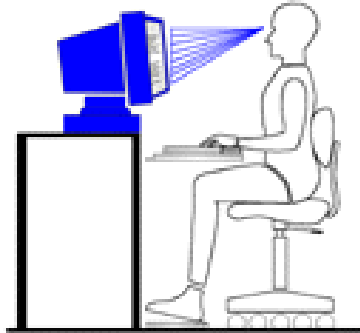




Workstation and Laptop Ergonomics

Reference: http://www.yale.edu/ergo/leg_feet.htm

Viewing Angles and Distance



- Position monitor, keyboard, and chair in straight line
- Top of monitor screen at or slightly below the eye horizon
- Comfortable, non-straining distance to read monitor (typically 15-30 inches)
- Adjust brightness, contrast, and color to comfortable levels
- Avoid glare by positioning away from windows and direct lights
- Keep written work materials propped up near monitor screen

Neutral Typing Position



- Use an adjustable chair, keyboard tray, or desk/table to achieve the "neutral position" of a straight hand: wrist: forearm
- Keep upper and lower arms at a 90 degree angle to each other
- Position mouse as closely to keyboard as possible to minimize reaching and twisting



Lower Back Support



- Use a chair that provides lumbar (lower back) support - if adjustable, adjust to maintain an erect sitting posture
- Ideal chairs can be easily raised or lowered, and have 5 wheel legs for safety
- Keep feet planted firmly on floor or footstool to counterbalance forces on lower back

Legs and Feet



Plant feet firmly on floor or - if not possible - use a foot stool

- Keep thighs parallel to floor
- Ensure leg clearance from table or keyboard tray to avoid bumps, scratches, pinches, and torn clothing



Laptop Computers

LAPTOP COMPUTERS ARE NOT RECOMMENDED AS PRIMARY COMPUTERS. IN THE OFFICE OR WHILE AT HOME, A DOCKING STATION IS RECOMMENDED TO PROVIDE ADJUSTABILITY WHICH WILL ENHANCE NEUTRAL POSTURES.



Are you using a laptop like this? – Don't!

Maintaining neutral postures will reduce stress and strain to the musculoskeletal system.

- Incorporate mini-breaks every 20 to 30 minutes to break up repetition and static postures.
- Maintain a comfortable viewing distance from your screen.
- Keep your head and neck in a neutral posture; avoid excessive neck flexion or rotation.
- Angle the screen so that it is perpendicular to your line of sight, if lighting permits.
- Position the keyboard at elbow height, and keep your wrists straight while keying. Experiment with table height, chair height and keyboard angle to maintain neutral wrist postures.
- Remember: if you raise your chair use a footrest to support your feet. When seated your hips should be slightly higher than your knees.
- If you are seated in a side chair or couch, use a pillow to support your arms while keying. This will help you maintain neutral arm, wrist, and hand postures.
- Attach an external mouse instead of using the small constricted touchpad or trackball.
- Clean the screen regularly using appropriate antistatic cleaning materials.
- The hands and wrists should be kept in a straight wrist posture when typing and should not be resting on a palm rest, table, or lap while typing. Wrist and palm rests are designed to provide support during breaks from typing.

Transporting the Computer

Keep these ideas in mind while carrying your laptop from place to place:

- Eliminate unnecessary baggage from your briefcase, the less demand placed on the body the better.
- Carry your laptop in a case with a padded shoulder strap and handle. Frequently shift hands or shoulders to balance the load or use a wheeled luggage cart when possible.



Ergonomic Tips

Reference: <http://ergo.human.cornell.edu/ErgoTips2002/workstation/workstationmain.htm>



Tip 1: Position the keyboard so that your forearms are parallel to your thighs when your feet are flat on the floor.

Why?

- Helps maintain blood flow in the hands and arms.
- Decreases muscle strain and tension.

Tip 2: Place the mouse on the side of the hand that is most comfortable to you.

Why?

- Places the arms in a neutral and relaxed position.
- Prevents overreaching and twisting of the shoulder, arm and wrist.





Tip 1: Center the monitor in front of you.

Why?

- Places the body in a neutral position.



Tip 1: Adjust the height of your chair to use the keyboard and mouse properly (see keyboard and mouse sections after finishing chair tips). After making this height adjustment your feet cannot be placed flat on the floor, use a foot rest.

Why?

- Encourages good posture.
- Enables proper sitting height.
- Avoids pressure placed on the back of the thigh.
- Promotes circulation.

Tip 1: Use a document holder and place it in front of the monitor or next to the monitor

Why?

- Prevents neck and eye strain.