

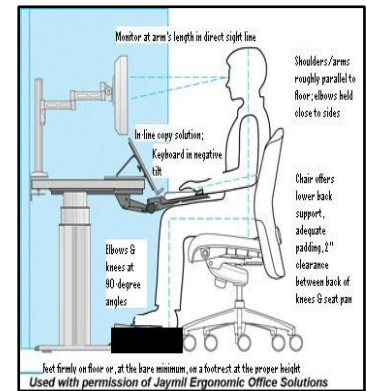
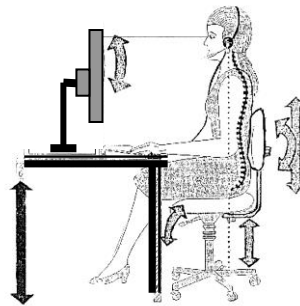


SIT-STAND WORKSTATIONS

Be sure that the station has adequate adjustment to meet current ergonomic guidelines

- 1. Basic ergonomic guidelines for the keyboard and screen are the same for sitting and standing. Standing alternatives **must provide options** for sitting and standing that meet the current ergonomic guidelines for keyboard access and viewing the screen.

- o Keyboard at about elbow height
- o Top of screen at eye level or slightly below
- o Frequent positional changes

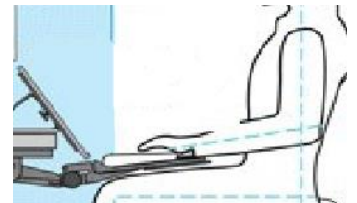
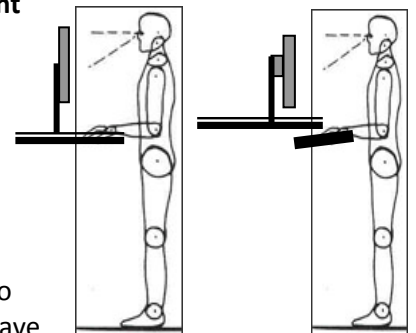


- 2. The sit/stand workstation should **position the keyboard at about elbow height in BOTH sitting and standing positions.**

- 3. To accommodate most workers, **adjustable surface heights for the keyboard** should range from about:

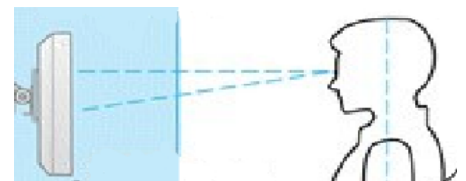
- ~22-24" to 28.5" in sitting
- ~36" to 48" in standing

- o For many years, we have added keyboard trays to workstations in order to provide access to keyboards and mouse at about elbow height. Studies have shown benefits for tilting the keyboard away from the user (negative tilt).
- o While not all computer users will need a tray if the table adjusts within the suggested range, retain keyboard trays for workers who have successfully used keyboard trays to address of hand, wrist, and elbow or shoulder discomfort.
- o To meet height range requirements for keyboards/mouse and user needs, work with your vendor to find tables that will accept keyboard trays.



- 4. The sit/stand workstation should accommodate vision needs of workers.

- o For most workers the top line of the screen should be at eye level or slightly below
- o The user should be able to position the screen farther away from or closer to the eyes as needed for optimum vision.
- o Some desk top sit/stand devices do not allow for options to move the screen closer or further from eyes.



The sit/stand station must be easy to adjust up/down and be appropriate for the work and most users

- Electric height adjustable workstations are preferred because they do not require pushing/pulling or lifting. This type of workstation allows **all** workers to adjust the workstation independently. Even easy to lift tables can be problematic for people with back, neck, shoulder or hand problems.
- If considering a desktop model, please watch videos and review manuals to understand how the workstation adjusts. Many require bending, lifting, reaching, loosening, and tightening of fixtures to make adjustments. Many of these workstations do not provide adequate adjustment to position the keyboard at about elbow height in both seated and standing positions.
- Consider maintenance and adjustment parameters. Who will set it up? How much will it cost? What adjustments need to be made if the screen is heavy or the user changes?
- Consider what the user does, what items he/she needs, and where these items will be when sitting and standing. If items such as resource books, the phone, or paperwork are needed and there is no room to access them while standing, the utility of the standing option is compromised.

Movement is essential; sitting and standing are both static postures.

5. With a standing station, users should have the option to sit or stand at the computer. Standing all day is not recommended. Some studies suggest that standing for 15-30 minute intervals is optimal.

6. If there are problems with seated comfort and postures, it is helpful to correct the **seated position first and then consider standing options**. Please see the Ergonomics Module and handouts located on the EHS site at Dartmouth. Seated workstations should provide options to vary sitting postures as shown to the right.



7. While there are some high hopes regarding the benefits of standing workstations, we do not have enough information on long-term outcomes relative to overall health or injury prevention. What we do know is that movement/changing position is important. Implement micro breaks to avoid staying in the same position (prolonged sitting or standing). Alternating sitting and standing, walking, and stretching throughout the day can be an effective method of implementing micro breaks.
- Try to move/change position about every 30-60 minutes.
 - Try using a headset and stand/walk when talking on the phone (office, home or cell)
 - Use a laptop, iPad, or tablet in standing. Place the item on a shelf, on top of a bookcase or any other surface that is about elbow height. Use for 15-30 minute periods as a change in position.
 - If you read, place the reading materials on a tilted holder on a shelf or podium that is above elbow height.
8. Sit/stand stations may be helpful to **vary work postures**. **However**, current research indicates that:
- After about 1 month, standing frequency declines rapidly.
 - Standing is more tiring than sitting.
 - The benefit of standing is unknown relative to its effect on the suspected negative impact of prolonged sitting.
 - Standing for prolonged periods increases stress on the circulatory system and increases the risk of developing varicose veins.
 - Sitting provides more stability for tasks requiring fine motor skills, such as computer work.

Not all possible problems or solutions may be noted here. Contact Molly Rhoad in EHS at Dartmouth if you would like to schedule an ergonomic assessment.