



- Maintain neutral wrist and arm postures when working; work with their wrists in a neutral or straight position as if they were shaking hands with someone.
- 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 (e.g., opening valves or adjusting microscopes).
- Select equipment and tools that are the right size for their hands.
- Use padding on the right

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Pipetting

Workers should be encouraged to do the following when pipetting:

- 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.

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Using a Microscope

Workers should be encouraged to do the following when using a microscope:

- 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.

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Using Hoods and Biosafety Cabinets

Workers should be encouraged to do the following when using hoods and biosafety cabinets:

- 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.

Employers Should Train Workers to Avoid Ergonomic-Related Risk Factors When Using Computers

Workers should be encouraged to do the following when using computers in the lab:

- Use adjustable keyboard platforms under lab benches that accommodate use of the mouse beside the keyboard.
- Where possible, position computer workstations in corners or other areas away from doors, entrances and passageways.
- Place monitor so their viewing distance is between 18 and 30 inches.
- Place monitor so the top of the screen is approximately at eye level. This allows the eyes to gravitate naturally toward the center of the screen.
- Use a document holder placed adjacent to and in the same plane as the computer screen.
- Use footrests, where possible, in order to allow them to change leg positions throughout the day.
- Use an appropriate keyboard, mouse or other input devices if they have existing musculo-skeletal problems.
- Take mini-breaks of 3 to 5 minutes for every 20-30 minutes of keyboarding or mouse work. These breaks can be spent doing mild hand exercises or stretches.
- Not to switch from computer keyboarding to pipetting activities (or vice versa) without an adequate break (at least 15 minutes) to allow the hands to recover.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; the teletypewriter (TTY) number is (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



Occupational Safety
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