Office Workstation Checklist

Can the workstation be adjusted to ensure proper posture by   **Yes**   **No**

- *adjusting knee and hip angles to achieve comfort and variability*

- *supporting heels and toes on the floor or on a footrest*

- *placing arms comfortably at the side and hands/forearms parallel to the floor, elbows close to body, arms and shoulders relaxed*

- *during keyboard use, the forearm and upper arm form an angle of 80 – 100 degrees, with the upper arm almost vertical, and*

- *supporting wrist (nearly straight) on a padded surface when breaking from keyboard and mouse work*

Does the work area

- *provide enough clearance for the feet, knees, and legs relative to the edge of the work surface;*

- *provide sufficient space for thighs between the work surface and the seat;*

- *include headsets for use when frequent telephone work is combined with hand tasks such as typing, using a calculator, or writing?*

Does the chair

- *adjust easily from the seated position,*

- *have a padded seat pan*

- *have a seat that is wider than hip breadth to allow for movement and clothing*

- *have a back rest that provides lumbar support that can be used while working,*

- *have a stable base with casters that are suited to the type of flooring,*

- *have a seat pan length that allows utilization of the back rest without applying pressure to the underside of thighs or back of the knees*

- *allow the seat pan to adjust for both height and angle*

Is the keyboard

                                                                                                       Yes   **No**

- *height from the floor and the slope of the keyboard surface adjustable and,*

- *prevented from slipping when in use?*

Are other inputs/devices (mouse, pointer, calculator)

- *at keyboard height?*

Is the screen display

- *clean and free from flickering, and*

- *able to swivel horizontally and tilt or elevate vertically?*

Is the monitor situated so that

- *the work can be performed with the head in a neutral posture for most of the workshift*

- *it is between 20 and 40 inches away from the operator*

- *the top line of text is at or slightly below eye height, unless bifocal lenses are used, and*

- *there is sufficient lighting without glare on the screen from lights, windows, or surfaces?*

Does the monitor

- *have brightness and contrast controls?*

Is the job organized so that

- *workers can change postures frequently,*

- *workers can perform different job tasks to reduce intensive keying,*

- *workers can leave their workstations for at least 10 minutes after each hour of intensive keying and for at least 15 minutes after every 2 hours of intermittent keying, and*

- *the workers have received training in ergonomics and know how to make adjustments to their workstations, chairs, and other accessories?*

Office Setup

After reviewing your workstation you may notice areas that need adjusting. There is no one "right way" to alter a workstation to make it more ergonomically correct. Listed below is information that will help you alter those areas that might be potential hazards.

Positioning Your Office Chair

The chair is one of the most important components of the workstation. Adjustability is important, but more important is "fit". The chair should be able to accommodate the worker. Often individuals will "inherit" a chair from a previous employee and will not be familiar with exactly what the chair is capable of. Even a good chair can be positioned wrong. Please familiarize yourself with all the available adjustments of your chair and if needed, obtain a copy of the instruction manual.

1. When positioning your chair first adjust the height from the floor so the front of the seat pan hits at about knee level when standing. You should be able to rest both feet (toe and heel) on the floor and the hips should be parallel with or slightly higher than the knees.

Seat Pan

Hips parallel or slightly higher than knees, feet flat on the floor

A foot rest is only needed if the workstation cannot be adjusted so that the feet are flat on the floor

2. Next, adjust the seat pan depth. You want to have about three inches between the back of the knee and the edge of the seat. The seat pan should provide support for most of the thigh without contact between the back of the user's knee and the front edge of the seat pan.

Seat Pan

Adjust seat pan so there is 2–3 inches between edge of seat and back of knee

3. After the seat pan has been adjusted look at the back. Make sure the height is appropriate for your body type and the lumbar support is positioned correctly. A good ergonomic chair should have a fully adjustable back support. Adjust the tilt of the back so there is a 90-120 degree angle between your torso and thighs.

90 – 120 degree angle between torso and thighs

Height of lumbar support should support the natural curve of the spine

4. Armrest should be adjusted last. Adjust the height and width so elbows can be supported and there is an 80-100 degree angle between the forearm and the upper arm, with the forearm parallel to the floor. Properly adjusted armrests will be:

- *Wide enough to allow easy entrance and exit from the chair,*
- *Close enough to provide support for your lower arms while keeping your upper arms close to the body*
- *Low enough so your shoulders are relaxed during use (Adjust your armrests so they just make contact with your lower arms when positioned comfortably at your sides.), and*
- *High enough to provide support for your lower arms when positioned comfortably at your sides. You may be able to add padding to the top of your armrests if they are too low and not adjustable.*

80 – 100 degree angle between forearm and upper arm

Relaxed

Armrest too High

Armrest too High & Wide

Purchasing a New Chair

If your current chair does not adjust to provide you with an optimum ergonomic set up, a new chair may need to be purchased to minimize existing risk factors.

If purchasing a new chair look for the following:

- *Stable base with 5 casters*
- *Seat that is approximately 18" wide*
- *Provides a back rest section for lumbar support that is adjustable*
- *Seat length (back to front) to provide support for thighs and buttocks but not so long that the front edge presses into the backs of the employee's legs*
- *Has adjustability for height, seat horizontal tilt and back rest*
- *Seat that has a "water fall" (i.e. rounded, downward-curving) front edge to reduce pressure on the underside of the thighs*
- *Adjustable armrests that move vertically and horizontally to ensure forearms are maintained parallel to floor and to reduce static loading on shoulders*

Positioning Your Monitor

Ideally your monitor should be directly in front of you between 20-40 inches away (see picture below). Studies have shown that monitors placed closer to the user can put more strain on the eyes due to convergence. Monitors placed too far away often force the user to squint and lean forward resulting in back discomfort. The top line of text should be at or slightly below eye level. This will prevent tilting the head back which can lead to neck pain. In addition, with the text slightly lower, more of the eye will be covered by the lid which will help keep the membrane moist to prevent drying of the eyes. The monitor should be placed in an area to prevent glare, if this isn't possible there are several glare reduction screens available.
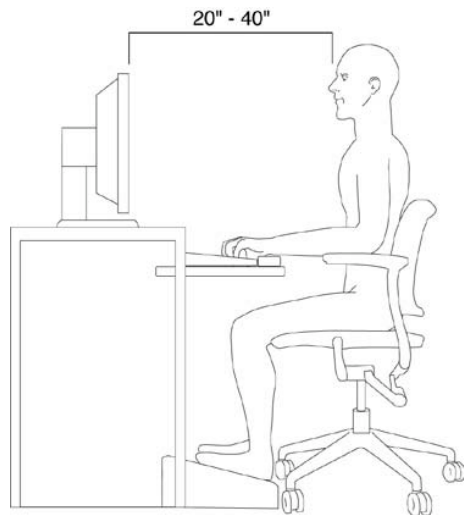
Individuals who utilize two monitors should have the center point where the two monitors meet directly in front of them. The monitors then can be fanned outward like a book to alleviate head movement. Please see picture below for guidance.

Individuals who wear bifocal glasses should place the monitor much lower to prevent straining the neck. Possible suggestions include tilting the monitor down or removing the tilt stand from the monitor. Another option might be to lower the work surface; however, this will often require further adjustments to the chair and keyboard to assure proper body positioning. You may also want to see your eye doctor about computer glasses designed for bifocal wearers.

Positioning Your Keyboard

The spacebar of the keyboard should be centered on the body. The input device or mouse should be placed to the left or the right. The height of the keyboard should be such that the forearms are parallel to the floor; the elbow is close to a 90° angle, and the shoulders are relaxed.

The best option for most office work stations is using an articulating keyboard tray. This is mounted underneath the work surface and allows easy adjustments in height and tilt. This can also be helpful if the user needs more leg clearance or distance from the monitor. One thing to remember, the tray should be long enough to also accommodate the mouse to prevent overextending of the elbow. Optimal setup can be achieved by utilizing a keyboard tray. OHS feels it is best practice for everyone whose job requires them to perform extensive keying and mousing to have an articulating keyboard tray.

An articulating keyboard tray with adjacent mouse is considered to be part of a "best practice" work station setup

A secondary option is the keyboard and mouse placed on the work surface. This will allow the worker to rest the forearms on the surface. This type of setup will require more adjustability in the worker's chair height (may also need a foot rest if feet will not reach the floor) and more surface depth to allow the monitor to be pushed back to the appropriate distance. Additionally, a contact stress relief pad (i.e. gel strip) should be used on the work surface to minimize the stress placed on the wrist and forearm.

Document Holders

Employees whose job requires them to frequently work between physical documents (i.e. papers/books) and the computer are strongly encouraged to implement the use of a document holder. Appropriate placement of the holder may reduce or eliminate risk factors such as awkward head and neck postures, fatigue, headaches, and eye strain. Document holders should

- *Allow you to place documents at or about the same height and distance as the monitor screen*
- *Be stable when loaded with heavier documents such as a textbook (Figure 2).*
- *A document holder can be positioned directly beneath the monitor (Figure 2). This provides a sturdy writing surface, if written entries are necessary, and reduces frequent movement of the head, neck, or back.*
- *Task lighting on the document should not cause glare on the monitor.*

"Inline" document holders are placed directly below the monitor. This is considered to be part of a "best practice" work station setup

Document holders that are placed beside the monitor should be the same height and distance as the monitor and be placed as close as possible to the monitor

Input device/mouse

The mouse should be placed at the same height and on the same plane as the keyboard. It is important to remember to use the entire arm when moving the mouse, not just the wrist. This will help prevent ulnar (turning outward) and radial (turning inward) deviation of the wrist. Frequent use of the mouse may require repositioning the keyboard. If you mouse with your right hand, you should move the keyboard slightly to the left for long durations of mousing. This will prevent raising the shoulder up and the elbow out, which can lead to discomfort. It is recommended to alternate between right and left hand mousing to avoid overuse, especially if you mouse with your writing hand. Some input devices can also be programmed to eliminate excessive clicking which can cause pain in the hand.

Telephone Use

Placing the telephone too far away can cause you to repeatedly reach, resulting in strain on the shoulder, arm, and neck. Additionally, prolonged conversations with the phone pinched between your shoulder and head (Figure 1) may cause stress and neck pain.

- *Place the telephone in the primary or secondary work zone (see "work area" below), depending on usage patterns. This will minimize repeated reaching, reducing the possibility of injury.*
- *Use a "hands-free" head set if you plan to spend a lot of time on the phone. Speaker phone options may also be appropriate, provided the volume of this feature does not annoy your co-workers.*


Hazardous posture created during telephone use

Employees who spend a lot of time on the phone should use a head set to minimize risk factors

Work Area

Your work area should fit your job. Pay attention to the three work zones. Anything that you use continuously throughout the day should be in the primary zone; these are items that can be reached with the elbow at a 90°angle. This includes items like your keyboard and mouse. Your secondary zone encompasses everything that can be reached with your arm fully extended, but doesn't require moving the back. Items like pens, paper, and the telephone usually go in this area. The tertiary zone should contain items you seldom use. Examples include printers, files, and some reference materials. Items in this zone require twisting, overextending, or repositioning the body to reach them. These positions should be infrequent since they can quickly lead to discomfort.
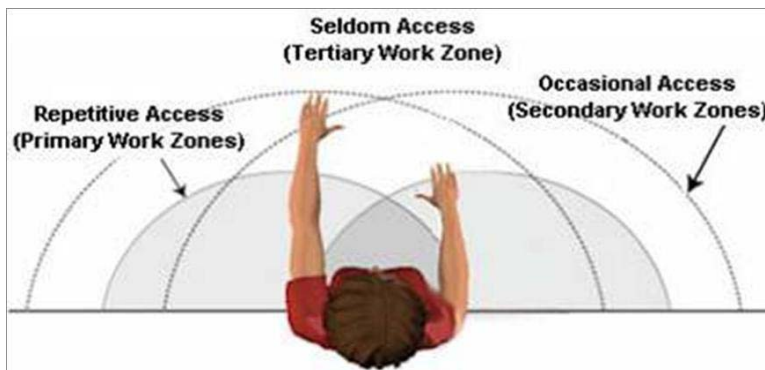
Job Organization

When utilizing the computer for long durations, periodically rotate tasks to stretch and flex. The intent is for the work rotation from keying operations to begin prior to the onset of pain or discomfort. Prevention is the key. The employee should use a timing device (e.g. egg timer) to prompt work rotation periods. For example, if the employee typically experiences pain or discomfort after 30 minutes of performing a task, the work rotation should be taken after 20 –25 minutes. Stretch and flex exercises can be performed ~ 10 minutes before resuming computer operations. Reposition your chair and keyboard throughout the day to alleviate static pressure applied to certain areas of the body.

For additional details on how to best customize your workstation to fit your needs, please refer to the OSHA computer workstation set up help guide:
http://www.osha.gov/SLTC/etools/computerworkstations/index.html

If you have any questions or need further assistance please contact UK Occupational Health and Safety at 257-3827 or email Melissa Claar at melissa.claar@uky.edu