

Beaumont

Origination: 3/24/2021
Effective: 3/24/2021
Last Approved: 3/24/2021
Last Revised: 3/24/2021
Next Review: 3/24/2023
Document Contact: Jennie Green: Mgr
Laboratory
Area: Laboratory-Safety
Key Words:
Applicability: FH, GP, RO, Troy

Laboratory Ergonomics

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

- A. According to NIOSH, "Ergonomics is the scientific study of people at work. The goal of ergonomics is to reduce stress and eliminate injuries and disorders associated with the overuse of muscles, bad posture, and repeated tasks. This is accomplished by designing tasks, work spaces, controls, displays, tools, lighting, and equipment to fit the employee's physical capabilities and limitations." The laboratory will evaluate employees and workspaces through prevention and engineering controls.
- B. This procedure is to identify some common postures and motions to avoid for training purposes, identify work area considerations when performing an ergonomic assessment and outline a procedure to follow in the event of an ergonomic concern.

II. PROCEDURE:

Managers should work with staff to evaluate work station arrangement and function with regard to the above objectives. Consideration should be given to the following concerns and further evaluation sought if a problem is identified.

A. Training

Training should include instruction on proper body positions and use of any devices designed to reduce strain. Specific considerations include the following:

- 1. Postures to avoid:
 - a. Prolonged or repetitive flexion or extension of the wrist
 - b. Prolonged or repetitive bending at the waist
 - c. Prolonged standing or sitting without shifting position
 - d. Suspending an outstretched arm for extended periods of time
 - e. Holding or turning the head consistently to one side or working with head bent forward
 - f. Any unnatural posture that is held repeatedly or for a prolonged time
- 2. Motions to avoid:
 - a. Repeated motion without periods of rest
 - b. Repeated motion with little or no variation

- c. Repeated motions done with great force
 - d. Resting or compressing a body part on or against a surface
 - e. Lifting heavy objects far away from the body
 - f. Frequent reaching or working above shoulder height
 - g. Holding fingers, hands and arms in unnatural positions
 - h. Using heavy touch on computer or equipment keyboards or touch pads
 - i. Squeezing forceps, bottles, etc. with large amount of force, and or repeatedly without periods of rest
3. Factors which may contribute to symptoms:
- a. Furniture or a work area arrangement which produces bad postures
 - b. Physically demanding work the employee is not accustomed to
 - c. Underlying medical conditions

B. Work Area Considerations

The work area should be large enough to accommodate the employee, allow the full range of motions involved in performing the task(s) and provide adequate room for the equipment and materials that make up the work station. Employee should arrange equipment and supplies so that reaching is kept to a minimum. All of the following should be considered when doing a work station/function assessment.

1. Desk/computer/lab workstations:
- a. Chair adjustments
 - b. Design/layout
 - c. Equipment
 - d. Fatigue mats
 - e. Keyboard
 - f. Lighting
 - g. Monitor
 - h. Mouse or other input device
 - i. Work habits
2. Work functions (Examples):
- a. Repetitive pipetting
 - b. Microscopy
 - c. Workbenches
 - d. Biosafety cabinet
 - e. Micro-manipulation and fine motor skill activities
 - f. Microtome and cryostat work
 - g. Interacting with equipment
 - h. Overhead lifting

C. Action

1. Employee
 - a. To minimize possibility of MSD (musculoskeletal disorder), employee shall be responsible to:
 - i. Maintain work area, equipment and supplies to minimize MSD.
 - ii. Avoid unnatural postures and positions, repetition and/or unusual force application.
 - b. Upon concern of potential work area or work practice that may possibly be contributing to a MSD, the employee is responsible to report any symptoms and/or concerns to their supervisor or safety officer.
2. Management
 - a. Upon receiving an ergonomics concern, the manager shall investigate and evaluate the situation. Where reasonably feasible, the manager shall:
 - i. Change and/or modify employee's work actions, motions and activities, and/or;
 - ii. Change and/or modify the work station and/or work practice

III. REFERENCES:

- A. [NIOSH/CDC](#)
- B. [OSHA Ergonomics Prevention](#)
- C. [OSHA e-tools on Ergonomics](#)
- D. College of American Pathologists Laboratory General Checklist Northfield, IL

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medical Directors	Mitun Amin: Chair, Pathology - OUWB	3/24/2021
Medical Directors	John Pui: Chief, Pathology	3/17/2021
Medical Directors	Vaishali Pansare: Chief, Pathology	3/17/2021
Medical Directors	Peter Millward: Chief, Pathology Service Line	3/17/2021
Policy and Forms Steering Committee (if needed)	Jennie Green: Mgr Laboratory	3/17/2021
Operations Directors	Amy Knaus: Dir, Lab Operations C	3/16/2021
Operations Directors	Elzbieta Wysteppek: Dir, Lab Operations B	3/16/2021
Operations Directors	Brittnie Berger: Dir, Lab Operations C	3/16/2021
	Jennie Green: Mgr Laboratory	3/16/2021

Applicability

Farmington Hills, Grosse Pointe, Royal Oak, Troy

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