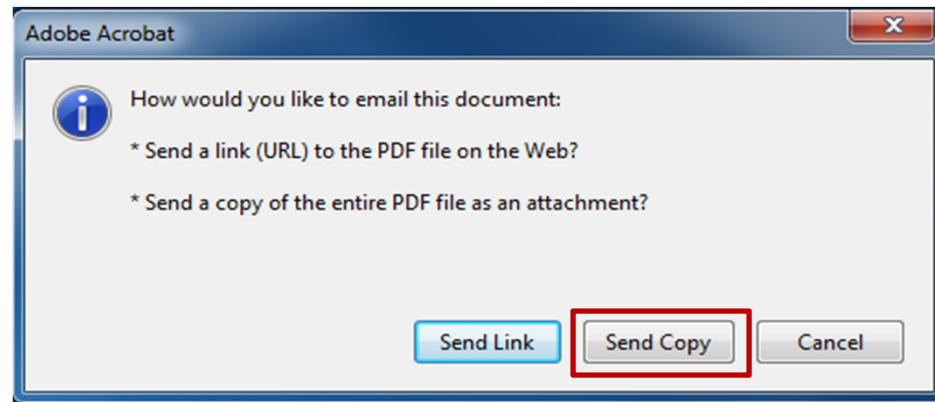
- Follow the 20 – 20 – 20 Microbreak Rule: take a 20 second break, every 20 minutes, and look at something at least 20 feet away
- Use adjustable keyboard tray (negative tilt)
- Use properly adjusted ergonomic designed chairs
- Close blinds or adjust monitor angle to reduce glare on screen
- Keep frequently used items within close reach
- Avoid forceful and jerking movements when handling bulky objects

Thank you and please direct any follow-up questions regarding this presentation to aruiz@otis.edu

Please proceed to the next slide for instructions on how to receive a certificate of training for this presentation

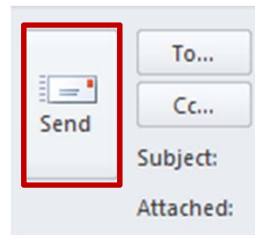
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Instructions for Submitting the Environmental Health and Safety On-line Training Confirmation Form

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- Please note that reviewing this presentation alone is not a good substitute for attending the training itself, as additional discussion of topics along with Q & A are often not fully covered by the slides. Training sessions covering various health and safety topics will be regularly announced.

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