

## CHECKLIST FOR EVALUATION OF ERGONOMIC STRESS IN INDUSTRIAL SHOPS

- |  | <u>Yes</u> | <u>No</u> | <u>N/A</u> |
|--|------------|-----------|------------|
|--|------------|-----------|------------|
1. Physical Stress:
    - a. Does this job require contact of fingers or wrist with sharp edges?
    - b. Do hand tools or process equipment vibrate the worker's hands, arms, or whole body?
  
  2. Force:
    - a. Does the job require more than 10 pounds of force?
    - b. Does this job require using a pinch grip (between thumb and finger)?
    - c. Are gloves used, increasing the force needed for motion of the fingers?
    - d. Does this job require frequent heavy lifting (> 18 kg or 40 lb, 2 hours per day)?
    - e. Does this job require occasional heavy lifting (> 23 kg or 50 lb)?
    - f. Does the job require handling items that are difficult to grasp?
  
  3. Posture:
    - a. Does the job require flexion or extension (bending up or down) of the wrist?
    - b. Does the job require deviating the wrist side to side (ulnar or radial deviation)?
    - c. Is the worker seated while performing the job?
    - d. Does the job require "clothes wringing" motion?
    - e. Does the job require extended reaches, beyond normal arm reach?
    - f. Does the job require awkward lifts or carries that are near the floor, above the shoulders, or far in front of the body?
    - g. Does the job require exertion of pushing, pulling, lifting, or lowering force in awkward positions to the side, overhead, or at extended reaches?
    - h. Do workers sit on the front edge of their chairs?
    - i. Is the worker required to maintain the same posture, either sitting or standing, all of the time?
  
  4. Workstation hardware:
    - a. Is the orientation of the work surface non-adjustable?
    - b. Does the work surface appear to be too high or too low for many operators?
    - c. Is the location of the tool non-adjustable?
    - d. Does the job require handling oversized objects that require two-person lifting?
    - e. Is there an absence of material handling aids, such as air hoists and scissors tables?
    - f. Do workers attempt to modify their chairs or work surfaces by adding cushions or pads?
  
  5. Repetitiveness:
    - a. Does the job require that one motion pattern be repeated at high frequency?
    - b. Is the cycle time for repetitive operation less than 30 seconds?
    - c. Is the work pace rapid and not under the operator's control?
  
  6. Tool design:
    - a. Is the handle too large for the thumb and finger to

- slightly overlap around a closed grip?
- b. Is the span of the tool's handle less than 5 cm (2 inches)?
  - c. Is the handle of the tool made of metal?
  - d. Is the weight of the tool greater than 10 lbs?
  - e. Are heavy tools lacking devices to suspend some of their weight?
  - f. Does use of the tool require flexion or extension of the wrist (bending up or down)?
  - g. Does the tool require ulnar or radial deviation of the wrist (bending to either side)?

7. Work environment:

- a. Are housekeeping practices poor, e.g. aisles cluttered, waste on the floor?
- b. Are floors uneven or slippery?
- c. Does the job require frequent (daily) stair or ladder climbing?
- d. Do the work tasks contain significant visual components, requiring good lighting?
- e. Does the worker's eye have to move periodically from dark to light areas?
- f. Is the air temperature uncomfortably hot or cold?

Score (count all "yes" answers)

Comments:

Prepared by: \_\_\_\_\_ Date:

Shop/Task Identification:

Operator's Name:

Evaluation: When a group of workstations are evaluated using this checklist by the same individual, the workstations with the higher scores should be the one most likely to cause ergonomic stress. It is not necessary for each workstation to achieve a "zero," or perfect score, on the checklist. Common sense should be used to determine where modification are necessary, reasonable, and feasible.