

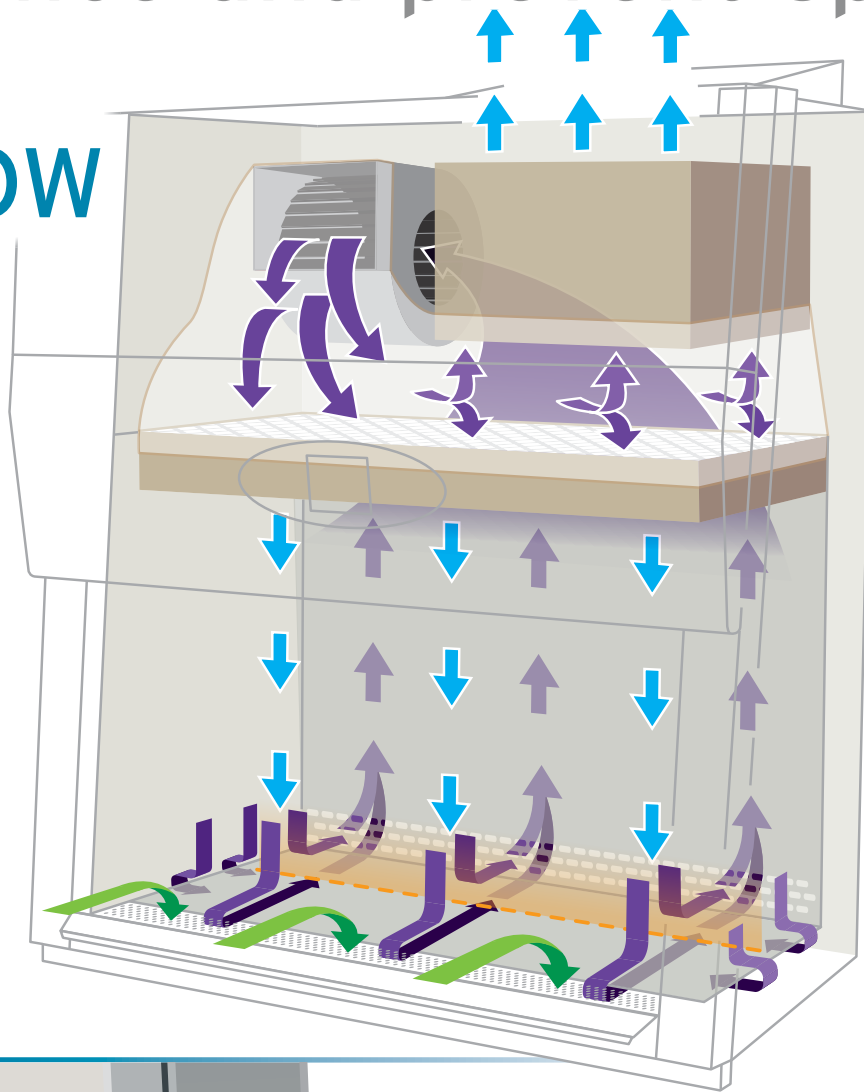
10 TIPS FOR WORKING SAFELY IN THE LABORATORY WITH YOUR BIOSAFETY CABINET

Good technique when working within a Class II Biosafety Cabinet (BSC) will minimize air turbulence and prevent splatter or unwanted spread of aerosols.

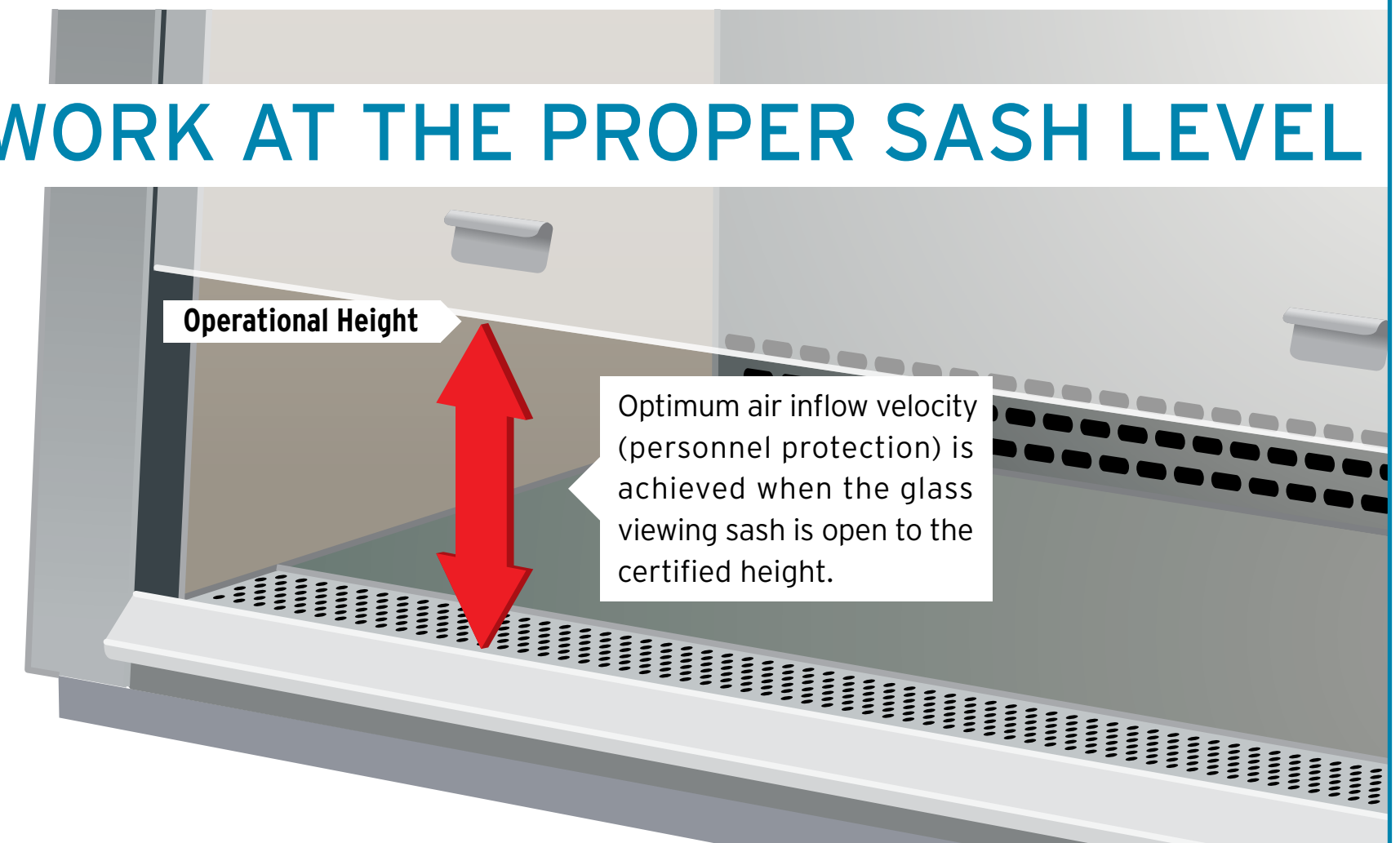
1 KNOW THE AIRFLOW

Biological Safety Cabinets provide personnel, product, and environmental protection through the use of HEPA-filtered air. Understanding air flow in, out, and through the cabinet is essential for maintaining a safe work environment.

- HEPA Filtered Air
- Contaminated Worksurface Air
- Contaminated Room Air
- Air Split

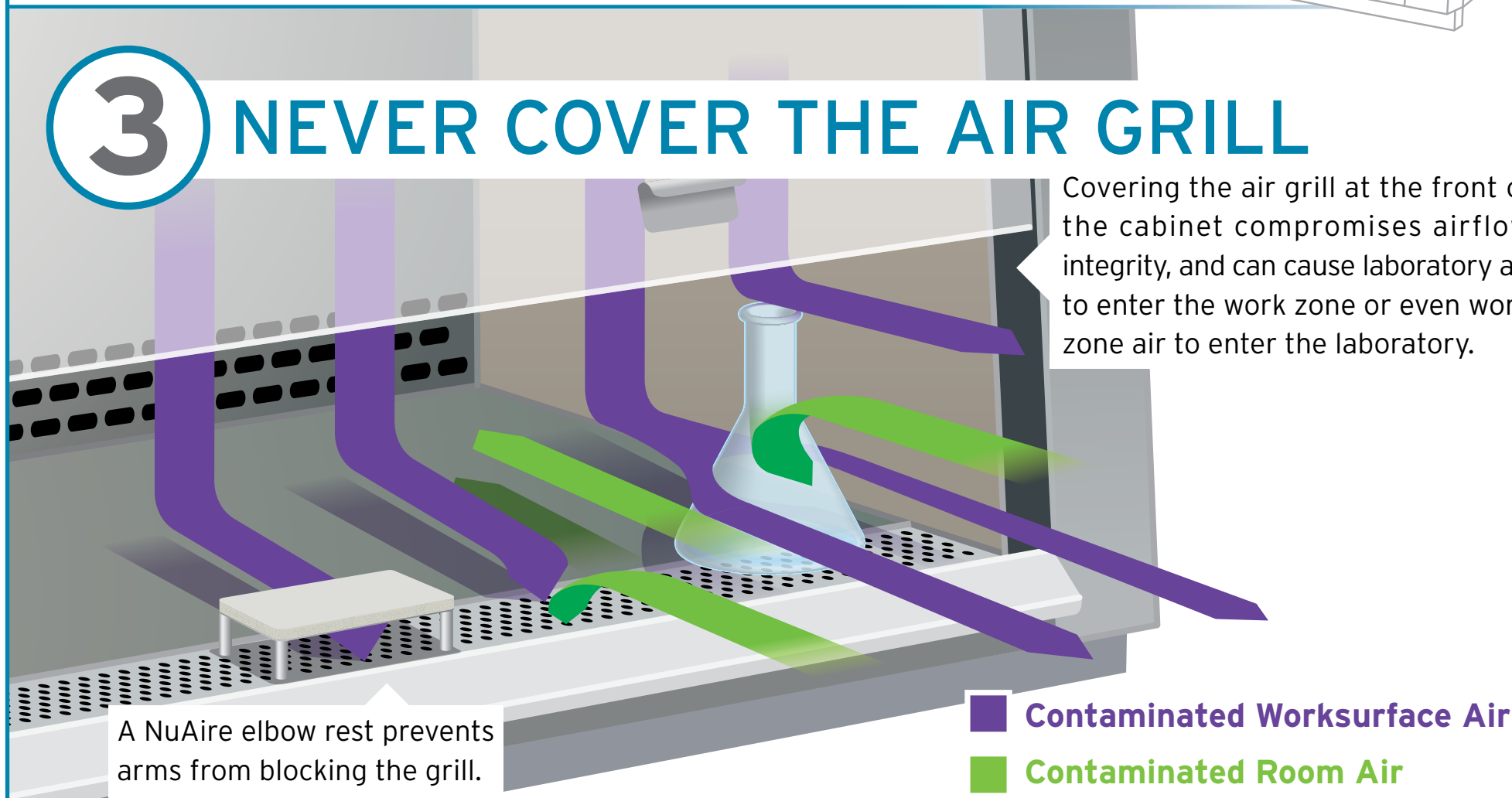


2 WORK AT THE PROPER SASH LEVEL



3 NEVER COVER THE AIR GRILL

Covering the air grill at the front of the cabinet compromises airflow integrity, and can cause laboratory air to enter the work zone or even work zone air to enter the laboratory.

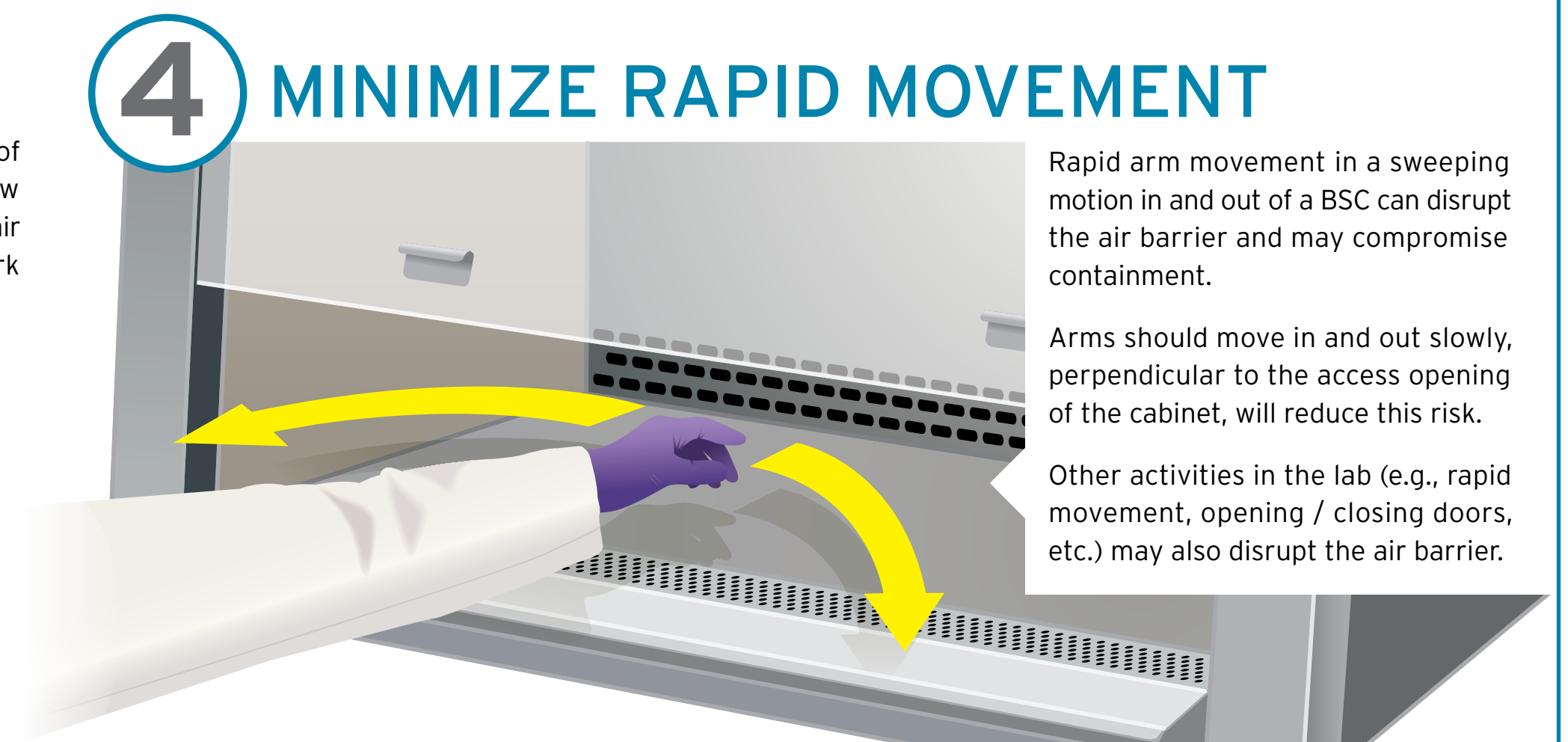


4 MINIMIZE RAPID MOVEMENT

Rapid arm movement in a sweeping motion in and out of a BSC can disrupt the air barrier and may compromise containment.

Arms should move in and out slowly, perpendicular to the access opening of the cabinet, will reduce this risk.

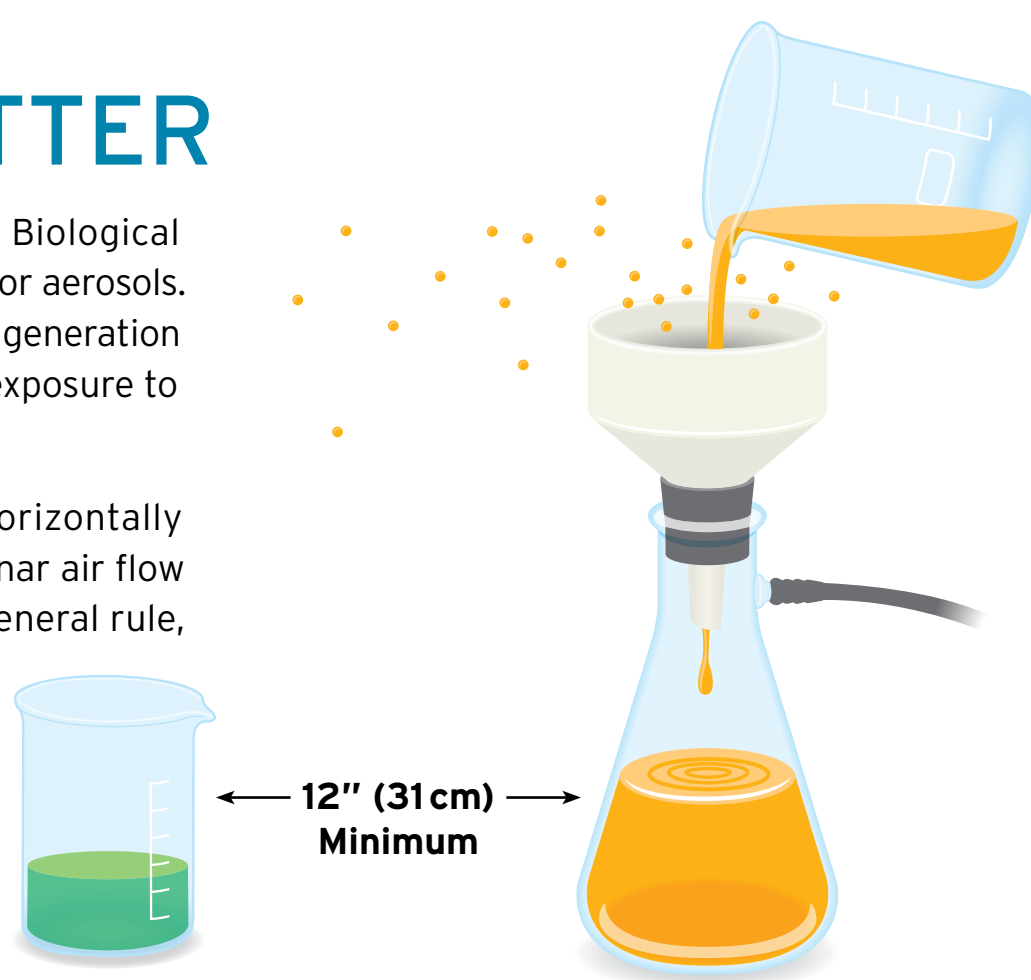
Other activities in the lab (e.g., rapid movement, opening / closing doors, etc.) may also disrupt the air barrier.



5 REDUCE SPLATTER

Many common procedures conducted in Biological Safety Cabinets (BSC) may create splatter or aerosols. Techniques to reduce splatter and aerosol generation will minimize the potential for personnel exposure to infectious materials.

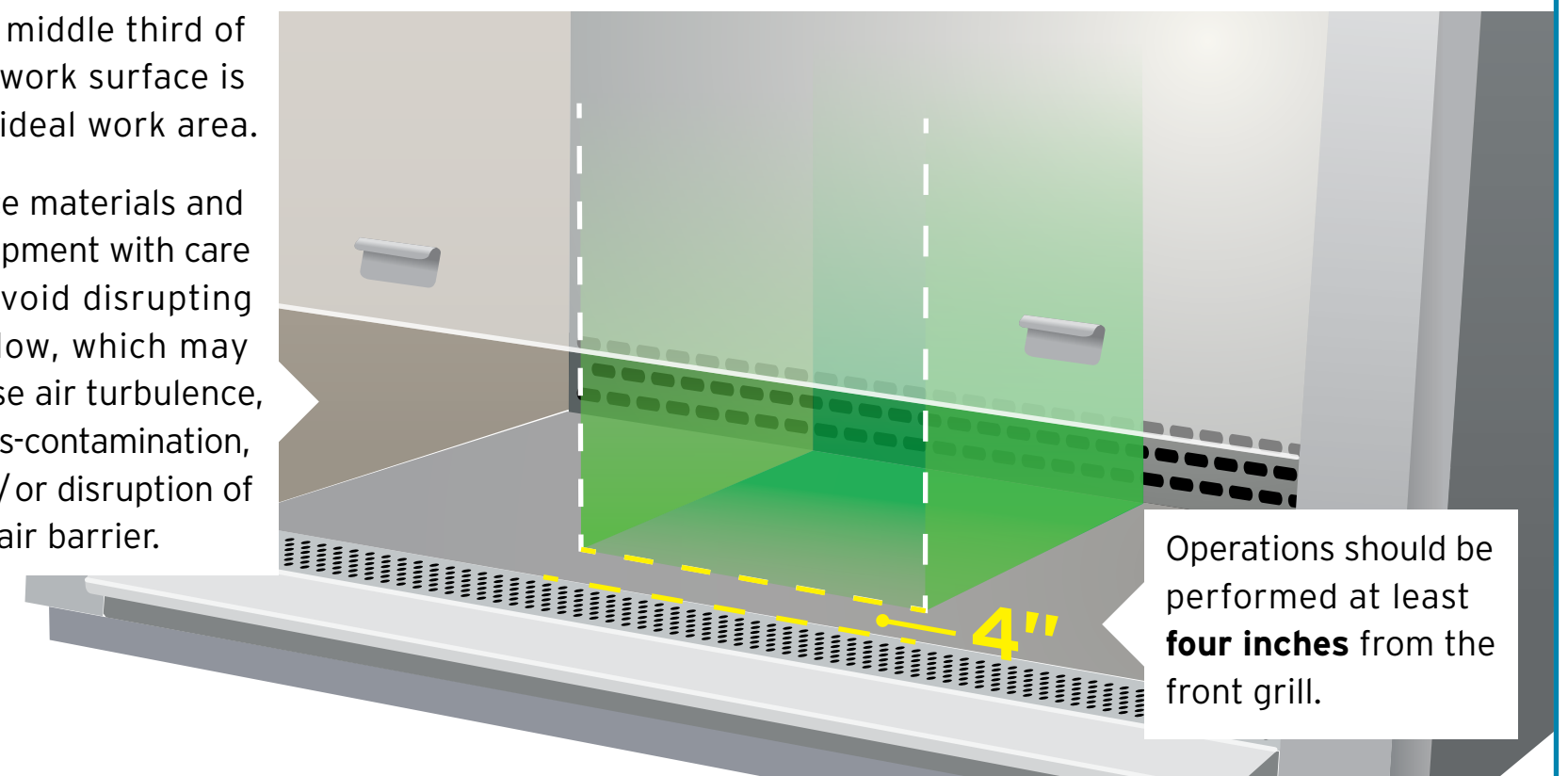
Class II cabinets are designed so that horizontally nebulized spores will be captured by laminar air flow within 14 inches (35 cm) of travel. As a general rule, keeping clean materials a distance of least 12 inches (31 cm) away from any activities which may generate aerosols minimizes potential cross-contamination.



6 KNOW YOUR WORK AREA

The middle third of the work surface is the ideal work area.

Place materials and equipment with care to avoid disrupting airflow, which may cause air turbulence, cross-contamination, and/or disruption of the air barrier.

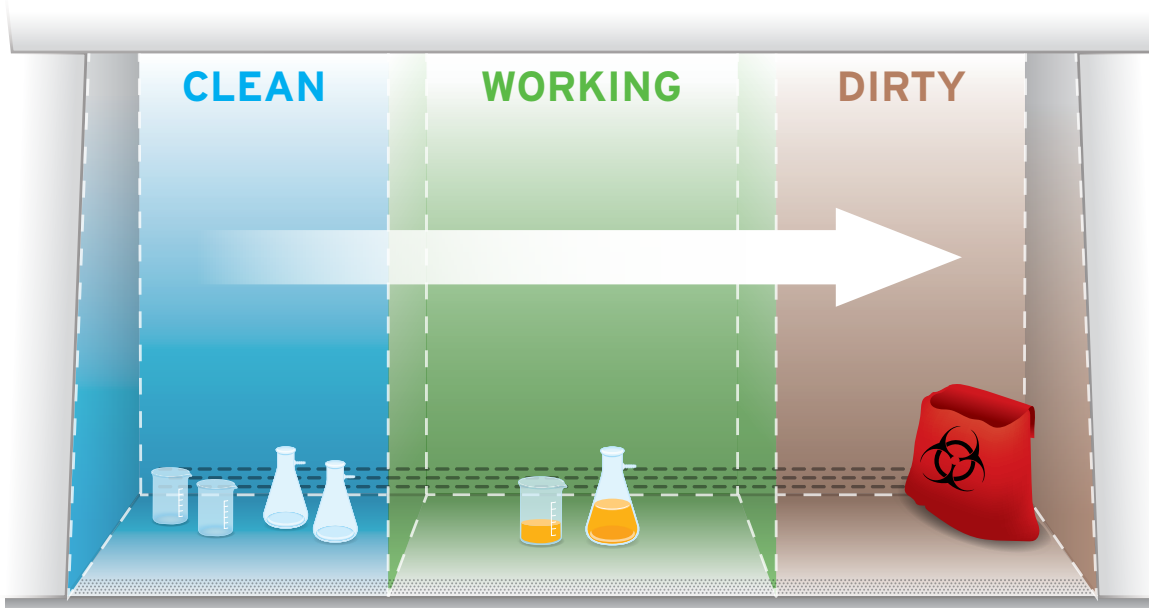


7 WORK FROM CLEAN TO CONTAMINATED

Work should flow from clean to contaminated areas across the work surface. Limit the movement of dirty items over clean ones.

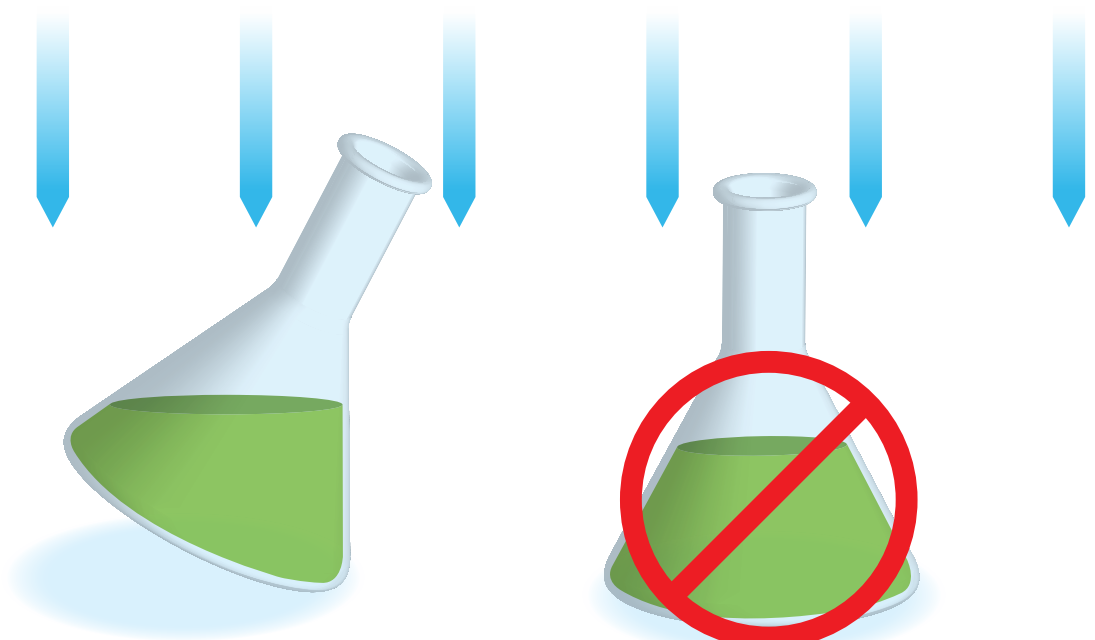
Distribute items evenly in the work area to help maintain uniform airflow. Supplies and equipment (especially aerosol generators such as vortex mixers or tabletop centrifuges) should be as close as practical to the rear of the work area, away from the front grill.

Bulky items such as biohazard bags, discarded pipette trays and suction collection flasks should be placed to the side of the work area.



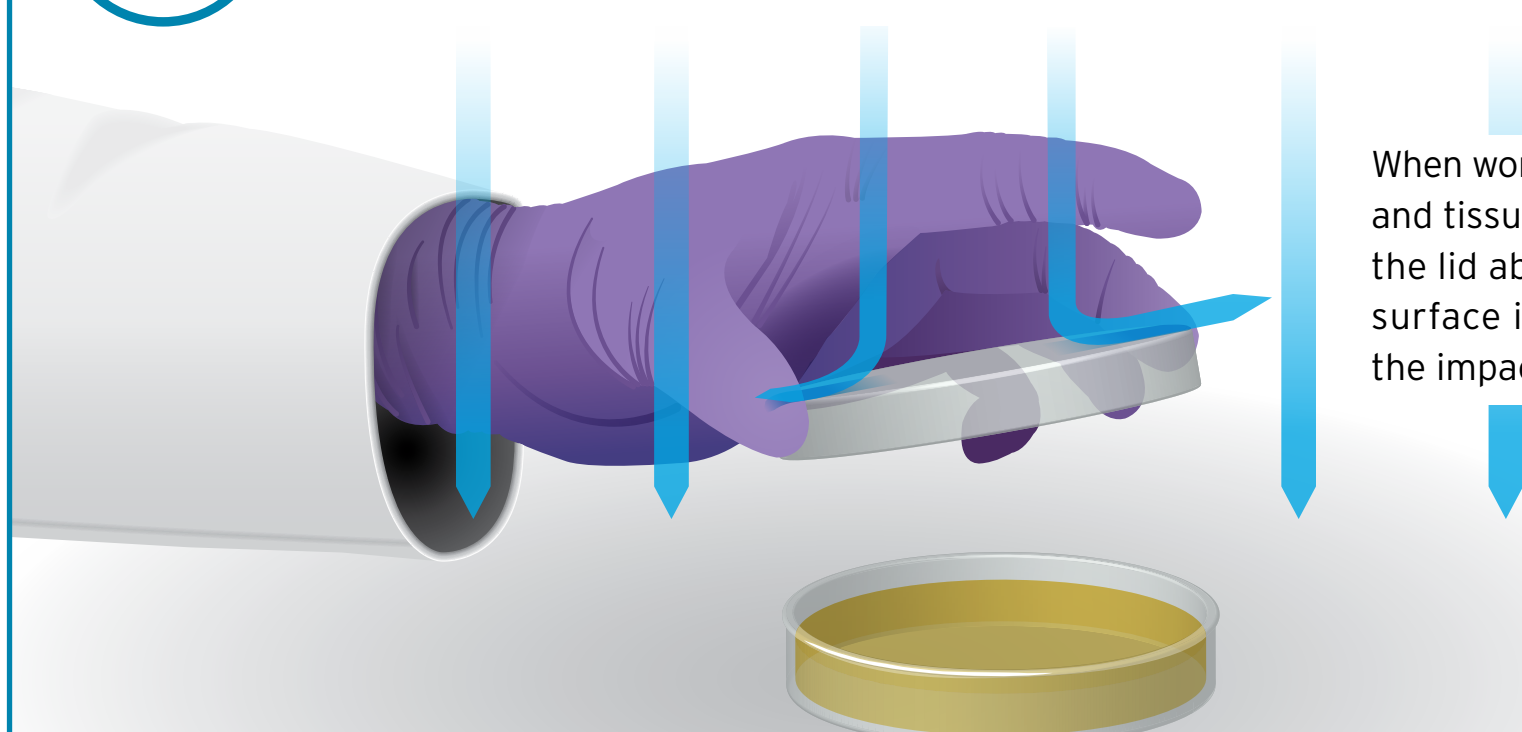
8 WORKING WITH TUBES

Open tubes or bottles should NOT be held in a vertical position. Bottle or tube caps should not be placed on the towel. Items should be recapped or covered as soon as possible.



9 WORKING WITH PETRI DISHES

When working with petri dishes and tissue culture plates, hold the lid above the open sterile surface in order to minimize the impact of air downflow.



10 WORKING WITH ASPIRATOR BOTTLES OR SUCTION FLASKS

Aspirator bottles or suction flasks should be connected to an overflow collection flask containing appropriate disinfectant, and to an in-line HEPA (or equivalent) filter.

This combination provides protection for the facility vacuum system or vacuum pump, as well as to the personnel who service this equipment.

