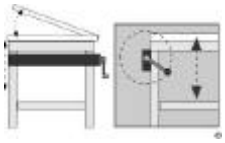
GENERAL WORKSTATION DESIGN PRINCIPLES

(Adapted from NIOSH Elements of Ergonomics Programs – Toolbox Tray 9-A)
Modified by EWI Works – January, 2002



1. Make the workstation adjustable, enabling both large and small individuals to fit comfortably and reach materials easily.

2. Locate all materials and tools in front of the worker to reduce twisting motions. Provide sufficient workspace for the whole body to turn.

3. Avoid static loads, fixed work postures, and job requirements in which operators must frequently or for long periods of time do the following:

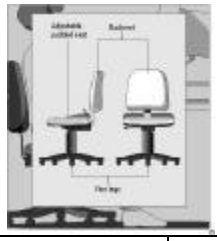
- Lean to the front or the side.
- Hold a limb in a bent or extended position

- Tilt the head forward more than 15 degrees.
- Stand in same position without shifting.

4. Set the work below elbow height for tasks requiring downward forces and heavy physical effort.

5. Support the limbs: provide elbow, wrist, arm, foot, and back rests as needed and feasible.

6. Provide adjustable, properly designed chairs with the following features:

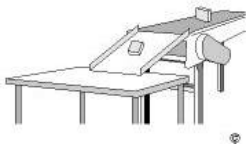


- Adjustable seat height.
- Adjustable up and down backrest, including a lumbar (lower-back) support.

- A chair that is stable to floor at all times (5-leg base).
- Padding that will not compress more than an inch under the weight of a seated individual.

7. Allow the workers, at their discretion, to alternate between sitting and standing.

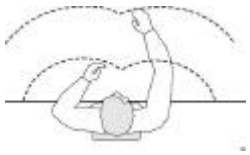
8. Provide floor mats or padded surfaces for prolonged standing.



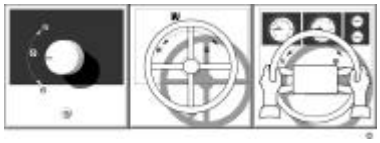
9. Use gravity to move materials.

10. Design the workstation so that arm movements are continuous and curved. Avoid straight-line, jerking arm motions.

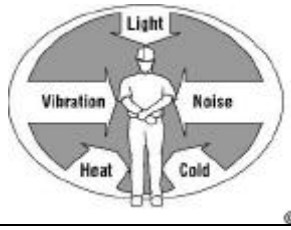
11. Design so arm movements pivot about the elbow rather than around the shoulder to avoid stress on the shoulder, neck, and upper back.



12. Design the primary work area so that arm movements or extensions of more than 15 in. are minimized.



13. Provide dials and displays that are simple, logical and easy to read, reach, and operate.



14. Eliminate or minimize the effects of undesirable environmental conditions such as excessive noise, heat, humidity, cold, and poor illumination.