

# Biosafety Awareness



**What is Biosafety?**

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Biosafety is safety measures taken with respect to the effects of biological research on humans, animals, plants and the environment.

**Biohazards**

## Laboratory Biosafety Guidelines

PHAC has established four classifications or risk groups, for biohazards.

- **Risk Group 1 (low individual and community risk)**  
Any biological agent that is unlikely to cause disease in healthy workers or animals.
- **Risk Group 2 (moderate individual risk, low community risk)**  
Any pathogen that can cause human disease but, under normal circumstances, is unlikely to be a serious hazard to laboratory workers, the community, livestock or the environment. Laboratory exposures rarely cause infection leading to serious disease; effective treatment and preventive measures are available, and the risk of spread is limited.
- **Risk Group 3 (high individual risk, low community risk)**  
Any pathogen that usually causes serious human disease or can result in serious economic consequences but does not ordinarily spread by casual contact from one individual to another, or that causes diseases treatable by antimicrobial or antiparasitic agents. Very few research facilities work with risk group 3 biohazards.
- **Risk Group 4 (high individual risk, high community risk)**  
Any pathogen that usually produces very serious human disease, often untreatable, and may be readily transmitted from one individual to another, or from animal to human or vice-versa, directly or indirectly, or by casual contact. The handling of risk group 4 biohazards is only allowed in designated government laboratories.

To control these risks, Health Canada has outlined four containment levels. These containment levels outline physical requirements of the lab, such as hand washing facilities and biological safety cabinets. These containment levels also require strict adherence to operational procedures, such as emergency protocols and wearing personal protective equipment.

### What kind of Biosafety Labs do we have at Western?

At Western, we have Level 1, Level 2, and Level 3 laboratories.

All of these laboratories are required to adhere to government standards to ensure the safety of Western faculty, staff, students; as well as the community we live in.





