CME

Some Tips for Healthy Computer Use for Protection of Health

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Introduction:

Computer is essential part of today's life for every working person. In every aspect of life like general education, health sector, business, travelling, and all office work and even for recreational purpose use of computer is almost unavoidable. Extended work with computers can lead to muscular fatigue and discomfort, usually in, back, arm, shoulder and neck. If the computer is used for long periods in wrong postures, there is chance of musculoskeletal injury (MSI).The risk increases as the intensity of computer work increases. These health problems may include carpel tunnel syndrome, tendinitis, tenosynovitis and many other musculo-skeletal disorders. The signs of these disorders may be seen in hands, wrists, arms, neck, shoulder, back, and forearm and even in fingers. Frequently the source of muscle fatigue and discomfort is working posture & lay out of the computer work station. Computer operators may also experience visual fatigue. Symptoms include eye strain, burning eyes, blurred vision and headache. Therefore the lighting levels and glare is also important while working with computers. So certain tips can be remembered to avoid or to minimize the discomfort arising out of long time use of computer.

Tips

1. **Adjust**
   i. Tilt of monitor

   ii. Use of foot rest

   iii. Chair height

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everyone. However, there are basic design goals, to consider when setting up a computer workstation or performing computer-related tasks.

By adjusting work environment personal, practices the user may be able to minimize fatigue and discomfort and reduce risk believed to be causing injury. In every time working posture, body position may be chosen relative to computer. The user should avoid seating in one posture long time. In between seating one should perform task that require working. One should take small and frequent break. User should build positive relationship at work and home.

2. **Listen**

One should listen to his/her body. Pay attention to any discomfort or pain and take immediate action to relieve it.

3. **Remember**

Practice exercise regularly to keep general fitness of the body

Position of workstation set-up

1. **Chair position**

- Push your hips as far back as they can go in the chair for lumber support

- Adjust seat height so that your feet are flat on the floor and knees equal to or slightly lower than hips.

- If the feet do not reach the floor, then a footrest should be used. The footrest height must allow your knees to be bent at 90^0; the height of the footrest may need to be adjustable.

- To keep back of the chair to $100^0/110^0$ reclined angle

- Adjust the arm rest so that shoulder are relaxed

2. **Keyboard position**

- Keyboard tray should accommodate mouse with enable leg clearance. The tray should not push you far away from work materials.

- When working at a keyboard the operator should be sitting with upper arms hanging naturally from the shoulders. The elbows should be bent roughly at 90^0 angle when the fingers are typing position. This posture helps the arm and

the wrists to be held in a natural and relaxed position, and puts least amount physical stress on muscle and joints.

- Resting wrist on wrist rest during working is not recommended, only wrist rest may help to keep wrist in neutral position
- Place mouse as close as possible to keyboard.

3. **Position of Screen and document keeping place**

- Adjust the screen and source document so that neck is in neutral relaxed position
- Centre of screen should be directly in front of user and above the keyboard.
- Position of top of the screen should be approximately 2 – 3 inch above seated eye-level.
- Seat at least an arm length away (20 – 24 inch) from the screen
- Reduce glare by placing screen right-angle to window, by adjusting curtain as necessary, or by using optical glass glare filter, using light filter, using LCD display
- Place telephone within easy reach
- Keep screen clean regularly with soft cotton.

4. **Pause and break**

- Short breaks one to two minute for every 20 – 30 minutes use of computer
- After each work hour 10 minutes break
- Avoid eye fatigue by resting and rechecking eye periodically
- Rest eye by covering with palm for 10 – 15 seconds
- Alternatively 20 -20 rule for pause may be followed – 20 second break for every 20 minutes work, look at least 20ft. away to avoid visual fatigue.
- During micro break you can stretch , stand up, move around, drink water or take tea or whatever healthy

5. **Position of Mouse**

- Hold mouse gently to move it over, don't throttle the mouse.

- Mouse should move from elbow – control mouse movement using the elbow as pivot point and keep wrist straight and neutral.

- Hold mouse in neutral wrist position

- Avoid restricting circulation in the wrist to prevent injury

- Avoid wrist rest – studies shows that using wrist rest double the pressure inside carpel tunnel.

- Avoid restricting arm movement

- Mouse shape – mouse design should be symmetrical shaped fitting with ones hand and may be near flat to reduce wrist extension but too curve mouse may not be good

- Mouse may be kept near key board on a soft pad of 1- 2 inch thick

6. **Furniture**

- Computer should be placed on a stable working surface with adequate space
  On a flat surface between 28 – 30 inch above the floor,
  if possible height adjustable furniture may be used

7. **Arm rest on a chair**

- Adjustable height arm rest i.e. comfortable fit to arm, flatter, padded is the best approach
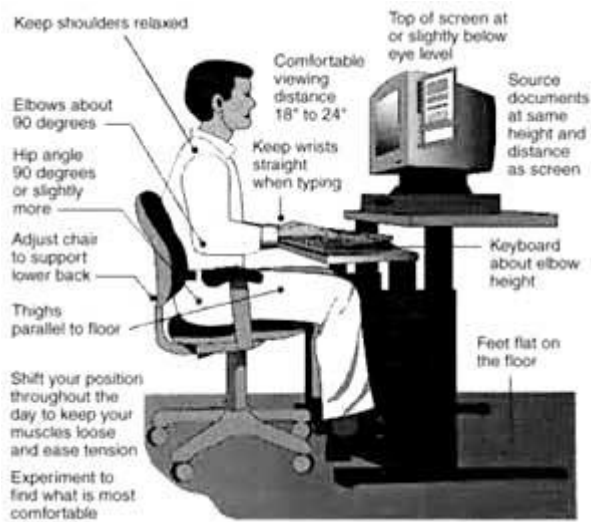
8. **Lighting**

- Use blinds or drapes on windows to eliminate bright light. Blinds should be adjusted during the day to allow light into the room, but not directly into the operator's field of view.

- Lamps should have glare shields or shades and the line of sight from the eye to the light should be at an angle greater than 30 degrees.

- Reorient the work-station so that bright lights from open windows are not in the field of view.

- Use indirect or shielded lighting where possible and avoid intense or uneven lighting in the field of vision.

9. **Ventilation**

Computer should be placed in a place where there is adequate fresh air ventilation to feel comfortable

10. **Noise**

Noise can cause stress that may stretch your muscles which increases risk of injury, so computer may be in quiet place.

Reference:

i. Cornel university ergonomics web

ii. www.healthycomputer.com

iii. www.bing.com/images

iv. www.osha.gov