



UNIVERSITY OF KENTUCKY LABORATORY ERGONOMICS CHECKLIST

Date: _____

Name of Lab: _____

Evaluator: _____

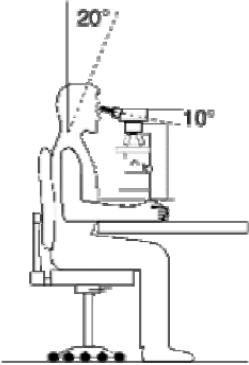
Lab Manager: _____


Comments/Notes: _____

*This checklist was adapted from the NIEHS Laboratory Self-Assessment Checklist and the OSHA Fact Sheet for Laboratory Safety

Laboratory Ergonomics Checklist


Laboratory Benches	Response	Suggestions if Response is No:	Comments
If employees stand, is anti-fatigue matting and/or supportive shoes supplied?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Order anti-fatigue insoles or anti-fatigue matting for areas with prolonged standing. See recommended products at: http://www.safety.duke.edu/Ergonomics/Catalog/Laboratory.htm	
Is the height of the bench appropriate for the majority of the workers or for the work that is performed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Ensure appropriate height for the majority of workers in the lab or for the particular piece of equipment being used. Use easily adjustable height chairs where possible.	
Is there adequate leg and foot room at all seated work areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No	To create foot room, modify benches, remove drawers and/or move equipment.	
Are work areas free of contact stressors, such as bench tops with sharp edges?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Apply padding to the edge of sharp work surfaces to reduce contact stress on arms and elbows. See recommended products list for examples.	
Are frequently used items within easy reach?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Rank items from most used to least and put the most frequently used items closest to you.	
Laboratory Chairs	Response	Suggestions if Response is No:	Comments
Can all laboratory chairs be adjusted to accommodate all employees who need to use the chairs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Chairs and stools should provide numerous adjustments, including adjustable backrest and seat height. If they do not, see recommended seating section of recommended products.	
Can employees comfortably rest their feet on the floor, a foot ring, or footrest?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Check foot rings for adjustability or supply adjustable footrests for taller lab stools. See recommended products list. Otherwise, feet should be flat on the floor.	
Is employee sitting with their back against the back of the chair?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Shorten the seat pan by moving the backrest or inserting a lumbar cushion.	
Laboratory Chairs	Response	Suggestions if Response is No:	Comments
Do employees know how to adjust the chairs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Read chair manuals, refer to the chair vendor's web site of instructions, or try the various levers and buttons.	

<p>Are chairs free of armrests or can arms be moved out of the way to allow for freedom of movement?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Remove armrests from chairs.</p>	
<p>Are the chair casters appropriate for the flooring?</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Contact the chair's vendor. Rubber or locking casters should be used for hard floors, and vinyl casters for carpeted surfaces.</p>	
<p>Microscopes <input type="checkbox"/> N/A</p>	<p>Response</p>	<p>Suggestions if Response is No:</p>	<p>Comments</p>
<p>Do employees work with neutral shoulder postures (without rounded shoulders or in a hunched position)?</p> 	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Move chair close to microscope and sit upright against back rest of chair/stool. Raise microscope so eye piece is eye level by using books or a microscope adjuster shown in recommended products list.</p>	

Microscopes <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Is the work area free of contact stresses between sharp edges and the forearms?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Purchase edge padding and/or arm supports for non rounded edges. See recommended products list for recommendations.	
Is the microscope pulled out to the edge of the workbench and stationed at a comfortable viewing height?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Elevate, tilt, or move microscope closer to edge of workbench or provide a cut-out workstation to allow the employee to get closer to the microscope.	
Have employees been trained how to properly sit at a microscope workstation?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Contact ergonomics to schedule an in-service.	
Are microscope work breaks provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide frequent short breaks (every 20 minutes) to stretch and move around. Every 15 minutes the employee should close their eyes or focus on something in the distance. Spread microscope work throughout the day and share it among workers if possible.	
Pipetting <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Is manual pipette use minimized?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Minimize manual pipetting. Consider options from recommended products list such as electronic or latch mode pipettes.	
Are electronic pipettors provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If pipetting for more than 5-10 minutes at a time, consider electronic pipettes.	
Are latch-mode pipettors provided? 	<input type="checkbox"/> Yes <input type="checkbox"/> No	If pipetting for more than 5-10 minutes at a time, consider latch mode pipettes.	

Pipetting <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Is a lightweight pipettor, properly sized for the user's hand available?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Have employees been trained how to properly operate the pipettor (e.g., pickup tips, eject tips, program electronic pipettor, etc.).	<input type="checkbox"/> Yes <input type="checkbox"/> No	Train employees on pipette use.	
Is pipetting frequency minimized (less than 2 hrs per day)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Limit periods of continuous pipetting to 20 minutes or less. Vary activities and rotate pipetting tasks among several people.	
Are frequent breaks provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Take frequent short breaks (e.g., 2 minutes for every 20 minutes of pipetting).	
Is the pipettor electric or multi-channeled to allow for computer-activated multiple dispensing instead of finger-activated dispensing?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Consider purchasing new Pipettes. See recommended products list.	
Are pipettors with finger aspirators and thumb dispensers available to reduce thumb strain?	<input type="checkbox"/> Yes <input type="checkbox"/> No		

Fine Motor Skills <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Are vials with the fewest amounts of threads allowable used?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Use plastic vials with fewer threads to reduce twisting motions during capping and uncapping of lids.	
Is dissection or micromanipulation tasks with forceps performed less than 5 hours per week?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Split micromanipulation tasks between lab workers and take breaks often to stretch and change postures.	
Are frequent micro breaks provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide frequent micro breaks (20 seconds each).	
Microtomes/Cryostats <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Do employees use neutral postures when operating the microtome or cryostat (without excessive bending of wrist)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Coach employees to use alternate postures.	
Is the workstation at a height and distance that allows the arms to be as close to the body as possible?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Adjust the chair or move the equipment closer to minimize reaching.	
Do employees have access to an automatic microtome/cryostat?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Purchase an automatic microtome to replace manual unit.	
Are frequent breaks provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide frequent breaks.	

Laboratory Hoods and Biosafety Cabinets <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Are anti-fatigue mats used if employees stand for prolonged periods?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Order anti-fatigue matting for standing areas. See recommended products list for examples.	
Are materials inside the hoods/biosafety cabinets as close as possible so as not to require reaching?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Move most frequently used items closest to you to minimize reaching. Remove any unnecessary items from the hood. Make sure contaminated material is handled at or behind the air-flow break point on the surface of the cabinet. Approved elevated turntables can be used for easy retrieval of materials and tools.	
Are lighting levels inside the hoods/biosafety cabinets appropriate?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Make sure that lights in hoods/BSCs are working properly. Replace bulbs when necessary. Use diffused lighting to limit glare when using reflective surfaces.	
Do employees work with neutral neck/back postures?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Use proper sitting posture and positioning.	
Are frequent breaks provided for prolonged hood/cabinet use?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide frequent micro breaks (20 seconds each every 20 minutes).	
Computer Workstations <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments
Can top of screen for monitors be adjusted to each individual's eye level? 	<input type="checkbox"/> Yes <input type="checkbox"/> No	Instruct users to adjust the monitor to eye height; or Adjust the chair so that eye height matches monitor height (Note: Ensure feet are on the floor or on a footrest and thighs are parallel to the ground, and keyboard is at appropriate height); or Replace with adjustable monitors or monitor arms.	
Computer Workstations <input type="checkbox"/> N/A	Response	Suggestions if Response is No:	Comments

Are monitors positioned so they are not in front of or across from a window?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Move monitors so they are 90 degrees to the window.	
Are keyboards and input devices height adjustable?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Adjust the keyboard/input devices to match elbow height; or adjust chairs so elbow height matches keyboard and input device height (Note: Ensure feet are on the floor or on a footrest and thighs are parallel to the ground); or Install adjustable keyboard/input device trays.	
Is task lighting sufficient for tasks such as reading and writing?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Purchase task lights	
Are other frequently used items (calculator, reference books) within reach?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Move frequently used items closer	
Are document holders available for employees who frequently reference documents?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Purchase document holders	
Is the employee able to rest his/her feet comfortably on the floor?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide footrests. Tall footrests or adjustable footrings on chairs would be required for lab stools.	
Are breaks provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Provide frequent short breaks (every 20-30 minutes) to stretch and move around. Every 15-20 minutes the employee should close their eyes or focus on something in the distance.	

Helpful Tips to Share with All Laboratory Workers:

- Keep shoulders relaxed and elbows at your sides when working.
- Avoid reaching to use instruments and work materials.
- Work with your wrists in a neutral or straight position as if shaking hands with someone.
- Sit close to the work area, keep objects close, and adjust the chair to match the height of the workbench.
- Avoid repetitive or forceful twisting and turning motions (e.g. opening valves or adjusting microscopes).
- Alternate tasks and take breaks.
- Select equipment and tools that are the right size for your hands.
- Use padding and tubing to reduce pressure and force when working. For example, use rubber tubing or forceps to increase diameter and reduce pinch force. Soften sharp edges on work surfaces with padding.
- Use thin, flexible gloves that fit properly.
- Shift your weight often when standing to work. Use a stool or shelf to prop up a foot to relieve pressure on your back.
- Alternate how you hold objects like forceps.
- When pipetting, do not twist or rotate the wrist. Alternate hands or use both hands. Use a relaxed grip and exert minimal pressure.
- When pipetting, elevate the chair rather than reaching up to pipette.
- Remove unnecessary supplies from the work area.