CSC

Hanford Occupational Health Services

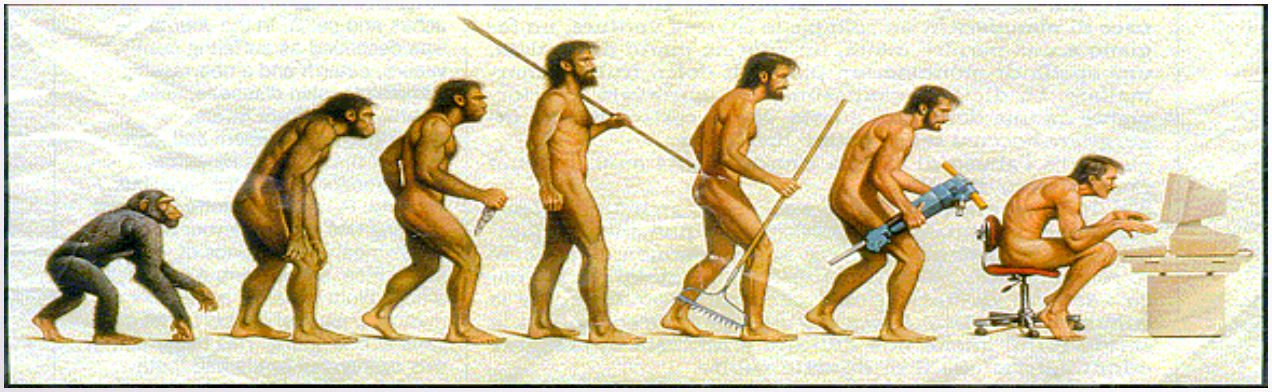
Office Ergonomics:
Working Safely to Improve Comfort and Efficiency

CSC
Hanford Occupational Health Services

What is Ergonomics?

Greek translation: ERGO (work) and NOMOS (natural law/system)

The scientific study of matching a job to a person's anatomical and physiological characteristics for the purpose of improving efficiency, comfort, and safety.



Ergonomic Risk Factors

CSC
Hanford Occupational Health Services

- Repetition
  - Using the same muscles in the same way repeatedly.
- Forceful Exertions
  - When the force required to lift, push, pull or grasp an object is greater than individual capacity.
- Prolonged Static Postures
  - Static muscle work combined with high force causes immediate fatigue in the working muscles of the neck, shoulders, and mid-back.
- Awkward Postures
  - These postures can lead to muscle strength and function deficiencies.
- Mechanical Contact Stress
  - Palm, wrist, forearms, elbows.
- Temperature
  - Cold will reduce blood flow.

CSC
Hanford Occupational Health Services

Repetitive Strain Injuries (RSI's)

- Chronic inflammation of a soft tissue.
  - Tendon
  - Muscle
  - Ligament
  - Joint cartilage
- Common examples are:
  - Arthritis
  - Tendonitis
  - Bursitis

CSC
Hanford Occupational Health Services

RSI Signs and Symptoms

- It is important to acknowledge signs and symptoms ASAP to prevent serious injury or permanent damage:
  - Numbness or a burning sensation in the hand.
  - Reduced grip strength in the hand.
  - Swelling or stiffness in the joints.
  - Pain in wrists, forearms, elbows, neck, or back.
  - Reduced range of motion.
  - Muscle cramping.

CSC
Hanford Occupational Health Services

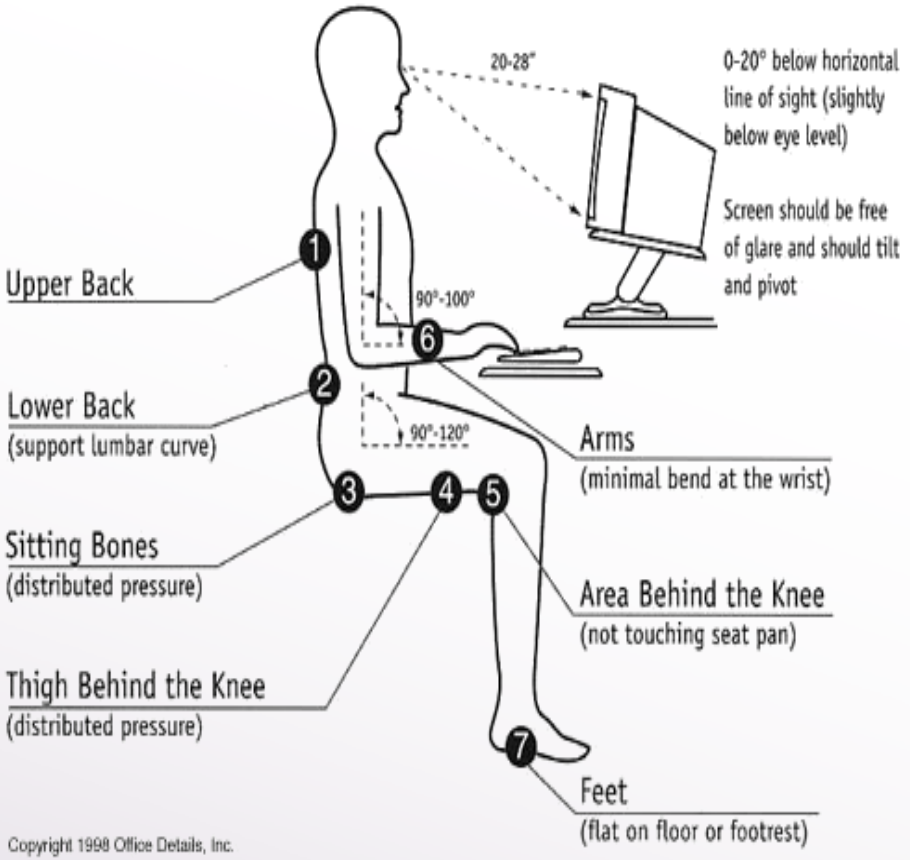
Ergonomic Controls

- Engineering Controls
  - Modify the workstation, tool, or process.
- Administrative Controls
  - Job rotation, work/rest cycles. Often used when engineering controls are not an option.
- Work Practice Controls
  - Training to maximize efficiency, use neutral and effective postures and best work practices.

Hanford Occupational Health Services

Setting up the Computer Workstation

- Your workstation should:
  - Be fairly adjustable. Depending on special needs it may require more customization (big or small chair, mouse options, keyboard options).
  - Promote proper body postures.



CSC
Hanford Occupational Health Services

Your Workstation

Chair:

- Adjust the seat of your chair. Thighs should be horizontal to the floor. Feet should rest firmly on the floor or footrest.
- Shoulders should be relaxed and the elbows at a 90-100 degree angle.
- Backrest should support the curves of your spine.
- There should be 2-3 finger widths between the back of your knees and the front of the chair.

Keyboard/Mouse:

- Position the keyboard directly in front of you with the mouse next to it at the same level.
- Keep the wrist relaxed and straight.
- Use wrist/palm support for micro-breaks – don't rest on it while keying.
- Move the mouse with the whole arm rather than just the wrist.

Your Workstation

Hanford Occupational Health Services

Monitor

- Position the monitor directly in front of you.
- Adjust screen height so the top is slightly below eye level.
  - NOTE: If you wear multi-focal corrective lenses, position the monitor at a height that allows you to maintain a straight neck when clearly viewing the screen. This may mean lowering the monitor as low as possible.
- Place monitor 18 – 30 inches (arms length) from eyes.
- Close blinds to minimize glare on the screen.
- Visit www.hanford.gov/amh for tips on preventing eye strain.

CSC
Hanford Occupational Health Services

Ergonomic Accessories

- Document Holder
  - Position directly next to the monitor.
- Footrest
  - Use to support your feet and low back.
- Palm/Wrist Support
  - Avoid resting you hands on the support while actively using the keyboard or mouse.
- Telephone
  - Use a headset if you frequently use the phone.
  - Never cradle it in your shoulder.

Prevention Strategies

CSC
Hanford Occupational Health Services

- Limit repetitive and static patterns.
  - Break up job tasks to avoid repetition.
  - If you must perform a repetitive task for a length of time, take short breaks.
    - Allows muscles to recover from repetitive motion.

- Frequent short movement breaks.
  - Daily Stretch
    - Use selected stretches several times a day.
  - Get up from your chair at least once every hour.
    - Walk into the hall, take a deep breath, or close your eyes for a minute.
    - Our bodies are not made to remain in one position for a length of time - Get up and MOVE AROUND.

CSC
Hanford Occupational Health Services

Fatigue-Relieving Exercises and Ergonomic Evaluations

- Stretch and move regularly to promote circulation and reduce muscle fatigue.
- Visit www.hanford.gov/amh for daily stretches that can be done at work.
- Contact your company ergonomics lead in Safety or Industrial Hygiene:
  - Engineering and layout of workstation.
  - Biomechanics of working positions and tasks.
  - If you are experiencing discomfort or for a check up of your workstation.