



Laboratory Ergonomics

Use this guide to prevent occupational injuries during routine laboratory procedures.



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Laboratory workers can encounter ergonomic hazards that manifest into occupational injuries. Some examples of these hazards include, standing for extended periods of time, working in awkward positions, leaning and reaching for items, and performing repetitive movements and tasks. This guide will address simple concepts for ergonomics while in a laboratory setting.

1. Standing

- Wear comfortable footwear and consider using an anti-fatigue mat.
- Sit against the back of your chair. If on a stool, adjust your stool so that you remain upright and in a supported position.
- Propping a foot can relieve pressure on the back.
- Stand and shifting your weight from one foot to the next, to avoid lower back pressure.
- Alternate between sitting and standing.

2. Reaching and Arms

- Keep all items needed to perform the task within arm's reach.
- Relax your shoulders and keep your elbows close to your body when working at the laboratory bench.
- Keep commonly used supplies on lower shelves for easier access.
- Use a stepstool when reaching for items from higher shelves.

3. Pipetting

- When pipetting, do not rotate or twist your wrist.
- Hold the pipette with a relaxed grip.
- Try to alternate hands while pipetting.
- Use two hands or light force to change tips.
- Place waste receptacles for used tips at a level no higher than the top of the tubes being filled.
- Take a 1-2-minute break after every 20 minutes of pipetting.

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4. Microscope Use

- Keep the microscope clean and in working order.
- Try to sit close to the work area.
- Keep elbows at your side.
- Adjust the chair, workbench, or microscope so your head is in an upright position and not bending while using the microscope.
- Adjust the eyepieces or mount the microscope on a 30-degree angle stand for easier viewing.
- Spread microscope work throughout the day and share it with several people.
- Take breaks every 15 minutes to focus on something in the distance. Stand up and stretch every 30-60 minutes.

5. Using Chemical Fume Hoods or Biosafety Cabinets

- Always keep fume hoods clutter free and the sash clean for viewing.
- Work six inches inside the hood.
- Supplies used most frequently should be at arm's length. Remove unnecessary supplies.
- Take short breaks to stretch to relieve forearm and wrist pressure.
- If using a chair or stool, adjust the height to allow your shoulders to rest and relax.