

## Labs

### Description

## Lab Ergonomics

Employees working in a laboratory perform routine tasks such as pipetting, working at microscopes, operating microtomes, keyboarding at computer workstations, standing and/or working in awkward positions in front of laboratory hoods/safety cabinets. Lab workers can potentially incur ergonomic risks of repetitive motion injuries. Therefore, it is important to become familiar with how to control laboratory ergonomics-related risk factors, in order to prevent and reduce occupational injuries.

### Laboratory Safety Ergonomics – OSHA Guidelines

[su\_spoiler style="fancy" icon="chevron" title=" Be Aware of Your Posture "]

- Use a chair that provides good back support and sit against the back of the chair.
- Lower the chair or adjust the foot ring or get a footrest, if their feet dangle.
- Tilt the seat forward or use a seat wedge when working in a forward posture; do not jut their chin forward when working. Adjust the position of their work, the work surface, or the chair so that they sit in an upright, supported position.
- Always try to work at a bench cut out; cut outs can help workers get close to their work while sitting against the back of their chair.
- Use supportive shoes and cushioned mats if required to stand for long periods.
- Keep frequently used trays and supplies within close reach.

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Keep Arms and Hands Relaxed "]

- Keep their shoulders relaxed and their elbows close to their sides when working. Avoid reaching to use instruments and work materials.
- Maintain neutral wrist and arm postures when working; work with their wrists in a neutral or straight position.
- Sit close to their work area, keep objects close and adjust their chair to match the height of the bench.
- Avoid repetitive or forceful twisting and turning motions
- Select equipment and tools that are the right size for their hands.
- Use padding and tubing to reduce pressure and force when working.
- Use thin, flexible gloves that fit properly.
- Shift their weight often when standing to work.

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Avoid static positions "]

- Use a stool or shelf to prop up a foot to relieve pressure on their back.
- Alternate how they hold objects like forceps. To vary the task, alternate holding with the thumb and index finger, and with the index and middle fingers

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Pipetting Tips "]

- Elevate chair rather than reaching up to pipette.
- Do not twist or rotate their wrist while pipetting.
- Alternate hands or use both hands to pipette.
- Hold the pipetter with a relaxed grip.
- Use electronic pipettes or light touch models whenever possible.
- Use minimal pressure while pipetting.
- Use a light amount of force or two hands to change tips.
- Use low profile tubes, solution containers and waste receptacles.
- Select a lightweight pipetter, properly sized for their hand.
- Use pipettors with finger aspirators and thumb dispensers to reduce thumb strain.
- Use latch-mode or electronic pipettors for repetitive pipetting.
- Take a 1-2-minute break after every 20 minutes of pipetting.

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Microscope Tips "]

- Sit close to the work surface.
- Avoid leaning on hard edges.
- Pad forearms and edges.
- Keep elbows close to their sides.
- Adjust chair, workbench, or microscope as needed to maintain an upright head position.
- Elevate, tilt or move the microscope close to the edge of the counter to avoid bending their neck.
- Use adjustable eyepieces or mount your microscope on a 30° angle stand for easier viewing.
- Keep scopes repaired and clean.
- Spread microscope work throughout the day and share it with several people, if possible.
- Take short breaks. Every 15 minutes close the eyes or focus on something in the distance. Every 30-60 minutes get up to stretch and move.

[/su\_spoiler] [su\_spoiler style="fancy" icon="chevron" title=" Lab Hoods & Safety Cabinet Tips "]

- Remove unnecessary supplies from the work area.
- Perform all work 6 inches inside the hood.
- Position work supplies in their order of use, with those most frequently used near the front of the hood, but not closer than 6 inches from the face of the hood.
- Place equipment on approved elevated turntables for easy retrieval.
- Use diffused lighting to limit glare.
- Take short breaks to stretch muscles and relieve forearm and wrist pressure.
- Adjust chair/stool to a height that allows the shoulders to relax.

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