

MANUAL PIPETTING



Use an ergonomically designed manual or electronic pipette to allow more neutral thumb motion and less static force and pressure on the hand.

MICROSCOPY



Use height adjustable lab tables and chairs to minimize neck and shoulder strain from thrusting head and neck upward and forward.

MICROTOME



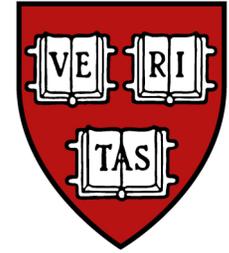
Choose an ergonomically designed chair with adjustable height and back support.

It may be necessary to raise or lower the microtome to minimize wrist flexion (upward motion) and shoulder abduction (forward thrust).

For further information, please contact ehs@harvard.edu or visit www.ehs.harvard.edu.

Revision Date: 03/18/2024

To request this document in an alternative format, contact ehs@harvard.edu.



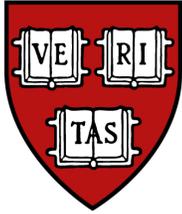
GUIDE TO LABORATORY ERGONOMICS



Harvard University Environmental Health, Safety & Emergency Management

Cambridge
46 Blackstone Street
Cambridge, MA 02139
(617) 495-2060

Longwood
Vanderbilt Hall
107 Avenue Louis Pasteur
(617) 432-1720



Apart from the potential risk of working daily with hazardous substances, laboratory personnel also have the potential to be exposed to many ergonomic risk factors due to the nature of their work (i.e. work benches) and the research they conduct (i.e. long hours).

Ergonomic risk factors associated to Laboratories are not any different from those found in the office and general industry. They consist of awkward and static postures, high repetition, excessive force, contact stresses, vibration, and pinch grip among others.

The purpose of this guide is to disseminate information to laboratory personnel about how they can control laboratory ergonomics risk factors, improve their level of comfort while performing their jobs, and reduce the risk of acquiring occupational injuries.

CRYTOSTAT



Because of this rigid configuration, the cryostat leaves little room for adjustment. The best solution is to limit the time at this station and take breaks.

FLOW CYTOMETER



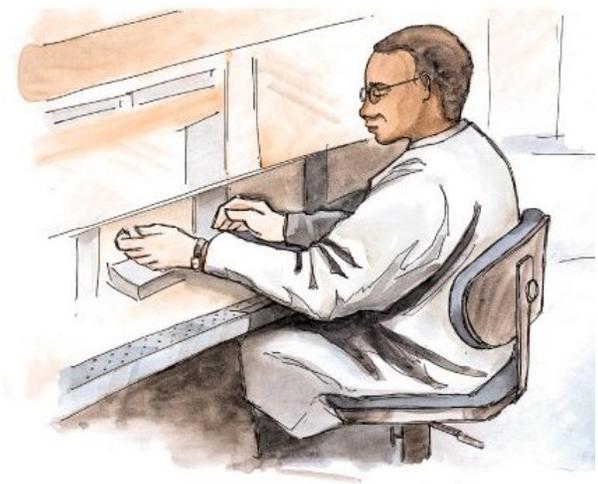
Raise the flow cytometer to minimize extended reaches and severe neck flexion during specimen processing (and other computer controlled equipment).

LABORATORY WORKPLACE ENVIRONMENT



Store frequently used items within reach. Use a fully adjustable lab chair with back support and a footrest. Arms should be parallel to the floor and legs should fit comfortably under the table.

BIOLOGICAL SAFETY CABINET



Place all work materials within reach. Support your feet.