ERGO YOUR SPACE
INCORPORATING ERGONOMICS INTO YOUR DAILY LIFE

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OUTLINE

• Ergo Basics
  • Ergonomic Risk Factors

• Applications
  • Spaces
  • Tasks
  • Examples
WHAT ARE YOUR SPACES/ TASKS

WORK

HOME

HOBBY
WHAT ARE YOUR SPACES/TASKS

WORK
- Computer
- Phone

HOME
- Kitchen
- Laundry

HOBBY
- Car
- Bike
- TV
WHAT DO YOU THINK ABOUT WHEN SOMEONE SAYS ERGONOMICS?

• What do you think about when someone says “Ergonomics”?

• You may think of “THINGS”
  • chair, mouse, keyboard, handles

• I want you to think about the PERSON
  • But, the movements that a person makes to perform a task can be determined by the physical items in a space, aka. “things”
WHAT DO YOU THINK ABOUT WHEN SOMEONE SAYS ERGONOMICS?

**TASK – TOOLS - OBSTACLES**

Definition:

Ergonomics looks at the design of tasks, tools, equipment & overall workplace layout in order to fit the task and workstation to the person.
ERGO BASICS – REDUCE RISK

- Force
- Repetition
- Awkward Posture
- Long Duration

AND/OR

Increase MSD Risk
aka RSI

University of Waterloo
REDUCING CHANCE OF MSD

Use tools

Force

Repetition

Awkward Posture

Long Duration
REDUCING CHANCE OF MSD

1. Use tools
2. Proper item placement
3. Force
4. Repetition
5. Awkward Posture
6. Long Duration
REDUCING CHANCE OF MSD

- Use tools
- Vary Tasks
- Proper item placement

Force
Repetition
Awkward Posture
Long Duration
REDUCING CHANCE OF MSD

- Use tools
- Vary Tasks
- Proper item placement
- Take Breaks

Force

Repetition

Awkward Posture

Long Duration
WHAT IS NEUTRAL POSTURE?

Neutral Posture: Ears over shoulders over hips, shoulders relaxed, elbows at sides.
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- Your body can perform tasks most safely and efficiently.
- Center of Gravity should pass through the center of base of support.

www.fitforduty.org
WHAT IS NEUTRAL POSTURE?

Neutral Posture: Ears over shoulders over hips, shoulders relaxed, elbows at sides.

- Your body can perform tasks most safely and efficiently.
- Center of Gravity should pass through the center of base of support.
- High heeled shoes throw the body off balance and increase stress on your lower back.

www.fitforduty.org
WHAT IS NEUTRAL POSTURE?

Neutral Posture: Ears over shoulders over hips, shoulders relaxed, elbows at sides.
Frequently used items should be in primary work zone to reduce reaching and leaning.
STORAGE RECOMMENDATIONS

• Don’t store heavy or frequently used items above shoulder height

• Do not overload shelves

• Use containers if items are likely to fall
REDUCE REPETITION AND DURATION
ERGO BASICS – REDUCE RISK

- Force
- Repetition
- Awkward Posture
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AND/OR

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WHEN YOU LOOK AT A SPACE
LOOK FOR RISK FACTORS!

TASK – TOOLS - OBSTACLES

• Can you change environment or workstation setup
  • Organize to reduce reach required for task
• Can you use tools to lighten load or allow improved postures
• Can you move or remove obstacles
WORK

- COMPUTER
- PHONE
COMPUTER STATION

Before

After

www.gvsu.edu
TOOLS - OFFICE

- Chair
- Laptop Riser / Stand
- External Keyboard and Mouse
- Monitor
- Footrest
MOBILE DEVICES- INTERACTION

- Text Neck
- Blackberry Thumb
- Cell Phone Elbow

***Repetition and Duration
PURSES/ LUGGAGE

- Size
- Weight
- Crossbody
- Wheels
- Adjust Straps
HOME

• KITCHEN
• LAUNDRY
• MISC. AROUND THE HOUSE
STORAGE

Organize Prioritize
KITCHEN

- Storage
- Clearance for postures
- Repetition
- Tools
STORAGE CONTAINERS

- Strong
- Good handles
- Appropriate size
- Don’t overload
TOOLS - STOOL

• When reaching is unavoidable (due to space), use the necessary tools to avoid awkward postures
MOVING- CART

• When carrying an object more than 10 feet use a cart or Dolly

• Consider the Handle
  • Is there a handle?
  • Height
  • Distance from your body (reaching out)

• Forearm Forklift
  • Lifting straps assist with grip and improve postures
TIPS FOR SAFE LIFTING

• Ensure you have **enough room** and clear access to the object that you are lifting
• Check the **weight** of the object before trying to lift
  • *Mark Items as “Heavy”*
• Get a good **grip**
• Keep the object **close** to you
• Keep your feet shoulder distance apart and staggered
• Keep your back neutral
• Bend your knees and hips, using arm and leg muscles rather than only back
• Always turn your feet, never twist your back
• All movements should be smooth and controlled, not jerky
• Make **smaller loads**
• Get help for heavy loads
NEUTRAL SPINE

• When lifting from the floor, bend at the hips and knees - keeping the back neutral
• Engage your abdominal muscles
• When lifting is not done correctly, you are forcing the lower back to lift the upper body weight plus the load

GOLFER’S TECHNIQUE

• Lift back leg to keep spine neutral

• Where else can you use this?

www.totaltherapy.ca/blog/the-start-of-long-term-back-health/  www.safety.duke.edu/ergonomics/ProtectYourBack.htm
BUILD A BRIDGE

• Support your upper body weight by placing your hand on your thigh or a table

• Decreases stress on the lower back

• Where else can you use this?
AROUND THE HOUSE

Neutral Spine – Keep it close – Build a Bridge
HOBBIES

- CAR
- BIKE
- OTHER
CAR ERGO

- Watch your spine (twisting) when climbing in and out of car
- Use the edge of the car as a “bridge”
CAR ERGO

Loading

• Keep item close to body
• Place on edge of trunk
• Push into place
• Using storage solutions will reduce sliding
• Use a ramp and dolly for heavy items if necessary
CAR

• Adjusting for Driving Posture
  1. Move the seat forward to enable you to comfortably depress the foot pedals all the way down with your knees bent while keeping your back against the seat back. This should aid in foot cramps and back pain.
  2. Adjust the headrest so it’s in the middle of your head. Keeping the head back and neck in a neutral position will ensure correct positioning and posture.
  3. Next, recline the seat slightly back to decrease pressure on the discs in the lower back. Shoulders should rest somewhat behind the hips.
  4. Bring the seat height up so that your hips are aligned with your knees (if you are too low, consider adding a cushion to the seat). Ensure your seat isn’t adjusted so high that it affects your headroom or eyesight. Slouching your head down or bending to the side will cause problems in your neck and back.
  5. Good lumbar support is an important factor to alleviate back pain. If the vehicle does not offer adequate support you can use a lumbar cushion behind the back. There should be comfortable support without pressure points or gaps between the spine and seat back.

• Don’t stick to “10 and 2”
• Stretch Breaks on long rides
BIKE

- Adjust seat height
  - Seat at hip when standing
  - Slight bend in knee when extended leg is flat footed
- Place the ball of your foot on the pedals
- Keep core engaged and spine neutral
- Watch wrist postures and wear gloves if numbness occurs
- Know your gears
  - Pain in the front part of the knee can sometimes be caused by cycling in too high a gear.
- Duration!!!
TV SETUP/ TABLET - VIEWING

- Same concept as computer monitors
- Neck Posture is priority
  - Height of screen
  - Distance
  - Chair/ Neck Support
HANDLE SIZE, SHAPE AND MATERIAL

- Handle size affects hand postures
- Ergonomic handles are thicker and softer
- Can easily DIY, build up the handle diameter
- Watch for warning signs and take breaks, vary postures

**Repetition and Duration**
WORKING OUT AND STRETCHING

• Keeping your body healthy and physically fit can significantly reduce your chance of injury

• Stretched muscles are less likely to pull from exertion (i.e. football players doing ballet)

• Keeping your core strong is the best way to protect your back
REMINDERS

• Be **Aware** of your Postures

• **Neutral** Spine

• Get a Plan Before Moving an Object

• Keep it Close (Leverage)

• Work/ Store things at a **comfortable height** to avoid reaching or excessive bending at the waist

• Movements should be **smooth** and controlled, not jerky
QUESTIONS?

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