



Laboratory Ergonomics Tips

Task	Body positions/ postures	Work Practices/ Processes	Proper equipment
Seating	<ul style="list-style-type: none"> • Feet should rest flat on the floor or a footrest • Chair should provide adequate low back and thigh support • Front edge of chair should not press up against back of knees. 	<ul style="list-style-type: none"> • Avoid sitting at the edge of the seat, sit all the way back into the seat for back support • Get out of chair at least every half hour to help relieve stress on back • Before starting work, make sure chair is properly adjusted for both the worker and the type of task 	<ul style="list-style-type: none"> • Use a footrest if feet do not reach the floor • If back support is not adequate or if the seat pan is too long, try a rolled up towel or a back support cushion • Remove or adjust armrests that hinder work activities
Pipetting	<ul style="list-style-type: none"> • Maintain straight wrists • Keep elbows close to body 	<ul style="list-style-type: none"> • Keep waste bins, beakers, etc., as close as possible • Take microbreaks every 20-30 minutes to stretch • Share workload between right and left hands (load splitting) • Rotate pipetting tasks with other employees if possible • Alternate activities to avoid continuous pipetting 	<ul style="list-style-type: none"> • Use shorter pipettes and pipette tips when possible • Choose pipettes that require minimal hand and finger effort • For highly repetitive jobs, utilize automated processes or multi-channel pipettes where feasible. • See Seating section
Test Tube Handling	<ul style="list-style-type: none"> • Maintain straight wrists • Work with elbows close to body • Avoid reaching upward or stooping low 	<ul style="list-style-type: none"> • Arrange tubes to minimize reaching/ twisting • Share workload between right and left hands (load splitting) • Take microbreaks every 20-30 minutes to stretch • Use both hands to open tubes 	<ul style="list-style-type: none"> • Use upside-down containers to raise tube racks when needed • Use a test tube rack instead of holding tubes by hand • Use cap removers to minimize pinch gripping • Pad sharp/hard edges of workbench to minimize contact stress on elbow and forearm
Microscope Use	<ul style="list-style-type: none"> • Maintain straight wrists • Avoid static tilted head/neck postures 	<ul style="list-style-type: none"> • Take frequent microbreaks to rest eyes (momentarily close eyes or focus on far away objects to vary focal length) • Keep scopes clean and in good condition • Spread microscope work throughout the day or rotate microscope work among several employees if possible 	<ul style="list-style-type: none"> • Raise tilt microscope to allow a more neutral head/neck posture • Pad sharp/hard edges of workbench to minimize contact stress on elbow and forearm • See Seating section
Hand Tool Use	<ul style="list-style-type: none"> • Maintain straight wrists • Avoid pinch gripping tools when possible 	<ul style="list-style-type: none"> • Take microbreaks every 20-30 minutes to stretch • Share workload between right and left hands (load splitting) 	<ul style="list-style-type: none"> • Choose the right tool for the job • Ensure tools are in proper working order • Increase size of tool handles where possible to minimize gripping effort
General Work Tips	<ul style="list-style-type: none"> • Minimize use of awkward body postures 	<ul style="list-style-type: none"> • For any continuous/ repetitive task, take frequent microbreaks away from the primary activity • Arrange work scheduling to allow alternating of tasks • Rotate tasks intermittently between left and right hands to avoid overuse of any one side • For highly continuous/ repetitive tasks, consider worker rotation to help safely distribute workload 	<ul style="list-style-type: none"> • Use equipment models that adjust in size • Use the proper equipment for the task • Know how to properly use the equipment • When possible, use automated processes to reduce/ eliminate high repetition or forces