Ergonomics

An eBook Resource—Not a Course for Credit
Posture Stresses

- If you experience posture stresses, habit modification and new equipment are things to consider.

- Includes things like:
  - Awkward wrist bending
  - Stooping
  - Holding the phone between shoulder and ear
  - Etc.
Contact Stresses

Typically involves upper extremities and a hard surface
- Example: Typing or “mousing” on a square edge table-the underside of the arm is at risk of a compression injury where the arm makes contact with the “sharp” edge of the desk

Consider purchasing wrist rests for your keyboard and mouse-pad
Forceful Exertions

- The repetitive stress injury due to force increases as other risk factors come into play.
- RSI's typically take months or years to develop and months or years to resolve.
  - When moving heavy objects-especially with poor physical conditioning and improper technique- tissue damage can occur immediately.
- It's important to plan out high-demand tasks and to make gradual increases in strength training routines.

If an object is too heavy or awkward to carry, ask for help! Risking the injury is not worth it.
Purchasing Suggestions

- Determine if the keyboard is compatible with existing hardware and software and whether it can accommodate other input devices such as “mice” and trackballs.

- Assess how the keyboard will fit with the workstation.
  - Some ergonomic keyboards must be placed on surfaces that are lower than those required for standard keyboards to achieve proper working posture.
  - If the workstation had a standard keyboard on a keyboard tray, an “ergonomic” keyboard may not fit on the old tray.

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Less than 5% of back pain is caused by serious disease (e.g., cancer or infection) or anatomical problems that require surgery.

Surgery is almost always elective, possibly providing faster relief of symptoms but may have little effect on long term outcomes.

Non-specific pain could originate with the muscles, ligaments, facet joints, or discs and it is generally impossible to be certain of the exact cause.

Note: More often than not, simply applying an ice pack or heat pad to the painful area and resting will “cure” back pain.
The Ergonomist’s Opinion

- Sitting with several “bad” postures for shorter periods of time may be better (or at least no worse) than using one “good” posture over long periods of time.

- Individuals are encouraged to use 3 or more seated postures throughout the workday to allow various muscle groups time to relax and recuperate. Recommended postures include:
  1. “perched” on the edge of the chair – with pelvic tilt to maintain good low back curvature
  2. Upright with seat back locked and the gluteus maximus all the way to the back of the seat
  3. Reclined
  4. Other postures you feel comfortable with

Don’t be that guy. It may be comfortable at the time but it can lead to lower back pain and reduced productivity.
Keyboard Adjustment

- **Primary considerations:**
  - With your chair adjusted properly, are your keyboard and mouse approximately at elbow height?
  - Are your arms in near your trunk rather than stretched out in front of you?
  - Is there at least an inch of clearance between the bottom of your work surface and the top of your thighs?
The Ergonomist’s Opinion

- It’s best to key (whether at a keyboard or with a calculator) and write at separate heights.
- If separate surfaces are not practical (forcing you to key and write at one height), selecting an intermediate height may be acceptable in some cases.

Remember! Be sure to find a desk that fits you and your work needs.
If you are assessing your workplace for ergonomic risk factors and solutions, it's a good idea to pretend that anything is possible and that money is no object.

Once potential solutions are identified, assumptions about work routines, budgets, etc., can be discussed.
Reasons to Stretch at Work

- Reduce muscle tension and stress
- Increase alertness and productivity
- Improve circulation
- It makes you feel better!
The Shoulder Stretch

- Start with your shoulders relaxed.

- Raise your left arm and place your right hand on your left elbow.

- Use your right hand to pull your left elbow toward your right shoulder.

- Repeat cycle on each arm.
The “Flamingo” Stretch

- Grab hold of a chair, desk, or other object for balance

- Raise your left leg, grabbing your left ankle with your left hand

- Gently and slowly, press your left (bent) knee towards the “back” of the room while slightly pulling your left ankle towards the “front” of the room

- Repeat on each leg