Office Ergonomics

Course Objectives

- Look at ways to reduce risk of injuries on the job
- Evaluate and control ergonomic hazards
- Recognize early warning signs
- Discuss: posture, monitors, keyboards, desks, chairs, phones

What is ergonomics

- Ergonomics is the study of the kind of work you do, the environment you work in and the tools you use to do your job.
- When your workstation is set up correctly, you may:
    - Be less likely to have problems such as headaches or eyestrain
    - Reduce neck and back pain
    - Prevent tendon problems that are linked to doing the same task over and over

Ergonomics Problem

- Many potential work related risks in an office environment
- Some work can cause fatigue, discomfort and musculoskeletal disorders (MSD)
- My examples
  - Years on days
  - Good office, bad posture and use of the computer and phone
  - Standing vs. sitting and movement
  - Stress

Principles of Ergonomics

- Look for ways to adapt the workplace to fit the worker
- Tasks that can lead to injuries
  - Awkward Posture – poorly designed workstation and poor practices
  - Repetitive Motions – Can cause injury due to continual strains to same part of the body
  - Pressure Points – direct pressure against a hard surface

Principles of Ergonomics

- To minimize the risk of injury
  - Do not do tasks that exceed your physical ability
  - Make your workspace **designed around you!**
  - Use appropriate equipment to help you do your job
  - Set up your work environment to help you

  - Your Desk is all about YOU!

Musculoskeletal Disorders

- Small problems or movements that produce a small amount of discomfort can become an MSD issue
- Computer desk signs and symptoms
  - Numbness and burning sensation to hands
  - Reduced grip strength
  - Swelling or stiffness in joints
  - Pain in wrists, forearms, elbows, neck and back
  - Reduced range of motion
  - Dry, itchy, sore eyes and blurred vision
  - Aching or tingling, cramping and weakness

Proper Positioning

Proper Positioning

- Best to maintain a neutral body position – joints are naturally aligned
- Regardless of your position, in the same position for a long time can be an issue – adjust your chair, take small breaks to stretch and walk around

Evaluate Your Workstation

- Ensure your space is set up in the safest and most comfortable way
- All things within easy reach and aligned properly
- Your workstation is all about YOU!

Computer Monitors

- Monitors
  - 20 – 40 inches away and directly in front of you
  - Not more than 35 degrees to the left or right
  - Top of screen at or near eye level
  - Prevent glare from window, etc.
  - Feet flat on the floor
  - Thighs parallel to floor

Computer Monitors

- Monitor to close or to far away can lead to awkward posture and eye strain
- Eye fatigue – can cause dryness if you look at the monitor for a long time
- Take viewing breaks – look away from the monitor, blink to exercise the eyes
- Do some non-computer duties/work

Computer Monitors

- Using printed material – don't put it off to the side when reading and typing, have it directly in front of the monitor
- Two monitors – keep them close together and your chair right in the middle of them
- Adjustable monitor – good to have but if not, adjust your chair. Be careful as a higher chair can cause other posture issues with legs not properly aligned and feet not flat on the floor

Keyboards

- Typing is a very common task we all do
- Keyboard arrangement
  - Directly in front of you
  - Not to high or to low, this can lead to carpal tunnel syndrome
  - Not to close or to far away from you, elbows should remain close to your body and forearms parallel to the floor

Keyboards

- Body Position
  - Relax your shoulders and keep elbows close to your body
  - Keep wrists straight and in line with your forearms
  - Maintain a neutral wrist position, not bending your wrists up or down

- Bad Practices
  - Bending your wrists sideways to reach keys
  - Wrists bent upward
  - Allowing contact stress to wrists, arms

Keyboards and the mouse

- Keep the mouse close to the keyboard
- Try switching hands once in a while

Document Holders

- Keep them close to the monitor
- Appropriate placement reduces
  - Bad head/neck posture
  - Headaches
  - Eyestrain

  My example – always a document to the left – an issue for me

Desks

- Assessment
  - Clearance for your legs
  - Things placed so that you have awkward posture
  - Most used items within close reach?
  - Monitor at the right height and distance?

Desks

- Your primary work zone is the area from your elbow to your hand
- Items used frequently should be in this zone
- Examples – keyboard, mouse, phone. Able to reach/use them while sitting properly
- Contact stress – if your wrists contact the edge of the desk, consider padding the edge, use a wrist rest

Desks

- Proper space is provided – clearance under the desk and good space for your feet
- Keep it free of clutter to keep movement and adjustments in place

Desks

- Recommendation
  - Consider a standup desk
  - Don't sit all day – get up every hour and walk around for a few minutes
  - Sitting all day is like smoking

Office Chairs

- Good chairs
  - Support for the legs, buttock, back and arms
  - Reduces awkward posture
  - Fully adjustable

  - Feet flat on the floor, knee slightly lower than the hips

Your Desk Phone

- The phone is a key component of your workstation
- Keep the cord from getting tangled up
- Phone within reach
- Don't pinch the phone between shoulder and neck
- Use a headset

Questions?

Keith Wright
Central Pierce Fire and Rescue
kwright@centralpiercefire.org